

**Asiatic Cholera and the Development of Public Health in Belfast
1832-1878**

By

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**I confirm that the word count of this thesis is less than 100,000 words excluding the
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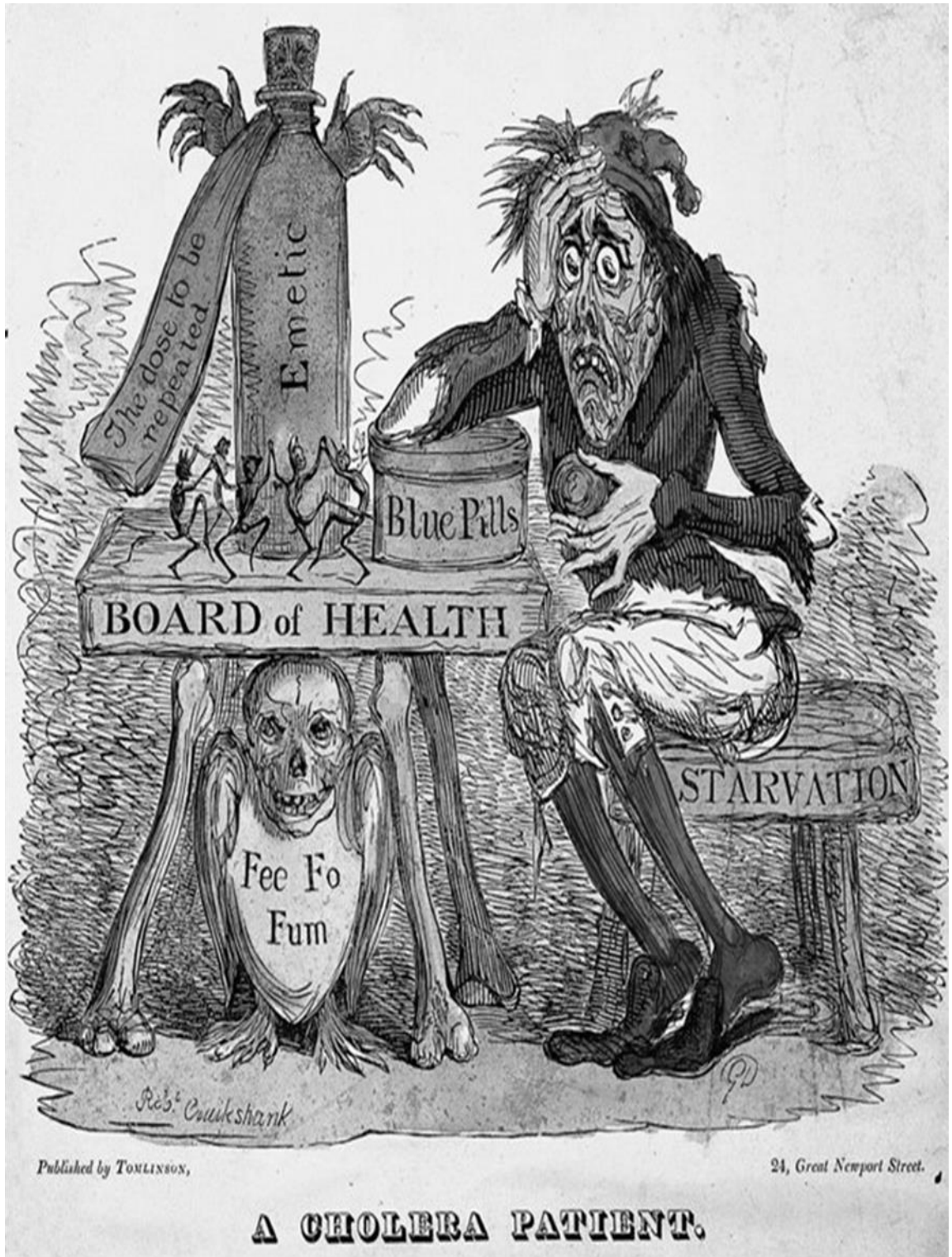
This volume is a revised author edition of the PhD thesis originally submitted to and examined by Ulster University in 2014.

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The examined and awarded thesis remains the version of record. This edition is presented as an author's revised text for ease of reading and reference.

Nigel Farrell

[June 2026]



¹ An etching published in 1832 by illustrator and caricaturist Robert Cruikshank, showing a cholera patient experimenting with a variety of useless remedies. From: Wellcome images collection, slide number 2234, <http://wellcomeimages.org/> (21 January 2014).

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Dedication

This thesis is dedicated to my children Ellen and Daniel Farrell.
Their love has been the source of both my inspiration and my motivation.

‘It's not only children who grow. Parents do too. As much as we watch to see what our children do with their lives, they are watching us to see what we do with ours.’ Joyce Maynard.

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Thirdly, I would like to offer my sincere thanks to the late Professor Robert Welsh who helped to give me the opportunity to commence my journey into academia almost ten years ago. His immortal words at the time, “you never know where you might end up” have always stayed with me and I would like to think that I have now gone some way towards honouring the faith that he showed in me as I started out as a very excited and nervous undergraduate.

I would also like to show my appreciation to the staff of the archives and libraries which I have visited over the past three years particularly the staff at the Coleraine Campus, PRONI, NAI, The Linenhall Library, The Belfast Newspaper Library and the Royal College of Physicians Heritage Centre, Dublin. I also extend my thanks to Professor Richard Clarke for granting access to the archive of the Royal Victoria Hospital and to Aiden Murray of the Ordnance Survey of Northern Ireland for his invaluable help with the maps that have been used in this thesis and similarly to Nial McSorley, GIS officer for Coleraine Borough Council for his assistance with maps.

Finally, I offer my sincerest thanks to my family particularly my children Ellen and Daniel, to whom this thesis is dedicated. Your support, understanding and love have been the most invaluable tools of all, and I thank you from the bottom of my heart.

Abstract

Asiatic Cholera and the Development of Public Health in Belfast 1832-1878

Prior to the development of modern epidemiological and laboratory medicine in the latter part of the nineteenth century, infectious disease was a characteristic feature of everyday life in Ireland. A number of diseases, including fever, tuberculosis, dysentery and cholera often escalated into serious epidemic outbreaks. Not only did such illnesses demonstrate the significance of the absence of a comprehensive medical understanding of disease aetiology, dissemination and treatment, they also served to highlight the problems of health, hygiene and sanitation, particularly in the industrialising world. Above all, Asiatic cholera stands out by the extent to which it engendered public concern and by the manner in which it focused the attention of medical men, legislators and the wider public towards tackling the inadequacies of public health provision. While it may not have had the sustained demographic impact of fever or other illnesses, the response to cholera can therefore be said to have been instrumental in changing centuries old attitudes regarding sanitation and hygiene.

The existing body of research on cholera in Ireland has predominantly concentrated on the epidemics of 1831-33 and 1848-49, with later outbreaks often disregarded. However, this thesis offers a distinctive contribution to Irish medical and social history by investigating the consequences of all four major nineteenth-century cholera epidemics in Ireland. It specifically explores their influence on the evolution of public health infrastructure in Belfast, providing insights leading up to the period just before the enactment of the 'Public Health (Ireland) Act' in 1878. In doing so, it aims to advance understanding of both cholera and the evolution of public health in nineteenth-century Ulster, with particular emphasis on the influence of previously overlooked cholera epidemics in the latter half of the period. Several compelling reasons support the selection of Belfast as a case study. Most notably, the town was the first place in Ireland to be affected during three of the four cholera epidemics between 1832 and 1866. More broadly, the period examined is one which sees Ulster's medical history marked, not only by the distinct evolution of Belfast's political, social, moral, and industrial landscape, but also by the manifestation of diseases like cholera, which shed light on the triumphs and shortcomings of the evolving public health infrastructure Ireland's most significant industrial centre.

List of Abbreviations

BBOG	Belfast Board of Guardians.
B.N.L.	Belfast Newsletter.
COH	Commissioners of Health.
CSOOP	Chief Secretary's Office Official Papers.
CSORP	Chief Secretary's Office Registered Papers.
CSOCP	Chief Secretary's Office Cholera Papers.
DQMS	Dublin Quarterly Journal of Medical Science.
ELWC	East London Water Company.
GBH	General Board of Health.
ISC	International Sanitary Conference.
MO	Medical Officer.
N.W.	Northern Whig.
PC	Privy Council.
PLC	Poor Law Commissioners.
PRONI	Public Record Office of Northern Ireland.
RG	Registrar General.
WHO	World Health Organisation.

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Declaration

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Introduction

Cholera and the Development of Public Health in Belfast 1832-1878

‘If ever a disease was invented to take the conceit out of man it was cholera.’¹

Dr R.L. Rea, Chicago 1867.

Introduction

This thesis argues that cholera epidemics were more influential in altering the public health landscape in Belfast than has previously been acknowledged. It aims to address three research questions, who cared? why they cared and what were the results of the actions taken by the key stakeholders? To address these questions, the study traces the impact of cholera and its influence on the development of public health in nineteenth-century Belfast and in doing so shows how the response to cholera by key medical personnel, public health campaigners and local government officials lessened its impact on the town’s population. It has found that public health reform during the long nineteenth century was inhibited by slow medical scientific and legislative advances and by the contagionist/anti-contagionist debate. Overall, it highlights that the response to cholera in Belfast was relatively successful meaning that in terms of its mortality rates Belfast coped much better in comparison both to urbanised centres throughout Ireland and to comparable industrialised towns and cities in Great Britain.

As Ireland’s only industrialised town in the nineteenth-century Belfast occupies a unique position in history. However, as William Maguire has noted, Belfast was a relative newcomer among the great Victorian cities.² It became a major manufacturing centre and international port only in the later nineteenth century and was not awarded city status until

¹ R.L. Rea, ‘Contagion of cholera’ in *Chicago Medical Journal*, Vol. 34(8) (1867), pp. 355-9.

² Maguire, *Belfast*, p. 11.

1888.³ Nevertheless, Belfast shared many similarities with the major Victorian conurbations including all of the issues associated with a rapidly growing and industrialising urban centre, such as inadequate housing, poor sanitation and poor health. While these problems were inextricably linked to population growth and industrialisation, environmental issues were not unique to this period and were undeniably inherited from the failure and inability of civic administrators to address the problems experienced during the early development of the town.⁴ All these problems necessitated responses from civic administrators, philanthropists and the medical establishment throughout the course of the nineteenth century, particularly as severe outbreaks of epidemic disease became increasingly commonplace.

The nineteenth century has been observed as the most remarkable in the history of epidemic disease, particularly as devastating outbreaks of typhus in the first half of the century were followed by the first epidemic of Asiatic cholera in 1832.⁵ As Charles Rosenberg has stated, cholera was the ‘classic disease’ of the nineteenth century.⁶ Its epidemic outbreaks have also been widely identified as causing popular unrest, social conflict and for providing a catalyst for municipal reform and the development of public health.⁷ With no medical understanding of how epidemic diseases were propagated, or

³ City status was conferred by Royal Charter on 8 November 1888. Henry O’Neill, ‘The progress of sanitary science in Belfast’ in *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. xi(lxxxix) (1900/1901), pp. 35-45; Maguire, *Belfast*, p. 11; Budge and O’Leary, *Belfast: Approach to crisis*, p. 117; Brian Hanna, ‘Belfast: A partnership approach to local governance’ in F. Gaffikin and M. Morrissey (eds), *City visions – Imagining place, enfranchising people* (Pluto Press, London 1999), p. 197.

⁴ For more on the social and environmental issues of the town see Gillespie, *Early Belfast*.

⁵ Joseph Robins, *The miasma: Epidemic and panic in nineteenth-century Ireland* (Institute of Public Administration, Dublin, 1995), p. 32.

⁶ Charles Rosenberg, *The cholera years: The United States in 1832, 1849 and 1866* (University of Chicago Press, 1962), p. 1.

⁷ This is a point which has been widely endorsed by historians including; David Arnold, ‘Cholera and colonialism in British India’ in *Past and Present*, no. 113 (1986), pp. 118-51; Asa Briggs, ‘Cholera and society in the nineteenth century’ in *Past and Present*, Vol. 19(1) (1961), pp. 76-96; Richard Evans, ‘Epidemics and revolutions: Cholera in nineteenth-century Europe’ in *Past and Present*, Vol. 120(1) (1988), pp. 123-46; Michael Durey, *The return of the plague, British society and the cholera 1831-32* (Gill and Macmillan, Dublin, 1979); Christopher Hamlin, *Cholera: The biography* (Oxford University Press, Oxford, 2009); Norman Longmate, *King Cholera: The biography of a disease* (Hamish Hamilton, London, 1966) Robert E. Megrew, *Russia and the Cholera 1823-1832* (University of Wisconsin Press, Madison,

disseminated this was also a period of confusion, fear and high mortality.⁸ As Christopher Hamlin has observed, although cholera pandemics approached slowly and could therefore be predicted, cholera, throughout most of the nineteenth century, could not be reliably prevented, avoided or cured.⁹ While cholera's deadliness and ability to spread globally were significant factors in the panic which it caused, the disease was also accompanied by a morbid fascination, driven largely, as Pamela Gilbert has argued, by its foreignness and the speed and drama with which it killed.¹⁰

Jo N. Hays has argued that Europeans took fright at cholera's virulence with good reason because its mortality rates approached those of plague.¹¹ Yet, cholera was not the nineteenth century's biggest killer, its mortality rates were far exceeded by tuberculosis and the various fevers of the period.¹² However, because a significant proportion of cholera's victims belonged to the lower classes, historians have viewed cholera epidemics as affording 'a unique opportunity to penetrate class structure' and as a means to uncover the 'social attitudes and living conditions of a broad section of the population.'¹³ The historical significance of cholera therefore, is predominantly derived from its interaction with humans. As David Arnold concludes, cholera in itself, like any other disease, lacks inherent meaning - it is only a microorganism. But: 'It acquires meaning and significance

1965); R.J. Morris, *Cholera 1832 The social response to an epidemic* (Croom Helm, London 1976) and Robins, *The miasma*.

⁸ For good examples of this viewpoint see, Robins, *The miasma*, p. 32; Jo N. Hays, *The burdens of disease: Epidemics and response in western history* (Rutgers University Press, New Jersey, 2003), pp. 135-9.

⁹ Hamlin, *Cholera: The biography*, p. 10.

¹⁰ Pamela K. Gilbert, *Cholera and nation: Doctoring the social body in Victorian England* (State University of New York, Albany, 2008), p. 2.

¹¹ Hays, *The burdens of disease*, p. 136.

¹² Hamlin, *Cholera: The biography*, p. 3. Greta Jones observes that tuberculosis (TB) was the biggest killer in nineteenth-century Ireland and Margaret Pelling observes that mortality from cholera was far less significant than TB or fever. See, Greta Jones, 'The campaign against tuberculosis, 1899-1914' in Greta Jones, and Elisabeth Malcolm (eds), *Medicine, disease and the state in Ireland 1650-1940* (Cork University Press, Cork, 1999), p. 158; Margaret Pelling, *Cholera, fever and English medicine 1825-1865* (Oxford University Press, Oxford, 1978), pp. 3-6.

¹³ See: Arnold 'Cholera and colonialism'; Robert E. McGrew, 'The first cholera epidemic and social history' in *Bulletin of the History of Medicine*, Vol. 34 (1960), pp. 61-73; Hamlin, *Cholera: The biography* p. 10 and Louis Chevalier, 'Introduction generale' in *Le Choléra: la première épidémie du XIXe siècle* (Imprimerie centrale de l'Ouest, La Roche-sur-Yon, 1958), pp. iii-xvii.

from its human context, from the ways in which it infiltrates the lives of the people, from the reactions it provokes, and from the manner in which it gives expression to cultural and political values.’¹⁴

Historiography

Cholera’s four nineteenth century outbreaks (1831/32; 1848/49; 1853/55 and 1866) have been utilised by many historians as point of reference from which they have examined the social, economic and political impact of the disease and its role in the genesis of public health reform both in Europe and farther afield.¹⁵ The arrival of epidemics like cholera, as Michael Durey notes, ‘always unsettled the normal functioning of society and brought to the surface latent social antagonisms.’¹⁶ Arguing along similar lines, R.J Morris observes that cholera in England created a ‘crisis atmosphere, quite unlike that produced by any other threat except perhaps foreign invasion.’¹⁷ While, in terms of its social impact, E.A Underwood notes that cholera, in both Britain and Ireland was, ‘directly responsible for the reporting of social conditions which most of the affluent classes regarded as the unalterable lot of the poor.’¹⁸ Consequently, it is clear, as Durey attests, that cholera offers a unique opportunity to observe a society under stress, being as it, ‘tested received attitudes and mentalities, probed society’s resources and resourcefulness and exploited its weaknesses and shortcomings.’¹⁹

¹⁴ Arnold, ‘Cholera and colonialism,’ p. 151.

¹⁵ Some of the best examples include: Durey, *The return of the plague*; Evans, ‘Epidemics and revolutions’; Idem, *Death in Hamburg: Society and politics in the cholera years, 1830-1910* (Oxford University Press, Oxford, 1987); Gilbert, *Cholera and nation*; Morris, *Cholera 1832*; Anne Hardy, ‘Cholera, quarantine and the English preventive system, 1850-1895’ in *Medical History*, Vol. 35 (1993), pp. 250-69. For studies outside Europe see in particular: Arnold, ‘Cholera and colonialism’; Idem, *Colonizing the body: state medicine and epidemic disease in nineteenth century India* (University of California Press, Berkley, 1993); Megrew, *Russia and the cholera 1823-1832*; Rosenberg, *The cholera years*; Idem, ‘Cholera in nineteenth century Europe: A tool for social and economic analysis’ in *Comparative Studies in Society and History*, Vol. 8 (1966), pp. 452-63.

¹⁶ Durey, *The return of the plague*, p. 1.

¹⁷ Morris, *Cholera 1832*, p. 14.

¹⁸ E. Ashworth Underwood ‘The History of the 1832 Cholera Epidemic in Yorkshire’ in *Proceedings of the Royal Society of Medicine*, Vol.27 (1935), pp. 6-18.

¹⁹ *Ibid.*, p. 2.

As Richard Evans has observed however, the significance of the impact of cholera in the nineteenth century has also had its detractors.²⁰ Margaret Pelling, for example, argues that cholera had almost no influence on political, administrative or medical history in Britain and Charles Rosenberg similarly claims that cholera had no permanent effect on either urban growth or on economic development in Europe.²¹ Although both these arguments have their merits, it is also clear that there is much more evidence to suggest that cholera did act as a catalyst to developments in public health which resulted in significantly improved mortality from infectious disease particularly in the latter half of the century.

Unlike the wealth of material pertaining to the impact of cholera in Great Britain, Europe and further afield, the extent of the research in Ireland on the impact of epidemic disease, and of cholera in particular, has been noticeably lacking. Recently this trend has begun to change and there have been several studies which explore the effects and influences that outbreaks of epidemic disease had on Ireland both socially and medically.²² In addition, a wide range of publications which relate to public health have investigated Ireland's high rates of morbidity and mortality in relation to the lack of widespread industrialisation and urbanisation throughout the majority of the nineteenth century.²³ The history of the

²⁰ Evans, 'Epidemics and revolutions,' p. 126.

²¹ Pelling, *Cholera, fever and English medicine*, pp. 3-6; Rosenberg, 'Cholera in nineteenth-century Europe,' pp. 452-63.

²² See for example Deborah Brunton, 'The problems of implementation: The failure and success of public vaccination against smallpox in Ireland 1840-1873' in Jones, and Malcolm (eds), *Medicine, disease and the state*; E. Margaret Crawford, 'Typhus in nineteenth-century Ireland' in Jones and Malcolm (eds), *Medicine, disease and the state*; Caitriona Foley, *The last Irish plague, the great flu epidemic in Ireland* (Irish Academic Press, Dublin, 2011); Greta Jones, *Captain of all these men of death: The history of tuberculosis in nineteenth and twentieth century Ireland* (Rodopi, Amsterdam, 2001); Eadem, 'The campaign against tuberculosis, 1899-1914' in Jones and Malcolm (eds), *Medicine, disease and the state*; Robins, *The miasma*; Isabel Magill, *A social history of tuberculosis in Belfast and its environs 1850-1950* (Unpublished Ph.D. thesis, University of Ulster, 1992); Patricia Marsh, *The effect of the 1918-19 influenza pandemic on Ulster* (Unpublished Ph.D. thesis, Queen's University Belfast, 2011).

²³ The list of publications is extensive. However, among the most significant are: Ruth Barrington, *Health medicine and politics in Ireland* (Institute of Public Administration, Dublin, 1987); Roger Blaney, *Belfast: 100 years of public health* (Belfast City Council, and Eastern Health and Social Services Board, Belfast, 1988); Laurence Geary, 'The poor and the sick in pre-famine Ireland: Charity and the state' in Henrik Jensen (ed.), *The Welfare State: Past, present, future* (Universita di Pisa, Pisa, 2002); Laurence Geary *Medicine and charity in Ireland 1718-1851* (University College Dublin Press, Dublin, 2004); Virginia, Crossman, and Peter Gray, *Poverty and welfare in Ireland 1838-1948* (Irish Academic Press, Dublin, 2011); Tony Farmar, *Patients potions and physicians: A social history of medicine in Ireland* (A and A Farmar, Dublin, 2004); Peter Froggatt, 'Industrialisation and health in Belfast,' in David Harkness and Mary

famine (1845-49) as well as other significant events, including mass emigration and associated studies on Ireland's remarkable population fluctuations have also provided a number of notable studies, many of which touch upon the impact of disease on the Irish at both home and abroad.²⁴

In general, the historiography of cholera in Ireland has tended to be restricted to a few local studies all of which focus solely on the pre-famine period. These include Timothy O'Neill's examination of cholera in Co. Offaly and Patricia Duffy's study of cholera in Co. Louth.²⁵ For general histories of the disease, Sean Connolly's brilliantly researched, *The Blessed Turf: Cholera and popular panic in Ireland June 1832*, provides a fantastic account of the consequences which the fear associated with cholera had on Ireland's Catholic population many of whom were steeped in religion, superstition and the supernatural.²⁶ Hugh Fenning's, *The cholera epidemic in Ireland, 1832-3: Priests, ministers and doctors*, also provides a useful identification of members of these professions who died from cholera by listing death notices and extracts from local newspaper archives.²⁷ While the above publications provide valuable insights to Ireland's

O'Dowd (eds), *The town in Ireland* (Appletree Press, Belfast, 1981); Alison Jordan, *Who cared? Charity in Victorian and Edwardian Belfast* (Institute of Irish Studies, Belfast, 1994); Joseph V. O'Brien, *Dear dirty Dublin: A city in distress, 1899-1916* (University of California Press, Berkeley, 1982).

²⁴ See in particular: Mary Daly, *The famine in Ireland* (Dublin Historical Association, Dublin, 1986); Peter Gray, *Famine, land and politics: British government and Irish society 1843-50* (Irish Academic Press, Dublin, 1999); Christine Kinealy and Gerard MacAtasney, *The hidden famine: hunger, poverty and sectarianism in Belfast* (Pluto Press, London, 2000); Christine Kinealy, *This great calamity: The Irish famine 1845-52* (Gill and Macmillan, Dublin, 1994); Cormac O'Grada, *Black '47 and beyond: The great Irish famine in history, economy, and memory* (Princeton University Press, New Jersey, 2000). Joel Mokyr and Cormac O'Grada, 'What do people die of during famines: The great Irish famine in comparative perspective' in *European Review of Economic History*, Vol. 6(3) (2002), pp. 339-63: For examples of sickness and health among Irish migrants in various areas of Britain see Rodger Swift (ed.), *Irish migrants in Britain 1815-1914: A documentary history* (Cork University Press, Cork, 2002); Donald MacRaild (ed.), *The great famine and beyond: Irish migrants in Britain in the nineteenth and twentieth centuries* (Irish Academic Press, Dublin, 2000). For abroad see: Kirby A. Miller, *Emigrants and exiles: Ireland and the Irish exodus to North America* (Oxford University Press, Oxford, 1985) and Robins, *The miasma*, pp. 150-91.

²⁵ Patricia Duffy, 'Cholera in County Louth 1832-39' in *Journal of the County Louth Archaeological and Historical Society*, Vol. 20(2) (1982), pp. 117-26; Timothy P. O'Neill, 'Cholera in Offaly in the 1830s' in *Offaly Heritage*, Vol. 1 (2003), pp. 96-107.

²⁶ Sean Connolly, 'The blessed turf': Cholera and popular panic in Ireland June 1832' in *Irish Historical studies*, Vol. 23(19) (1983), pp. 214-32.

²⁷ Hugh Fenning, 'The cholera epidemic in Ireland, 1832-3: Priests, ministers, doctors' in *Archivium Hibernicum*, Vol. 57 (2003), pp. 77-125.

cholera experience, Timothy P. O'Neill's, *Fever and public health in pre-famine Ireland*, which takes in the 1832 epidemic and Joseph Robins' *The miasma: Epidemic and panic in nineteenth-century Ireland*, are both still arguably the main resources for both fever and cholera during this period, although it must be noted that Robins work largely neglects the impact of the epidemics of the latter half of the century.²⁸

Ulster, however, is almost completely devoid of research into the cholera epidemics of the nineteenth century. While Christine Kinealy and Gerard MacAtasney have made a brief, albeit thorough, assessment of the 1848/49 epidemic in Belfast, the disease receives little but a cursory mention in other publications.²⁹ There is also a lack of research exploring the impact of epidemic disease, early concepts of public health provision and reactions to cholera throughout the remainder of Ulster. There were notable epidemics in towns including Coleraine, Londonderry, Strabane, Ballymena, Lisburn and Lurgan, to name but a few, therefore, the scope for ongoing research into the impact of cholera is indisputably substantial and merits further investigation.

While cholera in Ireland was not solely responsible for widespread changes to sanitary practices, or to the development of a wholesale change in attitudes regarding the necessity

²⁸ Timothy P. O'Neill, 'Fever and public health in pre-famine Ireland' in *The Journal of the Royal Society of Antiquaries of Ireland*, Vol. 103 (1973), pp. 1-34; Robins, *The miasma*, see in particular Chapters 4, 5, 7, and 11. O'Neill has also briefly covered the impact of cholera in Co. Clare, see Timothy P. O'Neill, 'Clare and Irish poverty 1815-1851' in *Studia Hibernica*, No. 14 (1974), pp. 7-27. It is also worth mentioning one local work of note which covers the final cholera epidemic in Co. Wicklow, Jim Rees, 'The cholera epidemic of 1866' in *Arklow Historical Society Journal* (1982).

²⁹ Kinealy, and McAtasney, *The Hidden Famine*, pp. 168-71. Most recent works on Belfast examine the political make-up of the town. However, aspects of nineteenth-century poverty, medicine, social conditions and charity are also touched upon in the following publications, see in particular; John Bew, *The glory of being Britons: Civic unionism in nineteenth-century Belfast* (Irish Academic Press, Dublin, 2008); Sean Connolly (ed.), *Belfast 400: People, place and history* (Liverpool University Press, Liverpool, 2012); Brian Griffin, *The Bulkies: police and crime in Belfast, 1800-1865* (Irish Academic Press, 1999); Alice Mary Johnson, *Middle class culture and civic identity in mid-nineteenth century Belfast* (Unpublished Ph.D. thesis, Queen's University Belfast, 2009); Jordan, *Who cared?*; Kinealy, and McAtasney, *The Hidden Famine*; Olwen Purdue (ed.), *Belfast: The Emerging City 1850-1914* (Irish Academic Press, Dublin, 2013); Stephen Royle, *Portrait of an industrial city, 'Clanging Belfast' 1750-1914* (Natural History and Philosophical Society, Belfast, 2011); Jonathan Wright, *The 'Natural Leaders' and their world: Politics culture and society in Belfast 1801-1832* (Liverpool University Press, Liverpool, 2012).

of providing systems which protected the health of the public, it certainly had a significant role to play. This is particularly relevant in terms of local studies of the disease. Belfast stands out in particular, as few places provide better evidence of the efficacy of the changes made to public health policy and local administration. While there were several abject failures in relation to continued urban overcrowding and the provision of water and sanitation, which were not resolved until well into the twentieth century, the efforts of Belfast's administrators, medical men and sanitary reformers arguably prevented mortality rates from epidemic disease from becoming unmanageable.

There has also been a considerable upsurge of historical interest in the story of Belfast in recent years. In part this has been driven by the four hundredth anniversary of the granting of the town's charter in 1613. This has resulted in an excellent new publication, *Belfast 400: People place and history*, which re-examines the rich history and development of the town and later city.³⁰ Several other works which place a good deal of emphasis on the nineteenth-century history of the town have also added considerably to the existing body of knowledge on Belfast.³¹ None, however, have comprehensively focused on the impact of epidemic disease or on the relevance of cholera with regard to the development of public health during this highly significant period. The originality of this thesis therefore lies in the fact that it is the first systematic examination of the impact and response to cholera in the north of Ireland during the nineteenth century. In addition, it also acts as a case study of public health in Belfast and as such throws light on the development of public health in an industrialising town. It invites comparisons with the preparations made to combat cholera and their consequences throughout Ireland and the rest of the British Isles and addresses the issue of the hitherto under-researched area of cholera's impact on the progress of public health provision in nineteenth-century Ulster.

³⁰ Connolly (ed.), *Belfast 400*.

³¹ See fn. 30 above.

Methodology and Sources

By examining the implications of cholera's foremost epidemics and their influence on the development of public health provision until the period before the introduction of the 'Public Health (Ireland) Act' in 1878, a number of compelling reasons why such a case study is important emerge.³² Chief among which is the fact that Belfast was the first town in Ireland to be afflicted by cholera in three out of the four epidemics experienced between 1832 and 1866. Also, the predominant focus of previous studies of cholera in Ireland has related almost solely to the epidemics of 1831/33 and 1848/49, with less regard given to the significance of later outbreaks. In addition, the period between 1832 and 1878 is characterised not solely by the discernible transformation of Belfast's political, social, moral, civic and industrial fabric but also by the impact of endemic and epidemic diseases such as cholera which shed light on the triumphs and shortcomings of the evolving public health infrastructure throughout Ireland.

With regard to industrialising towns and cities like Belfast and the difficulties associated with improving public health Christopher Hamlin notes, quite succinctly, that:

A key problem in understanding the origins of efforts to improve the environments of industrial cities is understanding why people came to see a particular problem and to take action. We need to know who cared, why they cared.³³

This thesis aims to show who cared, why, and what actions were taken. In doing so, it will illustrate that efforts to improve public health in Belfast had progressed appreciably in comparison to other large Irish towns, and argues that, despite the escalating relative mortality of cholera during its third and fourth epidemics, the demographic impact in Belfast was slight in contrast to the preceding half-century.

³² Public Health (Ireland) Act, 1878 (41 and 42 Vict., c. 52).

³³ Christopher Hamlin, 'Environmental sensibility in Edinburgh. 1839-1840; The "Fetid Irrigation" controversy' in *Journal of Urban History*, Vol.20 (1994), pp. 311-39.

This thesis adopts both a micro-history and a mixed methods methodology. The nature of cholera's epidemic outbreaks and the response and progress made also naturally led it to take a chronological approach, while the archival analysis of contemporary documents and newspapers largely dictated the nature of its narrative. A wide range of both quantitative and qualitative sources have been used to identify the key issues in regard to cholera in Belfast during the nineteenth century. Some of which, including the reports of the Census Commissioners and the reports of the Commissioners of Health, have never before been used in this manner with regard to cholera prevention and the statistical analysis of Belfast's morbidity and mortality rates. The records of Belfast's main local authorities, the town corporation and the board of guardians have also been widely used within this thesis. However, as other Belfast researchers have found, they often present their own peculiar set of issues.³⁴ It is notable, for example, that despite the prevalence of serious epidemic diseases in Belfast, throughout the period, the minutes of these bodies, and in the case of the corporation, its various sub-committees, often provide only snippets of information as to how these organisations made provision for cholera's arrival or managed its outbreaks when they emerged.

Local newspapers, particularly the Belfast Newsletter and the Northern Whig, extensively used throughout this thesis, are not exempt from possessing their own political and moral biases. Nonetheless, as explored in further detail, below and throughout this discussion, newspapers have proven to be invaluable sources of social commentary, insights into local governance concerns and responses, and sufficiently reliable statistical information concerning cholera morbidity and mortality rates in Belfast. With regard to island wide figures however, the challenges associated with obtaining central statistics for cholera

³⁴ Similar issues regarding the lack of material in the minutes of Belfast's administrative bodies have also been identified by Patricia Marsh, Alice Johnson and Gerard Slater. See introductions in Marsh, *The effect of the 1918-19 influenza pandemic on Ulster* and Johnson, *Middle class culture and civic identity*; Gerard, Slater, *Belfast politics, 1798-1868* Vol. II. (D.Phil. Thesis, New University of Ulster, Coleraine, 1982), p. 243.

underscore a unique set of issues due to the absence of dependable information, resulting in much of cholera's obscured history remaining elusive. A factor that can primarily be attributed to inaccurate or deficient record-keeping practices of contemporary bureaucrats. Therefore, local studies, including the investigation of Belfast presented in this thesis, assume a crucial role. Not only do they offer a nuanced understanding of the local context, but they also make substantial contributions to our broader comprehension of the repercussions of epidemic disease outbreaks in Ireland and beyond.

The lack of information contained in official records of the epidemics which occurred between 1832 and 1866, which is not exclusive to Belfast, or indeed to the practices which were employed to combat cholera has necessitated the exploration of contemporary newspapers regarding cholera's impact. In fact, it is often the case that a considerable amount of information can be gleaned from the more extensive minutes published in local newspapers including the *Belfast Newsletter* and the *Northern Whig* than those officially recorded by various medical administrative sources, both local and national.³⁵ Official statistics on cholera morbidity and mortality from the Belfast Board of Health were also published in these sources. These figures can be compared with those issued by national agencies, and as this thesis demonstrates, such comparisons often reveal significant disparities between local and national statistics.³⁶ Local and national newspapers, have also provided a rich source of commentary on cholera. They have been used here in conjunction with other sources, principally, contemporary accounts by medical

³⁵ The minutes of The Belfast Corporation and The Belfast Board of Guardians are for the most part brief and mostly record decisions that were made. However, the press was admitted to most meetings and recorded the proceedings in more detail. Throughout this thesis the *Belfast Newsletter* has been used as the main source of the particulars of these meetings as it gave the most consistently detailed reports. This is an approach which has also been used in Gerard Slater's well recognised thesis on Belfast politics. See, Slater, *Belfast politics*, p. 243.

³⁶ Comparative statistical information has predominantly been provided from the reports of the Census Commissioners, The General Board of Health and the reports of various commissions of enquiry.

practitioners and bureaucratic agencies, to help provide a qualitative discussion of key themes in relation to cholera throughout Ireland.

This thesis will also consider several other aspects of Belfast's nineteenth-century development encompassing changes in the dynamics of the politics of local government administration. However, it is crucial to emphasise that the ensuing discussion primarily adopts a socio-medical perspective, focusing on the examination of epidemic disease and the evolution of public health in order to provide a more comprehensive understanding of the impact of cholera in the nineteenth century. The political and civic dimensions of Belfast's development during this period have already been extensively documented in numerous noteworthy publications, and these continue to be fields that warrant further investigation into the socio-economic and socio-political understanding of the town's civic administration.³⁷

The following chapters will follow a largely chronological path. In order to give a broad perspective of the town's social conditions in the period prior to more widespread developments in public health, Chapter One will examine the historiographical context of Belfast's early civic, administrative and medical development. It will also be used to provide a historiography of Asiatic cholera's global pandemics from 1831-1866, and a historical background to cholera's etymology, pathogenesis and treatment during the same period.

Chapter Two will meticulously investigate the reactions to and repercussions of cholera's first epidemic upon its arrival in Britain in 1831. Through a comparative analysis of Irish

³⁷ See, Bew, *The glory of being Britons*; Ian Budge and Cornelius O'Leary, *Belfast: Approach to crisis: A study of Belfast politics 1613-1970* (Palgrave Macmillan, London, 1973); Sean Connolly, 'Belfast: The rise and fall of a civic culture' in Purdue (ed.), *Belfast: The emerging city*; Cornelius O'Leary 'Belfast urban government in the age of reform' in Harkness and O'Dowd (eds), *The town in Ireland*; Frank Wright, *Two lands one soil: Ulster politics before Home Rule* (Gill and Macmillan, Dublin, 1996); Wright, *The 'Natural Leaders'*; Slater, *Belfast politics*; Johnson, *Middle class culture and civic identity*.

morbidity and mortality rates, with a specific focus on Belfast in relation to other towns and cities in Britain and Ireland, this chapter will examine both local and national responses to cholera. It further argues that, despite shortcomings in addressing certain acute sanitary issues, the authorities in Belfast achieved a measure of relative success in combating the disease.

Chapters Three and Four will examine the 1840s, one of the most controversial decades in Irish history, particularly in terms of the evolution of responses to both poverty and epidemic disease. They will posit the argument that the introduction of an Irish Poor Law can be seen as an embryonic public health intervention. Deteriorating sanitary conditions in Belfast and the concurrent legislative responses and improvements to public health provision will be further analysed with a view to showing that, while initially directed at improving the civic aesthetics of the most prominent areas of the town, these measures also played a significant role in addressing both fever and cholera.

Chapters Five and Six, while examining the epidemic of 1853/55 will shift focus to the advancements in medical care and scientific understanding experienced during the mid-nineteenth century. The question of determining whether the discernible reduction in mortality rates from epidemic diseases in this period can be attributed to social and medical reform or shifts in public attitudes will be addressed. Attention will also be directed to the significant observation that, despite the diminished demographic impact of cholera epidemics during this period, their relative mortality rates persisted largely unabated.

Following the chronological theme of this thesis and using the 1866 epidemic as a case study, Chapter Seven will argue against the traditional viewpoint that cholera in the latter half of the nineteenth century was historically irrelevant in Ireland. It will argue that while cholera mortality was declining almost everywhere this had not resulted as a solitary

consequence of local improvements to sanitation and hygiene. In Belfast, the distinct lack of a clear-cut division of responsibility among the town's main administrative bodies for example, clearly hampered efforts to address the combined issues of overcrowding, poor sanitation and access to supplies of water for the town's poorest districts. Thus, Belfast's almost negligible cholera mortality came arguably as a result of the unpredictable nature of the disease and therefore a degree of good fortune rather than the impact of the fractured municipal response.

Finally, Chapter Eight will act as a postscript tracing the aftermath of epidemic cholera and continuing developments to public health provision in the period leading up to the implementation of the Public Health (Ireland) Act in 1878. It will argue that despite slow progress, public health provision and civic action in Belfast and throughout Ireland had shown marked improvement by the latter half of the nineteenth century and will contend that the recognition of the relationship between filth and disease was imperative in the ongoing local and state response to the health of the population.

Chapter One

Historiographical context: The early civic and medical history of Belfast and a background to Asiatic cholera and the global pandemics of the nineteenth century

Introduction

The following chapter will consider Belfast's early administrative, civic and medical history in the period prior to the town's response to the emergence of global pandemics of cholera in the early nineteenth century.¹ In the first instance, this chapter will examine the structure of Belfast's early civic administration in order to show that early involvement in public health affairs by the main stakeholders amounted to little more than a piecemeal attempt to control public nuisances. It will give a general synopsis of Belfast's social conditions and will emphasise how the town's rapid economic growth in the late eighteenth century facilitated the escalation of severe social and environmental issues for which the town's administrators had few, if any, effective solutions. This meant that there were no foundations for nineteenth century administrators to build on in relation to Belfast's problems regarding sanitation and hygiene. In order to provide a historical background to the development of public health, poor relief and philanthropy, medical practice and hospital provision that is discussed in the succeeding chapters of this thesis, this chapter will also consider early medical provision as well as the experience of, and reaction to, epidemic disease in Belfast. Finally, this chapter will provide a brief historiography of the spread of the global pandemics of Asiatic cholera from 1831-66 and

¹ Recent works on the historiography of Belfast also discuss the themes of the town's civic, administrative and medical history. They include; Connolly (ed.), *Belfast 400*; Raymond Gillespie, *Early Belfast the origins and growth of an Ulster town to 1750* (Belfast Natural History and Philosophical Society, 2007); Griffin, *The Bulkies*; Johnson, *Middle class culture and civic identity*; Kinealy and McAtasney, *The hidden famine*; W.A. Maguire, *Belfast* (Keele University Press, Staffordshire, 1993); Purdue (ed.), *Belfast: The emerging city*; Royle, 'Clanging Belfast.'

a historical background to cholera's etymology, pathogenesis and treatment during the same period.² While subsequent chapters will discuss these and other elements of the disease, this section aims to place the debates that follow in context within the scope of this thesis.

Background and Early History of Civic Belfast

Belfast has always had a significant connection to water, a commodity that would have a key role to play with regard to the problems of epidemic disease experienced in the nineteenth century. The early settlement of Belfast developed on land at a tidal ford at the junction of the Rivers Farset and Lagan.³ The name of the town is believed to have derived from a modern corruption of the Gaelic *Béal Feirste*, meaning either 'mouth of the river Farset' or 'approach to the tidal ford.'⁴ The nineteenth-century boundaries of the town were also defined largely by the town's main watercourses. The River Lagan formed the eastern boundary for several miles separating the counties of Antrim and Down.⁵ The northern boundary was marked by the Mile-Water. And the Blackstaff River marked the majority of Belfast's southern boundary.⁶ Throughout much of the nineteenth century, the Blackstaff, which will be discussed throughout the subsequent chapters of this thesis,

² Cholera has been examined in a variety of relatively recent studies including: Dhiman Barua, 'History of cholera' in Dhiman Barua and William B Greenough, *Cholera* (Plenum Publishing, New York, 1992); Connolly, 'The blessed turf,' pp. 214-32; Duffy, 'Cholera in County Louth,' pp. 117-26; Durey, *The return of the plague*; Fenning, 'The cholera epidemic in Ireland, 1832-3,' pp. 77-125; Gilbert, *Cholera and nation*; Hamlin, *Cholera: The biography*; Morris, *Cholera 1832*; O'Neill, 'Fever and public health in pre-famine Ireland,' pp. 1-34; Robins, *The miasma*.

³ The exact location of the ford is of some debate, even generating a legal dispute in the nineteenth century. For the main work on early Belfast see, Gillespie, *Early Belfast*. However, other works of note include. Raymond Gillespie and Stephen A. Royle, *Irish historic towns atlas no.12: Belfast part I to 1840* (Royal Irish Academy, Dublin, 2003) and Connolly (ed.) *Belfast 400*.

⁴ Gillespie and Royle, *Irish historic towns atlas*, p. 10.

⁵ *First report of the commissioners appointed to enquire into the Municipal Corporations of Ireland*, H.C. 1835 (23), xxviii, 697. Hereafter; *First report Municipal Corporations Ireland*, 1835; See also, Benn, *The history of the town of Belfast*, p. 4.

⁶ For the extent of the early boundaries of Belfast see, *First report Municipal Corporations Ireland*, 1835, p. 697.

was a major source of public antagonism and was a notorious example of the levels of pollution to be found in Belfast's waterways.

Civic Administration, Growth and Environmental Issues

The early civic administration of Belfast differed significantly from Ireland's other major cities, Dublin and Cork which were, 'largely shaped by town councils and only partly by a number of landlords interests.'⁷ In contrast, although it consisted of little more than a ruined castle and a collection of small thatched dwellings, early Belfast was the product of landlord planning and while it was administered by a corporation this body had little impact on the development of the town apart from making occasional by-laws in order to prohibit or control public nuisances.⁸

Economically, Belfast relied on commercial rather than manufacturing interests that did not depend on attracting outside employees. This meant that population growth during the early to mid-eighteenth century was relatively gradual.⁹ However, as a trading port the town enjoyed steady economic development from the late eighteenth century, exporting goods including wool, grain, butter and salted meat. By far the most successful industry, however, was that of cotton manufacture. Factories on the north-western side of the town took advantage of water power from local rivers, particularly the Farset and their success was such that migrants attracted by the prospect of work doubled the population in the period between 1780 and 1811.¹⁰

This rapid growth in population created considerable social issues for which the town was ill-prepared. By the beginning of the nineteenth century, The Belfast Corporation had

⁷ Gillespie and Royle, *Irish historic towns atlas*, p. 1; Gillespie, *Early Belfast*, p. 53.

⁸ Gillespie and Royle, *Irish historic towns atlas*, p. 1; Budge and O'Leary, *Belfast: Approach to crisis*, p. 1; Maguire, *Belfast*, p. 13; *First report Municipal Corporations Ireland*, 1835, p. 698

⁹ Beckett, 'Belfast to the end of the eighteenth century,' p. 18.

¹⁰ Gillespie and Royle, *Irish historic towns atlas*, p. 6.

become increasingly ostracised from the life of the town and was said to have, ‘scarcely impinged upon the consciousness of the citizens.’¹¹ However, it was still the body responsible for dealing with the issues that expansion and population growth created. From 1800, many of the infrastructural responsibilities of the corporation, including the responsibility of overseeing paving, lighting and cleaning the streets, alongside the provision of a night watch and a fire service passed to the Commissioners of Police, formed under the ‘Belfast Police Act.’¹² The Act established a two-tier structure, a supervisory body of twenty-one Commissioners of Police (elected for life) and a second body the Committee of Police, also consisting of twenty-one members but elected annually and subordinate to the commissioners.¹³

Waste disposal represented one of the most pressing problems that faced these organisations and while contractors were employed to cleanse the streets under the supervision of the Police Commissioners, they were often unable to keep Belfast sufficiently clean.¹⁴ Most of the waste generated arose from the development of housing constructed to accommodate Belfast’s growing population. However, as Gillespie and Royle note, ‘there were no mechanisms to deal with the social problems that expansion created.’¹⁵ The landlord was an absentee, the corporation were effectively powerless and

¹¹ Budge and O’Leary, *Belfast: Approach to crisis*, p. 7.

¹² An Act for paving, cleansing and lighting, and improving the several streets, squares, lanes and passages within the town of Belfast in the County of Antrim, and for removing and preventing all encroachments, obstructions and annoyances therein, and also for establishing and maintaining a nightly watch throughout the said town and precincts thereof and for other purposes, 1800. (40 Geo III c.37). Hereafter, ‘The Belfast Police Act’ (1800). See also, Statutes passed in the parliaments held in Ireland: 1799-1800, Vol. xii Chapt. xxxvii. (George Grierson, Dublin, 1801), pp. 63-101; Benn, *The history of the town of Belfast*, p. 88; Budge and O’Leary, *Belfast: Approach to crisis*, p. 15; Sean Connolly, ‘Belfast: The rise and fall of a civic culture’ in Purdue (ed.), *Belfast: The emerging city*, pp. 28-9; Royle, ‘Clanging Belfast,’ pp. 22-3. For more on the history of Belfast policing in the nineteenth century see Griffin, *The Bulkies*, pp. 8-11.

¹³ Budge and O’Leary, *Belfast: Approach to crisis*, p. 15; Connolly, ‘Belfast: The rise and fall of a civic culture,’ pp. 28-9; Royle, ‘Clanging Belfast,’ pp. 22-3.

¹⁴ Royle, ‘Clanging Belfast,’ p. 23.

¹⁵ Gillespie and Royle, *Irish historic towns atlas*, p. 6.

as there were no regulations governing the construction of houses, conditions, particularly in the poorest areas of the town, were often appalling.

Housing for the labouring poor was laid out in a grid pattern of confined and insanitary courts, lanes and alleys. The water supply was wholly inadequate for the demands of the town and this became a key issue that would remain unresolved until the twentieth century, as did sanitary provision, particularly the disposal of sewage, which was largely left to the owners of individual houses or streets.¹⁶ The rivers, already polluted by industrial effluent, also became receptacles for domestic waste. High tides caused regular flooding and made the sanitary conditions experienced by the people who resided nearby inherently worse.¹⁷ It is of little surprise therefore, that when acute outbreaks of epidemic diseases including fever and later cholera, appeared in Belfast they disproportionately overran the poorest areas of the town.¹⁸

A second Act in 1816 expanded the powers of the commissioners but the problem of overlapping jurisdiction was such that there were no clear delineations of responsibility and neither body could assume overall control.¹⁹ This was a situation that was by no means unique to Belfast and as Christopher Hamlin points out, similar bodies in England also rarely had clear allocations of duty.²⁰ Consequently, when diseases like cholera came

¹⁶ For more on the water supply to Belfast see, R. W. M. Strain, *Belfast and its Charitable Society: A story of urban social development* (Oxford University Press, Oxford, 1961), pp. 181-241; Jack Loudan, *In search of water: Being a history of the Belfast water supply* (W.M. Mullan & Son, Belfast, 1940).

¹⁷ Andrew George Malcolm, *The sanitary state of Belfast and suggestions for its improvement* (Henry Greer, Belfast, 1852), p. 4.

¹⁸ The term fever predominantly relates to typhus and relapsing fever. But it was an all-encompassing expression that also could also relate to, among other illnesses, typhoid, influenza, and scarlet fever. For the best accounts relating to the disease in Ireland in the pre and post famine periods see O'Neill, 'Public health in pre famine Ireland,' pp. 1-34; Robins, *The miasma*, p. 33. Malcolm, *The sanitary state of Belfast*, pp. 32-7; For Andrew Malcolm's maps of cholera locations in Belfast for 1832 and 1849 and plan of overcrowded localities in Belfast for 1849 see, Appendix 3 of this thesis.

¹⁹ *The Belfast Newsletter (B.N.L.)*, 7 June 1816; Royle, '*Clanging Belfast*,' p. 23; Maguire, *Belfast*, p. 40. Budge and O'Leary, *Belfast: Approach to crisis*, p. 16.

²⁰ Hamlin, *Cholera: The biography*, p. 121.

they ‘exposed and exacerbated these incoherent administrations.’²¹ In fact, three years after cholera’s first epidemic in 1832, the commissioners investigating Ireland’s municipal corporations severely chastised the ineffectiveness of Belfast’s Corporation and its lack of benefit to the town’s inhabitants. ‘The corporation as now conducted’ they observed:

Embraces no principle of representation and confers on the inhabitants no benefit. No power of control or check is preserved; the proceedings are carried on without publicity and the consequences have been that great neglect and abuse of trusts in the body have occurred and have remained so long concealed that the utmost difficulties now lie in the way of any attempt to correct them.²²

The health of Belfast’s population was also affected by this lack of a comprehensive system to deal with the sanitary issues created by industrialisation and urbanisation. Thus, such sanitary provisions as there were in the early part of the nineteenth century had little impact in terms of dealing with the diseases experienced by Belfast’s inhabitants.²³ As the century progressed, advancements in medical understanding deepened, and the significance of sanitation became intricately intertwined with medical and scientific responses to infectious diseases. It is worth noting, however, that the roots of this connection were already discernible in the earlier development of medical provision over the preceding two centuries.

Early Medical Provision

The first reference to the acknowledgement of the necessity of providing for the sick in Belfast comes from the mid-seventeenth century when Ireland had been divided into fifteen precincts of which Belfast and the three counties of Down, Antrim and Armagh

²¹ *Ibid.*, p. 121.

²² *First report Municipal Corporations Ireland*, 1835, p. 701.

²³ For more on industrialisation and health in Belfast see Peter Froggatt, ‘Industrialisation and health in Belfast in the early nineteenth century’ in Harkness and O’Dowd (eds), *The town in Ireland*, pp. 155-79.

formed one.²⁴ Each precinct was placed under the control of commissioners who had extensive powers; but in terms of providing for the sick, it is clear that the commissioners were advised to decide on the best course of action for their individual areas. A reply to inquiries made in 1651 informed them that:

If there be want of a doctor or apothecary amongst you, and you can find fit and able persons for that purpose, we leave to you the choice of them, and the granting of their salaries, only limiting you in this, that you exceed not £100 yearly to the doctor, nor £50 yearly to your apothecary.²⁵

In 1689, soldiers involved in the Williamite Wars were garrisoned in Belfast. The governor of the town, Thomas Pottinger, furnished them with a storehouse and a hospital where the sick were attended to during the early months of 1690.²⁶ However, the ‘Great Hospital’ as it was known, suffered high rates of mortality from a severe outbreak of fever.²⁷ From 1 November 1689, to 1 May 1690 as many as 3,762 men died.²⁸ The contagious nature of the various fevers experienced at this time was still obviously unknown but it is clear that the diseases of the soldiers quickly spread to the townsfolk.

George Story, a Chaplain in William’s army noted in his account of the war that:

The fever was very violent at this time all the North of Ireland over, insomuch that it was impossible to come into any house but some were sick or dead, especially at Belfast where the Hospital was. I have sometimes stood upon the street there and seen ten or a dozen corps (of the townspeople) go by in little more than half an hour.²⁹

²⁴ Robert Esler, ‘Early history of medicine in Belfast: Transactions of the Ulster Medical Society, Session 1884-5’ in *Dublin Journal of Medical Science*, Vol. lxxix (1885), pp. 158-69.

²⁵ *Ibid.*, p. 158; Strain, ‘The foundations of Belfast medicine,’ p. 18.

²⁶ *Ibid.*, p.19; Esler, ‘Early history of medicine in Belfast,’ p. 158; Benn, *The history of the town of Belfast*, p. 41.

²⁷ *Ibid.*, p. 41; George Warter Story, *An impartial history of the wars of Ireland* (Ric. Chiswell, London, 1693), p. 50.

²⁸ Esler, ‘Early history of medicine in Belfast,’ p. 159; Strain, ‘The foundations of Belfast medicine,’ p. 19; Benn, *The history of the town of Belfast*, p. 41.

²⁹ Story, *An impartial history of the wars of Ireland*, p. 50.

Following the end of the campaign, the hospital was closed leaving Belfast with no institution to deal with its sick although doctors were available to deal with the town's population on a paid basis.³⁰

Yet, even in this early period, there is clear evidence of concern regarding sanitation and its links to illness in Belfast. Local laws which attempted to curtail the level of waste created by the inhabitants were issued, but how strictly they were adhered to or were enforced is unknown. However, what they do show, from the threat of harsh penalties for offenders, is that the principal concern was the pollution of the town's watercourses. The laws in force stated:

No one to make dunghills to continue longer than three days in the open street before the door, or throw carrion, dying stuff, or any loathsome thing into the river, under a penalty of 5s.

Complaints are made that great annoyance is caused by butchers suffering the blood and garbage of their slaughter-houses to lie in the street, and run in the kennels and ditches of the town, to the corruption of the river and annoyance of the neighbours, by reason of the evil and infectious smells; and it is ordered by the authorities that all blood and garbage be carried twenty yards beyond high-water mark, under a penalty of 20s.³¹

During the eighteenth century, medical matters in Belfast go largely unrecorded until after the establishment of the *Belfast Newsletter* in 1737.³² However, even then, as Robert Esler has observed, 'where matters medical are referred to, they are generally more amusing than instructive.'³³ Responsibility for administering care to the sick was usually placed upon families and was provided for the most part at home. For those that could afford it,

³⁰ Strain, 'The foundations of Belfast medicine,' p. 19.

³¹ Esler, 'Early history of medicine in Belfast,' p. 159.

³² *Ibid.*, p. 159. Strain, 'The foundations of Belfast medicine,' p. 19.

³³ Esler, 'Early history of medicine in Belfast,' p. 159.

untrained nursing assistance could be found, and at home, patients received better care and were protected from the serious infections that were a scourge of early hospitals.³⁴

It can be seen therefore, that before the late eighteenth century, the majority of people in provincial Ireland who were susceptible to disease did not have access to professional medical care. In addition, the few medical institutions that provided for the poor were largely restricted to Dublin.³⁵ Dublin's House of Industry (poorhouse) for example, was established in 1703 and provided public hospital care for adults and foundling children.³⁶ However, its record, as well as that of its successor the Foundling Hospital, established in 1730, was abysmal, and as James Kelly has observed, it served to highlight the fact that the country's politicians did not accept that 'it was their responsibility to provide against illness for those in state institutions.'³⁷ The most noteworthy initiatives to provide public health care therefore came from philanthropic sources, including Sir Patrick Dun, Dr Richard Steevens, Mary Mercer and six Dublin surgeons who established the city's Charitable Infirmary.³⁸

³⁴ Richard Clarke, *The Royal Victoria Hospital, Belfast: A history 1797-1997* (Blackstaff Press, Belfast, 1997), p. xv. and p. 1. The rich often had personal physicians. Apothecaries and surgeons were also used by the well off. All three branches were most likely to be found in Dublin. As yet no work has been done specifically in relation to Belfast.

³⁵ By 1835, Dublin had three voluntary hospitals and Cork had one. For more on hospital provision in this period see James Kelly, 'The emergence of scientific and institutional medical practice in Ireland 1650-1800' in Jones and Malcolm (eds), *Medicine, disease and the state*, pp. 26-9.

³⁶ For more on the emergence of institutional provision in seventeenth- and eighteenth-century Ireland see, Kelly, 'The emergence of scientific and institutional medical practice', pp. 21-39. For charity and the state see, Geary, 'The poor and the sick in pre-famine Ireland,' pp 187-200; Geary, *Medicine and charity in Ireland*; Gerard O'Brien, 'State intervention and the Irish poor 1787-1850' in Jones and Malcolm (eds), *Medicine, disease and the State*, pp. 195-207.

³⁷ Kelly, 'The emergence of scientific and institutional medical practice,' p. 26; John F. Fleetwood, *The history of medicine in Ireland* (2nd edition, Skellig Press, Dublin, 1983). For more on provincial health care in late eighteenth century Ireland see also Andrew Sneddon, 'State intervention and provincial health care: The county infirmary system in late 18th century Ulster' in *Irish Historical Studies*, Vol. 38(149) (2012), pp. 5-21.

³⁸ Kelly, 'The emergence of scientific and institutional medical practice,' pp. 26-7; Geary, 'The poor and the sick in pre-famine Ireland,' pp. 190-1.

While Dublin had established three voluntary hospitals by 1735, Belfast's process of providing institutional facilities for the care of the sick poor evolved much later. Although a fund for the relief of the poor in Belfast had been established in the early seventeenth century, it depended on gifts and bequests and was therefore completely inadequate as a regular system of support.³⁹ Provision for the relief of the sick poor was also largely unheard of until the establishment of the Belfast Poorhouse, which opened in 1774.⁴⁰ The poorhouse owed its foundations to the philanthropic efforts of a small number of eminent Belfast merchants that had led in turn to the establishment of the Belfast Charitable Society following a meeting in the George Inn on the corner of North Street and John Street on 28 August 1752.⁴¹ The stated aim of the society was, 'to consider of a proper way to raise a sum for building a poorhouse and hospital and a new church in or near the town of Belfast.'⁴²

The project was funded by member's subscriptions, and a nationwide lottery was also set up to help generate funds. However, as Robert Strain observes, tickets were often difficult to sell and consequently the society also decided to take over a series of tickets in London's state lottery.⁴³ Ultimately, the lottery scheme proved to be a protracted way of raising the required funds and it took around twenty years before the amount of £7,500 had been raised.⁴⁴ The merchants also turned to Belfast's principal landlord, The Fifth

³⁹ Beckett, 'Belfast to the end of the eighteenth century,' p. 21; R. W. M. Strain, 'The history and associations of the Belfast Charitable Society; Address given to The Ulster Medical Society, 13 Nov. 1952' in *Ulster Medical Journal*, Vol. 22(1) (1953), pp. 31-60. For the full history of the Society along with associated urban and social development in Belfast see Strain, *Belfast and its Charitable Society*.

⁴⁰ Robert M. Young (ed.), *Town book of the Corporation of Belfast 1613-1816* (Edited from the original, Marcus Ward and Co, London, 1892), p. xii. Clarke, *The Royal Victoria Hospital*, p. xv and p. 2. Beckett, 'Belfast to the end of the eighteenth century,' p. 21.

⁴¹ Strain, 'The history and associations of the Belfast Charitable Society,' p. 33.

⁴² Minutes of the inaugural meeting of the Belfast Charitable Society, 28 August 1752. Quoted in, Strain, 'The history and associations of the Belfast Charitable Society,' p. 33.

⁴³ *Ibid.*, pp. 33-4.

⁴⁴ Extracts from the minutes of the Belfast Charitable Society relative to the new burying ground (preface); Public Record Office of Northern Ireland (PRONI) MIC/61/12.

Earl of Donegall for assistance.⁴⁵ Lord Donegall donated about twenty acres of land for the buildings, secured, 'at a low rent' and on 1 August 1771 the foundation stone of the poorhouse and infirmary was laid.⁴⁶

In 1773, additional powers were granted to the society following an amendment to an 'Act for Badging the Poor' of the previous year.⁴⁷ The act acknowledged that Belfast was unable to benefit from the provisions of the law to the extent deemed necessary, but it nevertheless recognised the society as a corporate body and authorised it to:

Make such and the like byelaws and regulations...with respect to the poor and all idle and sturdy beggars...as the corporations created by virtue of the said act within counties at large, and counties of towns and cities are enabled to do.⁴⁸

Although it was a voluntary body, the act essentially gave the society the power to function as the governing body of Belfast and as such, it assumed responsibility for many of the town's public services including its water supply, graveyard and hospital. Tasks which otherwise would have fallen to the local authorities, had Belfast then been a city or county borough.⁴⁹

⁴⁵ Clarke, *The Royal Victoria Hospital*, p. xv & p. 2.

⁴⁶ Minutes of the Belfast Charitable Society relative to the new burying ground (preface). Strain, 'The history and associations of the Belfast Charitable Society,' p. 35. In a further mark of generosity, Donegall, at his own expense, also erected a new parish church, Saint Anne's, which occupied the site of the present Cathedral.

⁴⁷ An Act for badging such poor as shall be found unable to support themselves by labour, and otherwise providing for them, and for restraining such as shall be found able to support themselves by labour or industry from begging, 1772 (11 & 12 George III c.30); An Act for amending an Act made in the last session of Parliament entitled an Act for badging such poor as shall be found unable to support themselves by labour, 1773 (13 & 14 George III c.46).

⁴⁸ 1773 (13 & 14 George III c.46).

⁴⁹ Strain, 'The history and associations of the Belfast Charitable Society,' p. 36.

In 1774 the Poorhouse and infirmary, which had cost £9000,⁵⁰ was finally open for business, signifying the inauguration of Belfast's hospital provision.⁵¹ It provided seven beds for the sick, four double beds for sturdy beggars, twenty-two double beds for the poor and four single beds for vagrants.⁵² Other services were also provided, including offices, a dining and boardroom, spaces for teaching skills to the unemployed as well as a separate space for children. A dispensary, attended by physicians who agreed to assist for no remuneration also provided free care for the sick poor.⁵³ However, it quickly became clear that much greater provision for the sick especially for treatment in their own homes was required.⁵⁴ To many of the society's medical members the establishment of a local dispensary seemed to provide the most practical solution.

The Origins of the Belfast Dispensary and Fever Hospital

Privately funded dispensaries had begun to afford an invaluable service from the mid-eighteenth century when some of the landed gentry provided rudimentary dispensaries for their tenants.⁵⁵ Soon the practice was extended from these rural estates to provincial towns and in 1805, the Irish Dispensary Act, allowed grand juries to contribute sums equal to the amount of donations and subscriptions, further enabling the development of the dispensary system.⁵⁶ By 1833, the number of dispensaries in Ireland had grown to 452, significantly more than were available to the much larger population of England

⁵⁰A.G. Malcolm, *The history of the General Hospital Belfast and the other institutions of the town* (W&G Agnew, Belfast, 1851), p. 30. See also, Jonathan Bardon, *An Interesting and Honourable History. The Belfast Charitable Society, the First 250 Years, 1772,2002*. (The Belfast Charitable Society, Belfast, 2002). pp. 11-18.

⁵¹ Strain, 'The history and associations of the Belfast Charitable Society,' p. 37; Malcolm, *The history of the General Hospital Belfast*, p. 33. Bardon, *An Interesting and Honourable Society*, p. 17.

⁵² *Ibid.*, p. 37.

⁵³ Clarke, *The Royal Victoria Hospital*, p. 2.

⁵⁴ Strain, 'The history and associations of the Belfast Charitable Society,' p. 37.

⁵⁵ Maurice Russell, 'The poor man's doctor: The rise and fall of the dispensary system in Ulster' in *Ulster Medical Journal*, Vol. 53(1) (1983), p. 4.

⁵⁶ *An Act for the better establishment and regulation of dispensaries for the relief of the sick poor in Ireland*. 45 Geo. III, c. 111 (1805). See also, Geary *Medicine and charity in Ireland 1718-1851*, pp. 54-69.

during the same period.⁵⁷ However, there were still many areas in Ireland where no such facilities existed, a fact that would prove to be significant during later crisis periods.⁵⁸

In Belfast, a number of the town's most eminent citizens paved the way for the first dispensary in 1792.⁵⁹ The group led by Dr James McDonnell along with Charles Brett and Henry Joy from the Belfast Charitable Society, published a prospectus, which detailed the aims of the dispensary and invited subscriptions.⁶⁰ Much of the main part of its text clearly highlights the concerns that its thirty-nine signatories had for the plight of the poor in the town and the document began by stating that:

The importance and utility of the industrious poor to a civilized and commercial nation are indispensable, yet little attention has been paid in this country to the preservation of their lives and health's. Besides the misfortunes to which labourers and artists are liable in common with the rest of mankind, there are many peculiar to themselves - exposed to the inclemency of the seasons, living upon unwholesome food, and crowded into narrow habitations, they become a prey to various diseases; and supporting the existence of to-day by the scanty produce of yesterday's labour a short sickness reduced them to uttermost misery.⁶¹

Following the receipt of subscriptions totalling fifty pounds the dispensary duly appointed two attending physicians, Doctors McDonnell and White, on an honorary basis, as well as two attending surgeons, Messrs' Fuller and McClelland and two consulting physicians, Doctors Halliday and Mattear.⁶² A later addition was Mr Hull, who was appointed as

⁵⁷ Russell, 'The poor man's doctor,' p. 4. For more on dispensaries in England see Irvine S. Loudon, 'The origins and growth of the dispensary movement in England' in *Bulletin of the History of Medicine*, Vol. 55 (1981), pp. 322-42.

⁵⁸ Russell, 'The poor man's doctor,' p. 6.

⁵⁹ *Ibid.*, pp. 6-7; Strain, 'The history and associations of the Belfast Charitable Society,' p. 37. Prior to this the main medical establishment was the County Antrim Infirmary which was sited in Lisburn almost ten miles from Belfast.

⁶⁰ Russell, 'The poor man's doctor,' pp. 6-7; Strain, 'The history and associations of the Belfast Charitable Society,' p. 23.

⁶¹ Prospectus for the Belfast dispensary in Malcolm, *The history of the General Hospital Belfast*, p. 34. For the full text of the prospectus and list of signatories, see, Malcolm, *The history of the General Hospital Belfast*, pp. 34-5. See also Belfast Charitable Society Petition, PRONI T51/1; Belfast Charitable Society Papers 1767-1986, PRONI Mic 61. The minutes and records of the Belfast Charitable Society from 1752 to 1977 are also available in the Belfast Charitable Society Archive, Linen Hall Library Belfast.

⁶² Russell, 'The poor man's doctor,' pp. 6-7.

apothecary following a ballot.⁶³ In its early years, the dispensary proved to be exceedingly popular. Its premises, a house in Factory Row, now Berry Street in central Belfast, contained six beds for fever patients, and during its first four years some 2,406 patients received medicines as well as medical and surgical advice. Of these, 1,740 were pronounced cured, 336 relieved, 50 dismissed as incurable and 280 either died or had no report made about their condition.⁶⁴

The dispensary's early period was also marked by recurrent epidemics of fever and by a lack of funding.⁶⁵ However, in 1797 a new proposal for a fever hospital was presented to the public and rapidly accepted.⁶⁶ Under its new title of the Belfast Dispensary and Fever Hospital, it admitted sixty patients, only one of whom died, during its first six months.⁶⁷ However, the new institution, partly from the want of patients, was closed by the end of the year.⁶⁸ It was revived in 1799, but, with the intensification of fever and an increasing population, it had become apparent that more spacious accommodation would be required.⁶⁹ This was achieved by moving to new premises, two houses on West Street, beside Smithfield Market.⁷⁰ However, it was not until 1810 that a more permanent site in Frederick Street was chosen and a building fund started. The fund, financed by legacies, donations and collections at charity sermons grew slowly, but by 1815 enough funding

⁶³ Malcolm, *The history of the General Hospital Belfast*, p. 39. Hull resigned in 1795 and was replaced by Richard Devlin, *ibid.*, p. 42.

⁶⁴ T. Bradshaw, *Belfast general and commercial directory for 1819* (Francis Finlay, Belfast, 1819), pp. xiv-xxvi; Russell, 'The poor man's doctor,' p. 7.

⁶⁵ Clarke, *The Royal Victoria Hospital*, p. 8.

⁶⁶ Bradshaw, *Belfast general and commercial directory for 1819*, pp. xiv-xxvi.

⁶⁷ Malcolm, *The history of the General Hospital Belfast*, p. 51.

⁶⁸ Bradshaw, *Belfast general and commercial directory for 1819*, pp. xiv-xxvi.

⁶⁹ *Ibid.*, p. xxvi; Russell, 'The poor man's doctor,' p. 7.

⁷⁰ *Ibid.*, p. 7; Malcolm, *The history of the General Hospital Belfast*, p. 54.

had been secured and the foundation stone was laid by the Marquis of Donegall on 4 June 1815.⁷¹

The Belfast Fever Hospital

The new Belfast Fever Hospital was designed to accommodate 100 patients (70 medical and surgical, and 30 fever patients).⁷² Although, ‘the walls were wet and the staircase scarcely secure,’ it opened on 1 August 1817 with seventeen patients transferred from the old hospital.⁷³ It was, however, quickly filled to capacity as the result of the severe outbreak of fever between 1816 and 17. Within thirteen weeks of opening, 461 patients had been admitted, rising to a total of 959 admissions over the following three months.⁷⁴

Although the contagious nature of fever was not yet understood, its rapid spread in Belfast was almost certainly facilitated by the large number of factory and mill workers, who, due to financial necessity were unable to take time off work when ill, meaning that, the disease spread readily from person to person, and was further exacerbated by the damp and dusty environment of their workplaces.⁷⁵ Those who did go to hospital, often only on pain of death, were accommodated in general wards but the absence of adequate convalescent wards was soon noted.⁷⁶ Meetings were eventually convened to discuss the hiring extra accommodation, but were held as Andrew Malcolm observed, only after the epidemic had, ‘spent its force.’⁷⁷ The epidemic persisted until 1819, by which time it was estimated that some 7,400 inhabitants had been affected. By May 1820, hospital returns

⁷¹ Ibid., p. 69; Clarke, *The Royal Victoria Hospital*, p. 9. See also, Robert, Marshall ‘The Royal Victoria Hospital, Belfast’ in *Ulster Medical Journal*, Vol.5(1) (1936), pp. 14–24.

⁷² Malcolm, *The history of the General Hospital Belfast*, p. 69.

⁷³ Ibid., p. 73; Benn, *The history of the town of Belfast*, p. 110.

⁷⁴ Bradshaw, *Belfast general and commercial directory for 1819*, p. xxvii, records that there were 461 admissions, 305 recoveries and 15 deaths. Ibid., p. xxvi; Benn, *The history of the town of Belfast*, p. 110.

⁷⁵ Clarke, *The Royal Victoria Hospital*, p. 9.

⁷⁶ Ibid., p. 9.

⁷⁷ Malcolm, *The history of the General Hospital Belfast*, p. 69.

recorded 3,452 admissions, while a further 10,718 prescriptions had been dispensed for the relief of the external poor.⁷⁸

Philanthropy

During periods of exceptional distress, philanthropic assistance became an invaluable method of providing relief and health care to the poor in nineteenth-century Belfast. Among the most important, particularly during the fever and cholera outbreaks of the early to mid-nineteenth century were two that were managed by women, the Belfast Ladies Clothing Society and the Society for the Relief of the Destitute Sick.⁷⁹ The Clothing society was founded in 1819 and its committee was made up of women from families closely associated with philanthropy. The society distributed clothing and blankets, at a nominal fee to the ‘deserving poor,’ those who it thought would not pawn the clothes, upon receipt of a line of referral from a subscriber. This was a particularly useful service, and because it charged for the items distributed, it meant that recipients avoided the stigma of charity.⁸⁰ However, it was a relatively small-scale provider of relief and offered no semblance of medical assistance or advice. On the other hand, The Society for the Relief of the Destitute Sick, founded in 1826, exclusively aimed to assist workers and their families in cases of sickness and poverty. Despite its name, the society did not aim to provide medical treatment or money to those requiring relief. Instead, it issued weekly or fortnightly tickets that were redeemable for coal or food and offered unobtrusive religious instruction.⁸¹ Between 1826 and 1832, relief was provided to 3,684

⁷⁸ Ibid., p. 69; Benn, *The history of the town of Belfast*, p. 110.

⁷⁹ Jordan, *Who cared?* pp. 180-8.

⁸⁰ Ibid., pp. 180-2.

⁸¹ Jordan, *Who cared?* pp. 183-4.

people in this way, but because its members were untrained volunteers, the society could do little to assist those who needed medical treatment.⁸²

In October 1835, the provision of private medical relief for the labouring poor was proposed in a prospectus advocating the establishment of a self-supporting dispensary in Poultry Square (now Victoria Square).⁸³ Such dispensaries had already been successfully introduced in England, providing medicine and medical attendance to labourers and mechanics.⁸⁴ In Belfast, the prospectus was likewise directed at the labouring poor, who frequently avoided seeking medical treatment for fear of the associated costs. It observed that, the labouring poor:

Who still retain an honest feeling of independence and who are consequently unwilling that either they or their families should derive assistance from a source which was designed exclusively for the pauper population...It is well known, that in Belfast, not a few of this class, rather than apply for such gratuitous medical aid as a Dispensary affords, have suffered nature to take its course, and have perished prematurely of diseases, which, humanely speaking, might have been cured, had timely assistance been rendered.⁸⁵

The prospectus claimed that for a small monthly sum, ‘not exceeding their limited means’ labourers could secure medical aid for themselves and their families. Prospective subscribers were also informed that they would also be able to assist the poor by recommending charitable patients according to the value of their subscriptions.⁸⁶ It appeared to offer an advantageous system of relief as it provided for a community which, for the most part, had previously been uncatered for, it also removed, ‘from other institutions,’ the burden of false claims for assistance from ‘improper applicants,’ and

⁸² *Ibid.*, p. 185.

⁸³ *B.N.L.*, 27 Oct. 1835; Prospectus of Belfast self-supporting dispensary, c.1830, PRONI D1923/3/9.

⁸⁴ For England, see Loudon, ‘The Origins and Growth of the Dispensary Movement in England,’ pp. 322-42.

⁸⁵ Prospectus of Belfast Self-Supporting Dispensary.

⁸⁶ *Ibid.*

asserted that in no way, ‘are the virtuous endeavours of the working classes, more fostered and encouraged, than by this system.’⁸⁷ It appears, however, that the proposal was ultimately disregarded, as no further evidence of the dispensary’s establishment survives. Had it been successfully implemented, it might have provided valuable support to the existing system of medical provision and offered significant relief to Belfast’s labouring population during subsequent epidemics of fever and cholera.

Cholera: The Epidemics of the Nineteenth Century

Table 1: List of Global Pandemics 1817-Present

Pandemic	Years
First	1817-24
Second	1829-51
Third	1852-59
Fourth	1860-75
Fifth	1881-95
Sixth	1899-1923
Seventh	1960-present

Table compiled from Hamlin, *Cholera: The biography* and Pollitzer, ‘Cholera studies.’⁸⁸

Geographic Dissemination of Asiatic Cholera⁸⁹

As shown above in Table 1, 1817 marked the onset of the first in a series of global pandemics that saw cholera escape from the Indian sub-continent and extend worldwide.⁹⁰ It was believed to have originated in Bengal; however, as Christopher Hamlin argues, contemporary accounts often involved considerable selective reinterpretation of reports from India, particularly by contemporary cholera historians

⁸⁷ Prospectus of Belfast Self-Supporting Dispensary.

⁸⁸ See Table 1 for the dates of cholera’s global pandemics compiled from Hamlin, *Cholera: The biography*, p. 4; Robert Pollitzer, ‘Cholera studies 1. History of the disease’ in *Bulletin of the World Health Organisation*, Vol.10 (1954), p. 427.

⁸⁹ Definitions vary. However, it is generally accepted that there have been seven global pandemics to date.

⁹⁰ Pollitzer, ‘Cholera studies,’ p. 427. Images from the history of medicine (IHM); Map of routes of Asiatic cholera; John C. Peters, ‘Map of routes of Asiatic cholera’ in *Harper's Weekly*, vol. 29, 25 Apr. 1885, p. 268. (<http://ihm.nlm.nih.gov/luna/servlet/detail/NLMNLM~1~1~101435614~139818:-Map-of-Routes-of-Asiatic-Cholera>) (13/01/2012).

such as John Macpherson and Nottidge Charles MacNamara, who tended to overlook other regions where cholera was present but which went unrecorded by European observers.⁹¹

In early August 1817 the disease spread to Calcutta, where, in his later account of cholera in the English port town of Sunderland, James Butler Kell, an army surgeon, observed that it ‘excited the utmost alarm.’⁹² From Calcutta, it spread in various directions throughout the interior of India, carrying off both natives and European settlers in large though not equal numbers.⁹³ One report estimated that, ‘one-tenth of the population of Hindustan was, in the whole, attacked by the epidemic, of which one-sixth died.’⁹⁴ Curiosity and fear accompanied the disease, leading James Annesley, a physician to the East India Company in Madras, to comment; ‘There are few diseases which have excited more interest among medical men, or more terror in the mind of the Indian community at large, than the epidemic cholera.’⁹⁵ The epidemic in India continued until around 1820 and while the true death toll will never be known David Arnold estimates that the

⁹¹ N. Charles MacNamara, *A history of Asiatic cholera* (Macmillan, London, 1876); John MacPherson, *Annals of cholera from the earliest periods to the year 1817* (2nd Edition, H.K. Lewis, London, 1884). For more on MacNamara and MacPherson see, Hamlin, *Cholera: The biography*, pp. 39-46: Idem, ‘The cholera stigma and the challenge of interdisciplinary epistemology: From Bengal to Haiti’ in *Science as Culture*, Vol. 21(4) (2012), pp. 445-74.

⁹² James Butler Kell, *On the appearance of cholera at Sunderland in 1831; With some account of that disease* (Adam and Charles Black, Edinburgh, 1834), p. 3. Kell, an army surgeon had observed and treated cholera in Mauritius during 1819-20 and in 1829, his excellent and in-depth history of cholera provides a fascinating account of the dissemination of cholera. Further contemporary accounts are also to be found in the various medical journals of the period particularly within the *Edinburgh Medical and Surgical Journal* see vol. 37 (1832), pp. 180-210 and 214-21. See also, John Warner Barber, *An account of the rise and progress of the Indian or spasmodic cholera: With a particular description of the symptoms attending the disease: Illustrated by a map, showing the route and progress of the disease, from Jessore, near the Ganges, in 1817, to Great Britain, in 1831* (L.H. Young, New Haven, 1832).

⁹³ Kell, *On the appearance of cholera at Sunderland*, p. 3.

⁹⁴ Report by Mr Corbyn, then assistant surgeon in charge of the native hospital of the centre division, dated Erch, on the Betwa, 26 Nov. 1817, and published by order of the government, the calculations he states are by M. Moreau de Jonnes. However, Corbyn could not confirm what data the calculations were based upon. Quoted in Kell, *On the appearance of cholera at Sunderland*, pp. 3-4.

⁹⁵ James Annesley, *Sketches of the most prevalent diseases of India* (Underwood, London, 1825), p. xv.

epidemic could have been responsible for the deaths of anywhere from one to two million people.⁹⁶

From 1818, cholera spread from India across both land and sea routes.⁹⁷ The disease appears to have gained a foothold first in Ceylon from where it spread to Nepal and across the Himalayas into Tibet.⁹⁸ Transmission over sea routes also saw cholera reach the Mauritian island of Penang in October where it killed over 800 inhabitants. When it reached Mauritius in November, it was said to have been responsible for the deaths of almost a quarter of the island's population by the time of its cessation in January 1820.⁹⁹ Elsewhere, cholera had killed 40,000 in Bangkok by September 1820 and had swept into China and along the Persian Gulf during 1821. At Bushehr in Iran, it accounted for 14,000 deaths in fifteen days. In June 1821 at Muscat in the Gulf of Oman, it killed 10,000 in a month. Throughout Arabia, one-third of the inhabitants of the towns visited by it died.¹⁰⁰ Between 1822 & 23, Egypt was also affected by cholera. However, as Kell observed, the Egyptian viceroy, at the suggestion of the Council of Health in France, adopted sanitary precautions which largely prevented a more severe and widespread epidemic.¹⁰¹

In September 1823, cholera finally managed to enter Europe first appearing in southern Russia at Astrakhan on the Volga Delta.¹⁰² Almost simultaneously, it also struck the Russian flotilla in the Volga. However, severely cold weather as well as precautions adopted by the Russian authorities were believed to have stopped the disease and it was

⁹⁶Arnold, *Colonizing the body*, p. 163.

⁹⁷ Pollitzer, 'Cholera studies,' p. 429.

⁹⁸ Ibid., p. 429, Kell, *On the appearance of cholera at Sunderland*.

⁹⁹ Almost 20,000 people according to a report by Dr Burke the chief medical officer in Mauritius. See, Kell, *On the appearance of cholera at Sunderland*, p. 6.

¹⁰⁰ Ibid., p. 7. Pollitzer, *Cholera*, p. 20.

¹⁰¹ Kell, *On the appearance of cholera at Sunderland*, p. 7.

¹⁰² Ibid., p. 8.

considered to have been eradicated.¹⁰³ This cessation proved only temporary, as cholera re-emerged in Astrakhan in July 1830. From there, it spread to Moscow and was transmitted to Polish troops via the Russian army during the November Uprising where retreating Russian forces were said to have left the unburied bodies of soldiers who died from cholera out in the open where they were eaten by animals or polluted fresh water supplies. In June 1831, a *Belfast Newsletter* report on the conflict, acknowledged this Russian aggression and the spread of cholera telling its readers that:

The Russians consistent in everything to render hideous their barbarous aggression, having in almost every instance abandoned their infected sick, carried off their medicine chests and left behind them a livid tumulus of pestilence as a fit trophy to record the glory of their exploit.¹⁰⁴

From 1831, cholera spread rapidly throughout the majority of Europe particularly through the large coastal ports. After reaching the Baltic port of Riga, which shared well-defined trade links with Britain, it was only a short time before it arrived on British shores. The disease, almost certainly transported by infected ships' crews who were able to avoid the quarantine measures put in place at British ports, first appeared in Britain in the north-east port of Sunderland on 23 October 1831¹⁰⁵ While the outbreak was not particularly severe, accounting for just 215 deaths, cholera subsequently spread reasonably rapidly throughout Great Britain, ultimately resulting in approximately 32,000 deaths as the epidemic ran its course between 1831 and 32.¹⁰⁶ In early 1832, the disease spread to

¹⁰³ Kell, *On the appearance of cholera at Sunderland*, p. 8.

¹⁰⁴ *B.N.L.*, 3 June 1831. See also *The Morning Chronicle*, 24 June 1831 and 'Report of Dr Schnur on the propagation of cholera in the kingdom of Poland' in *Edinburgh Medical and Surgical Journal*, Vol. 37 (1832), pp. cxxxiv-cxlvii.

¹⁰⁵ Kell, *On the appearance of cholera at Sunderland*, p. 28.

¹⁰⁶ N.B Kell records 418 cases and 202 deaths between 23 October and 31 December, however cholera lingered into 1832, see, Kell, *On the appearance of cholera at Sunderland*, p. 104. See also: Charles Creighton, *History of epidemics in Britain; Volume Two 1666-1893* (Frank Cass and Co, London, 1965), p. 799. Figures for England, as is also the case elsewhere, differ according to source but not immeasurably and the inaccuracies of the statistics were also recognised by contemporaries. For example, the British General Board of Health in its *Report on the epidemic cholera of 1848 and 1849* warned that 'there were in 1832 no means of obtaining an accurate return of the number of attacks and deaths; nor has there been

Ireland. Beginning in Belfast in late-February, cholera, over the course of its duration, as recorded by the 1841 census commissioners, was subsequently responsible for at least 66,000 cases and some 25,378 deaths (38.4% mortality) between 1832 and 33.¹⁰⁷ Although the true toll was likely to have been significantly higher; among Ireland's 7.8 million people, these statistics represented the highest per capita mortality rate in the whole of the United Kingdom.¹⁰⁸

Later Epidemics

While cholera seemed to quickly disappear from both the minds of the public and government officials in the United Kingdom after 1832, the disease continued to spread globally. For instance, it assumed epidemic proportions at Mecca during the 1835 Hajj pilgrimage and at the same time began to spread in Europe. It attacked much of southern France and from the French Riviera spread throughout Italy between 1835 and 37. Serious outbreaks were also reported in Vienna and Hungary and the English city of Coventry in 1836, and in 1837, outbreaks occurred in Prussia, Russia, Poland and in the German city of Hamburg¹⁰⁹

After 1840, the disease became widespread once more in India and subsequently spread to China, the Philippines and Burma. In 1845, cholera invaded most of the seaboard of the Arabian Peninsula. From there it spread to Persia and along the Caspian shore and

any return that can be relied on of the number of attacks in the late epidemic.' See: *Report of the General Board of Health on the 1848-49 cholera epidemic*, p. 10. HC, 1850, [1273] [1274] [1275], xxi.3, 185, 365. Hereafter, *Report of the General Board of Health 1848/49*.

See also, Morris, *Cholera 1832*, p. 79; E. A. Underwood, 'The history of cholera in Great Britain' in *Proceedings of the Royal Society of Medicine*, Vol. xli (1947), pp. 165-73; Creighton, *History of epidemics*, pp. 799-833.

¹⁰⁷*Report of the Commissioners appointed to take the census of Ireland for the year 1841* BPP, 1843, XXIV (504), p. xix. Hereafter, *Census of Ireland (1841)*.

¹⁰⁸ Robins, *The miasma*, p. 108. In Great Britain there were approximately 32,000 deaths in a population estimated to have been between 16 and 17 million.

¹⁰⁹ Pollitzer, *Cholera*, pp. 25-6.

moved along the Volga to the Black Sea coast and into the interior of Russia.¹¹⁰ By early 1848, it had spread throughout much of Europe, including Norway, The Balkan States, England, Ireland and Spain. In Arabia, infected pilgrims returning from Mecca were believed to have transported the disease to Egypt, while in America, European emigrants were largely blamed for transporting cholera across the Atlantic.¹¹¹ During 1849 almost no part of Europe went untouched by cholera and in most places mortality rates surpassed those of the previous epidemic. As a result, governments slowly began to pay attention to the relationship between disease sanitation and hygiene as internationally, sanitarians, many of them statisticians, began to exert greater influence, using mortality data to advance broader arguments about the social determinants of disease. In France, for example, René Villermé used the 1832 outbreak in Paris to show correlations between disease and poverty.¹¹² In America, a Bostonian publisher, Lemuel Shattuck, chaired a Massachusetts legislative commission that blamed social and environmental factors for deteriorating public health and suggested that the state should be made responsible for eliminating waste and for providing water and sewer systems. The report, however, went largely ignored for two decades.¹¹³

In England, sanitarians played a vital role in influencing changes to public health provision. Above all, Edwin Chadwick stands foremost. Alongside James Kay-Shuttleworth and Thomas Southwood Smith, Chadwick championed a theory based on the connection between filth and disease and proposed that the provision of water and

¹¹⁰ Ibid., p. 26.

¹¹¹ Pollitzer, *Cholera*, pp. 27-9.

¹¹² Hays, *The burdens of disease*, p. 143. For more on Villermé and cholera in Paris see Ann Elizabeth Fowler La Berge, *Mission and method: The early nineteenth-century French public health movement* (Cambridge University Press, Cambridge, 1992), William Coleman, *Death is a social disease: Public health and political economy in early industrial France* (University of Wisconsin Press, Madison, 1982). Francois Delaporte, *Disease and civilization: The cholera in Paris 1832* (Cambridge MIT press, Massachusetts, 1986).

¹¹³ Hays, *The burdens of disease*, p. 144.

sewerage systems were key requirements for a clean society.¹¹⁴ In turn, Chadwickian theory would inspire British policies of sanitary reform in the latter half of the century.¹¹⁵

In Ireland, as Robins has noted, ‘there was no sanitary reformer...in the nature of Chadwick.’¹¹⁶ However, several prominent figures from the medical establishment, including Dr William Stokes and Dr Edward Mapother in Dublin and Dr Andrew Malcolm in Belfast advocated the importance of sanitary improvement. Malcolm, in particular, was instrumental in influencing public health reforms and responses. His 1852 report on the *Sanitary State of Belfast* for example, was undoubtedly one of the most important public health publications of the mid-nineteenth century.¹¹⁷

1852 also saw the start of the third global pandemic of cholera. Again, it arose in India spreading to Northern Europe, America, and the West Indies in 1853.¹¹⁸ From 1853-4, the disease exacted a serious death toll in Greece and Turkey, its spread closely linked to the transport of troops from southern France who had been engaged in the Crimean War.¹¹⁹

In Britain, cholera had a similar demographic impact to the epidemic of 1832 and is believed to have caused some 21,800 deaths in England and Wales as well as approximately 6,000 in Scotland.¹²⁰ In Ireland, cholera was less widespread than it had been previously and the country suffered less than 3,000 deaths.¹²¹ However, for those

¹¹⁴ Ibid., p. 144.

¹¹⁵ Hays, *The burdens of disease*, p. 145; Hamlin, *Cholera: The biography*, p. 191.

¹¹⁶ Robins, *The miasma*, p. 230.

¹¹⁷ See, Malcolm, *The sanitary state of Belfast*.

¹¹⁸ Pollitzer, *Cholera*, p. 30.

¹¹⁹ Ibid., p. 30.

¹²⁰ Underwood, ‘The history of cholera in Great Britain,’ p. 169; Creighton, *History of epidemics*, p. 852 and 855.

¹²¹ *Third annual report of the commissioners for administering the laws for the relief of the poor in Ireland, under the Medical Charities Act, 14 & 15 Vict., cap. 68.* p. 354. H.C. 1855 (1908), xvi, 193. Hereafter, *Third report PLC* (1855). *Fourth report of the commissions for administering laws for relief of poor in Ireland under Medical Charities Act 14 & 15 Vict., cap. 68.* p. 146, H.C. 1856 (2062), xix, 185. Hereafter, *Fourth report PLC* (1856).

affected by cholera, the mortality rate of thirty-nine per cent was similar to that experienced during both previous epidemics.¹²²

Cholera's fourth global pandemic began around 1860 and saw a marked change to its traditional pattern of dissemination. In 1865, the disease was prevalent in Egypt when pilgrims returning from the Hajj in Mecca brought it to the port of Alexandria. From there cholera was transported via shipping routes to a large number of European ports. In Britain, cholera first appeared on the south-coast of England before spreading throughout the country. Though widespread, the epidemic's impact was much less severe than during previous outbreaks. Accounting for 14,378 deaths in England and Wales the most acute waves occurred in Liverpool and London.¹²³ In Ireland, the first cases were reported on board an emigrant ship at Cork in early May 1866.¹²⁴ The subsequent epidemic was largely confined to the province of Leinster and almost wholly to Dublin. Ulster on the other hand, escaped almost entirely with only eighty-seven deaths recorded by the Poor Law Commissioners during 1866.¹²⁵ Nevertheless, it is notable that of the small number of cases recorded in the official returns for Belfast the case fatality rate exceeded fifty per cent, highlighting the exceedingly slow pace of municipal and public health reforms.¹²⁶

¹²² See *Abstract of return of all reports addressed to the commissioners of Poor Laws in Ireland, relative to the appearance and spread of cholera in that country, and of all correspondence arising thereon; together with a return of all cases of cholera hitherto reported to the commissioners from each Poor Law Union in Ireland*, p. 42, H.C. 1854 (109), lvii, 485. Hereafter, *Abstract reports to PLCs in Ireland* (1854); *Third report PLC* 1855, p. 354; *Fourth report PLC* (1856), p. 10 and p. 146.

¹²³ Underwood, 'The history of cholera in Great Britain,' p. 170.

¹²⁴ *Hansard*, clxxxiii, 358-60 (03 May 1866), pp. 353-8.

¹²⁵ *Annual report of the commissioners for administering the laws for relief of the poor in Ireland, including the twentieth report under the 10 & 11 Vic., c. 90, and the fifteenth report under the 14 & 15 Vic., c. 68: with appendices*. p. 31. H.C. 1867 (3877), xxxiv, 397. Hereafter, *Twentieth report PLC* (1867).

¹²⁶ *B.N.L.*, 30 Jan. 1867.

Cholera: Definitions, Pathogenesis, Symptoms and Treatments

There has long been a lack of agreement about the early history of cholera, with considerable uncertainty surrounding both its definition and etymology. According to Dhiman Barua, confusion arose because, ‘it was difficult to define cholera precisely and to distinguish it from many other diseases associated with diarrhoea and vomiting.’¹²⁷ Despite this ambiguity, it is clear that cholera was, without doubt, a global disease. As the physician and retired Inspector of Army Hospitals in Bengal, John MacPherson, observed in his account of cholera prior to 1817, ‘almost every language seems to have had a popular name for it.’¹²⁸

By the early-nineteenth century, definitions of cholera had somewhat changed. *Cholera Morbus*, for example, was used to describe gastroenteritis with vomiting and diarrhoea, but it was not usually perceived as a severe disease, nor a spreading one.¹²⁹ This was a perception that would change after 1817, but as Christopher Hamlin makes clear, this shift, ‘from cholera as a transitory state of ones constitution to cholera as a relentless and deadly invader was neither quick nor unproblematic.’¹³⁰ After 1830, cholera, spasmodic, epidemic and later Asiatic, (in reference to its connection to India) although its symptoms were similar to older definitions, came to refer to the new pandemic disease. In the early-nineteenth century. However, *Cholera Morbus*, or *Cholera Nostras* (our cholera) were still used to define old cholera, an endemic form of gastroenteritis common during the spring and summer particularly in Britain and Ireland.¹³¹

¹²⁷ Barua, ‘History of Cholera,’ p. 1.

¹²⁸ MacPherson, *Annals of cholera*, p. 14.

¹²⁹ Hamlin, *Cholera: The biography*, p. 20.

¹³⁰ *Ibid.*, p. 20.

¹³¹ Hamlin, *Cholera: The biography*, p. 21.

Severity and epidemicity were the defining features of ‘new’ cholera. Yet, in medical circles, confusion between this pandemic form and its endemic counterpart were common.¹³² Although, new cholera, could be anticipated, as its pandemics approached slowly, it was highly fatal and spread globally. The old, endemic form, however, was much less fatal and normally restricted to small outbreaks in individual areas, yet, at the beginning of an outbreak it was almost impossible to definitively declare the presence of new or old, thus fear and continued confusion regularly led to misdiagnosis of suspicious cases.¹³³ Fear, anxiety and paranoia, particularly among the public, accompanied every epidemic outbreak of cholera occasionally leading to unusual claims. In October 1831 for example, the *Belfast Newsletter* reprinted a report from Berlin which stated with authority that domestic waterfowl and freshwater fish had been affected by cholera and had died in great numbers.¹³⁴

Cholera was also notoriously erratic, it struck hard, but it also struck strangely, attacking some towns while leaving neighbouring areas untouched. It could move at pace, or it could travel slowly, leading communities into a false sense of security when an outbreak did not arise or ended rapidly. Often it was the case that a cholera outbreak would be declared extinguished only for it to rear up again with even more ferocity a short time later.¹³⁵ The unpredictable nature of its progress therefore, caused panic confusion and anger. Cholera riots and protests against the medical establishment, particularly, but not exclusively, in England, were all too common.¹³⁶ Almost everywhere, doctors were

¹³² *Ibid.*, p. 20.

¹³³ Hamlin, *Cholera: The biography*, p. 20.

¹³⁴ *B.N.L.*, 11 October 1831.

¹³⁵ Briggs, ‘Cholera and society,’ pp. 18-19.

¹³⁶ For more on cholera and popular protest specifically in the early part of the nineteenth century see Michael Holland, Geoffrey Gill and Sean Burrell (eds), *Cholera & conflict: 19th century cholera in Britain and its social consequences* (Medical Museum Publishing, Leeds, 2009) and Durey, *The return of the plague*, pp. 158-9.

feared as purveyors of nauseous or painful remedies. In Britain, cholera was at times interpreted as a deliberate attempt to poison the impoverished, driven by the belief that doctors sought to have a steady supply of cadavers for dissection.¹³⁷ Similar suspicions appeared elsewhere, and across Europe the disease was often imagined as part of a wider genocidal conspiracy to reduce the population of the poor.¹³⁸ Yet, despite the persistence of such fears, nothing proved more alarming than the effects of the disease itself.

Asiatic or epidemic cholera is an acute waterborne diarrhoeal disease caused by the short rod or comma shaped gram-negative bacterium *Vibrio Cholerae*. In the early part of the nineteenth century, it was understood to be a generic constitutional condition and later a specific invasive disease, but it was not until the latter half of the nineteenth century that the vibrio was identified as its causal agent.¹³⁹ Credit for the discovery of the cholera microbe is widely attributed to the German physician Robert Koch in 1883. Koch's reputation as a bacteriologist was arguably unrivalled in the period and as Hamlin notes, 'his systematic approach for identifying microbe pathogens had succeeded in the study of anthrax, wound infections and tuberculosis.'¹⁴⁰ However, it was discovered in the twentieth century that an Italian physician Filippo Pacini of Florence had in fact been the first person to identify the bacterium and link it to cholera some three decades earlier. In 1854 Pacini published a paper entitled, 'Microscopical observations and pathological deductions on cholera,' in which he described the "miriadi di vibrioni" (myriads of vibrios) seen in cholera and came to the same conclusions as Koch for the same

¹³⁷ Hays, *The burdens of disease*, p. 140.

¹³⁸ France, Russia and Britain all experienced similar instances of public paranoia. Robins, *The miasma*, p. 63; Hays, *The burdens of disease*, p. 143; Evans, 'Epidemics and revolutions', p. 127; Nancy M. Frieden, 'The Russian cholera epidemic, 1892-93, and medical professionalization' in *Journal of Social History*, Vol.10(4) (1977), pp. 538-59.

¹³⁹ Hamlin, *Cholera: The biography*, p. 7.

¹⁴⁰ *Ibid.*, p. 213.

reasons.¹⁴¹ Pacini continued to develop his findings in series of publications in 1865, 1866, 1871, 1876, and 1880.¹⁴² Despite this, his work was largely ignored by the contemporary scientific community, and Koch himself is thought to have been unaware of Pacini's research. As a result, recognition for the discovery of the cholera pathogen remained firmly associated with Koch until the twentieth century, when Pacini's earlier contribution was more fully acknowledged.¹⁴³

Transmission of the cholera toxin to humans comes via oral-faecal infection where bacteria are typically ingested by oral contact with water contaminated with the excreta of another cholera sufferer. It may also be transmitted after contact with infected food, or occasionally, flies, clothing and blankets that have been in close contact with a victim.¹⁴⁴ However, while cholera is relatively easy to catch it can be extremely difficult to develop the disease as the vibrio first has to survive the acid environment of a victim's stomach, yet, it is equally as difficult to survive once an attack begins.¹⁴⁵ Fatalities resulted primarily from severe dehydration, with victims sometimes dying within hours of the onset of cholera's premonitory symptoms.¹⁴⁶ The appearance of sufferers also shocked contemporaries, as the disease rapidly reduced its victims to a comatose and apathetic

¹⁴¹ Filippo Pacini, *Osservazioni microscopiche e deduzioni patologiche sul cholera asiatico* (Bencini, Firenze, 1854); Judicial Commission, International Committee on Bacteriological Nomenclature in *Opinion. International Bulletin Bacteriological Nomenclature* Vol. 15 (1965), p. 185. Norman Howard-Jones, 'Robert Koch and the cholera vibrio: A centenary' in *British Medical Journal*, Vol. 288 (1984), p. 380.

¹⁴² *Ibid.*, p. 380.

¹⁴³ Howard-Jones, 'Robert Koch and the cholera vibrio,' p. 380. Pacini subsequently received posthumous recognition for his work in 1965 when the Commission of the International Committee on Bacteriological Nomenclature adopted 'Vibrio Cholerae Pacini 1854' as the correct name for the vibrio, 82 years after his death.

¹⁴⁴ Robins, *The miasma*, p. 62. The cholera vibrio can survive 2-5 days in meat, milk and cheese up to 16 days in apples but only 8 hours in beer and wine. In August 1832, *The Mirror Monthly* magazine printed an article from the *Medical Gazette* that warned of the dangers associated with consuming fruit and vegetables. The reporter stated, 'we are quite sure that many cases of cholera have been produced by unripe fruit and raw vegetables (as cucumbers) taken even in moderate quantity; and that great caution is necessary in this respect,' *Mirror Monthly*, 4 Aug. 1832, p. 79.

¹⁴⁵ Morris, *Cholera 1832*, p. 15.

¹⁴⁶ Robins, *The miasma*, p. 62.

state, marked by sunken eyes and blue-grey skin.¹⁴⁷ Cholera did not simply kill quickly; it visibly transformed the body. As Christopher Hamlin observes, it ‘distorted lives and bodies...leaving a shrivelled form and thickened blood.’ ‘It was not a disease a person lived with.’¹⁴⁸

Upon initial infection, cholera exerted its pathogenic effects in the alkaline environment of the small intestine and usually developed in three distinct stages, premonitory, collapse and reaction and recovery.¹⁴⁹ During the premonitory phase, victims would appear listless and depressed or generally out of sorts and would often suffer painless diarrhoea akin to that suffered during food poisoning. These initial characteristics were quickly followed by the appearance of cholera’s signature symptoms, violent diarrhoea and vomiting.¹⁵⁰ Victims would purge copious amounts of watery fluid containing small white particles made up of mucus, cells and cholera bacteria resembling rice husks. Combined with severe vomiting, sufferers could consequently lose as much as a quarter of the body’s fluids along with essential body salts within a few hours.¹⁵¹

During the collapse stage, pulse and body temperature dropped and the violent purging of bodily fluids abated. However, victims would experience agonising muscle and stomach cramps and a bluish or leaden tinge to the skin, caused by poor circulation and subsequent thickening of the blood. It was during this stage that most deaths occurred.¹⁵²

An 1831 case study of one of the first English victims, a 25-year-old woman from Sunderland, describes the symptoms as observed by a from a contemporary viewpoint:

¹⁴⁷ Evans, ‘Epidemics and revolutions,’ p. 127.

¹⁴⁸ Hamlin, *Cholera: The biography*, pp. 2-3.

¹⁴⁹ Sambhunath De, *Cholera, Its pathology and pathogenesis* (Oliver and Boyd, Edinburgh, 1961), p. xiii.

¹⁵⁰ For more detail on the symptoms of cholera see Pollitzer, Ch.9. Symptomology, diagnosis and treatment in R. Pollitzer (ed.), *Cholera, World Health Organization Monograph Series* No. 43 (WHO, Geneva, 1959), pp. 684-819.

¹⁵¹ Evans, ‘Epidemics and revolutions,’ p. 127.

¹⁵² Morris, *Cholera 1832*, p. 16.

On physical examination, the patient was extremely weak and lethargic. The silver-bluish colour of her skin was reminiscent of lead. She was cool to the touch and had poor skin turgor. The wrinkled skin on her hands appeared as if it had been immersed in water for a prolonged time (“washerwomen's hands”). Her facial features were flattened and her eyes were sunk deep into their sockets. The patient's breathing was laboured. The abdomen was soft.¹⁵³

Unusually, this patient survived for twenty days before finally succumbing to renal failure due to her doctor administering a rudimentary form of intravenous solution therapy.¹⁵⁴

Throughout the nineteenth century, the vast array of literature on cholera offered an equally vast array of treatments.¹⁵⁵ While Morris and Hamlin both concede that cholera therapies each had their own rationale based on tradition, science and experience, Howard-Jones has called the embryonic and sometimes barbaric treatment of nineteenth century cholera patients a form of benevolent homicide.¹⁵⁶ In the modern period, it is universally recognised that the persistent diarrhoea and vomiting suffered by cholera patients causes an enormous loss of water and electrolytes. Thus, they require rehydration therapy to restore the volume and fluidity of the blood, initially by the intravenous infusion of physiologically balanced saline solution, and later by drinking large quantities of fluids.¹⁵⁷ Yet, among nineteenth century physicians, it was common practice to administer emetics to encourage vomiting and to further deplete their patients of vital fluids by prescribing purgatives and clysters (enemas) to combat diarrhoea.¹⁵⁸

¹⁵³ Stephen M. Kavica, Eric J. Frehm, and Alan S. Segal, ‘Case studies in cholera: Lessons in medical history and science’ in *Yale Journal of Biology and Medicine*, Vol. 72 (1999), p. 394.

¹⁵⁴ *Ibid.*, p. 395.

¹⁵⁵ Morris, *Cholera 1832*, pp. 162-3.

¹⁵⁶ Morris, *Cholera 1832*, pp. 162-3; Hamlin, *Cholera: The biography*, p. 28; Norman Howard-Jones, ‘Cholera therapy in the nineteenth century’ in *Journal of the History of Medicine and Allied Sciences*, Vol. 27(4) (1972), p. 373.

¹⁵⁷ *Ibid.*, p. 374.

¹⁵⁸ Howard-Jones, ‘Cholera therapy,’ p. 373.

During early epidemics, bleeding patients was the standard and most common treatment for cholera.¹⁵⁹ Bleeding was particularly popular among doctors with Indian experience¹⁶⁰ and in Belfast, Dr Henry McCormac the physician to the town's cholera hospital, advocated its practice.¹⁶¹ The motive behind bleeding was aimed at restoring circulatory imbalance in the bodies of cholera victims. A process that harked back to Galenic medicine and therapies which sought to heal imbalances in the body's humours. It was a controversial and highly ineffectual treatment for cholera sufferers that often came in for considerable criticism.¹⁶² The removal of already depleted blood, as Howard Jones has observed, meant that; 'Tens of thousands of cholera patients must have been dispatched by their physicians to their graves.'¹⁶³

Apart from bleeding, many treatments were reliant on the use of laxatives and drugs that sought to both drive poison from the bodies of patients and combat cholera's purging and painful spasms. Calomel (mercury), opium and laudanum were the most commonly prescribed drugs throughout the nineteenth century and were often used in conjunction with other more drastic purgatives such as croton oil which acted as a powerful irritant to the gastrointestinal tract, inducing rapid and often violent evacuation of the bowels. In addition, doctors used a wide range of methods aimed at stimulating patients.¹⁶⁴ Alcohol, particularly brandy, was used in conjunction with laxatives, and mustard was commonly used to rid the stomach of its contents. Other physicians used a diverse range of treatments

¹⁵⁹ Ibid., p. 374. Morris, *Cholera 1832*, p. 163.

¹⁶⁰ Morris, *Cholera 1832*, p. 163.

¹⁶¹ Henry McCormac, *Cholera morbus, A short outline of its history while in Belfast* (Francis Finlay, Belfast, 1832); Idem., *Observations on spasmodic cholera, its origins nature and treatment* (Hugh Clark, Belfast, 1832). McCormac's methods are discussed further in Chapter Two of this thesis.

¹⁶² Howard-Jones, 'Cholera therapy,' pp. 374-8; Morris, *Cholera 1832*, pp. 162-6. Robins, *The miasma*, pp. 98-102.

¹⁶³ Howard-Jones, 'Cholera therapy,' p. 374.

¹⁶⁴ Ibid., pp. 380-2.

including ammonia, arsenic, camphor, castor oil, rhubarb, turpentine and enemas of alcohol, mutton broth and tobacco.¹⁶⁵

In Ireland, whiskey, widely available to the poor from illicit stills also offered comfort and escapism to many.¹⁶⁶ While temperance was widely advocated, it seems as though few people paid attention to advice from medical, government or religious sources.¹⁶⁷ Whiskey therefore, was widely seen both as a preventative and a cure, so much so that it was often used, as Robins notes, in ‘bizarre ways.’¹⁶⁸ For example, a man in Cork whose wife was stricken was said to have plunged her up to the neck in distillery wash and made her swallow brandy and castor oil. Within a few days, he claimed that she had recovered completely.¹⁶⁹ Physicians also employed alcohol in various methods, they included Dr Thomas Thompson from Belfast who administered a treatment that the *Belfast Newsletter* described as ‘peculiar, but eminently successful.’ It involved administering a pint of arrowroot, a glass and a half of whiskey and eighty to one hundred drops of laudanum, mixed together, thin enough for an enema, and ‘thrown up the intestines as warm as the patient can bear it.’¹⁷⁰ It was little wonder that Thompson reported that some patients suffered to such a degree that he was frequently attacked.¹⁷¹

Other treatments were less harsh but just as ineffective. Cholera treatments were offered by homeopaths and a wide range of proprietary medicines as well as dietary and hygienic

¹⁶⁵ Howard-Jones, ‘Cholera therapy,’ pp. 380-2.

¹⁶⁶ Robins, *The miasma*, pp. 101-2.

¹⁶⁷ Laurence Geary observes that people often any abandoned the recommended treatment if there was not an obvious and immediate improvement in their condition and that in some areas of pre-famine Ireland the poor were as likely to turn from ‘the prescriptions of the physician to the judgements of the old women famous for cures or to their own imagination...Often this included liberal doses of illicit whiskey self-prescribed and administered.’ Geary, ‘The poor and the sick in pre-famine Ireland,’ p. 194.

¹⁶⁸ Robins, *The miasma*, p. 102.

¹⁶⁹ *The Constitution*, 8 May 1832. Quoted in Robins, *The miasma*, p. 102.

¹⁷⁰ Thomas Thompson M.D. *Practical remarks on the epidemic cholera which at present prevails in Belfast and its vicinity* (James Williamson, Belfast, 1832), p. 7.

¹⁷¹ *B.N.L.*, 28 Aug. 1832.

regimens were regularly promoted in the popular press.¹⁷² In 1831 the MP for Preston, Henry Hunt even advised the British government to remove the duty on soap stating that, cleanliness among the poor: ‘would be found the best preventive of Cholera Morbus.’¹⁷³ Virtually the only point of consensus regarding the management of cholera was the necessity of prompt treatment; accordingly, posters and handbills consistently urged those exhibiting suspected symptoms to seek immediate medical attention.¹⁷⁴ Beyond this, however, there was little agreement. Throughout the period, any coherent or widely accepted understanding of effective treatment remained as elusive as a shared explanation of the disease’s mode of transmission.

Contagion or Miasma: Cholera Debates in the Nineteenth Century

Two competing schools of thought dominated theories of disease transmission in the nineteenth century, those who believed that the disease was spread by human interaction (contagionists) and those who held environmental factors (miasmas) responsible for the dissemination of endemic and epidemic illnesses.¹⁷⁵ Both had long histories and were present in the ancient world and medieval Europe.¹⁷⁶ However, before the development of bacteriological science in the latter half of the century and, as Robins notes, because of the cholera experience, non-contagionist theory tended to dominate.¹⁷⁷

¹⁷² Robins, *The miasma*, pp. 100-1.

¹⁷³ *Hansard*, viii, cc898-901 (18 Oct. 1831).

¹⁷⁴ Such advice was popular everywhere but for Belfast see the copies of posters appended to this thesis (Appendix 2) sourced from; Bound volume of cuttings relating to cholera in Belfast, Royal College of Physicians Ireland (RCPI), BMS/19. I would like to extend my thanks to Harriet Wheelock RCPI heritage centre archivist for access to this resource.

¹⁷⁵ For a more detailed overview see Caroline Hannaway, ‘Environment and miasmata’ and Margaret Pelling, ‘Contagion/germ theory/specificity’ in W. F. Bynum and Roy Porter (eds), *Companion encyclopaedia of the history of medicine Volume I* (Routledge, London, 1993), pp. 292-334. Pelling, ‘The meaning of contagion: reproduction medicine and metaphor’ in Alison Bashford and Claire Hooker (eds), *Contagion* (2nd ed. Routledge, London, 2002), pp. 15-38. Pelling, *Cholera, fever and English medicine*.

¹⁷⁶ Morris, *Cholera 1832*, p. 172.

¹⁷⁷ Robins, *The miasma*, p. 96.

Non-contagionist theory attributed cholera to miasmatic influences arising from a variety of sources, including putrefying organic matter, noxious odours, and even atmospheric anomalies such as so-called “cholera clouds.”¹⁷⁸ Proponents of this perspective therefore advocated sanitary reform as the primary means of prevention, emphasising measures such as street cleansing, whitewashing and fumigation of dwellings, and the development of sewerage systems and clean water supplies.¹⁷⁹ In Belfast, Henry McCormac was a particularly ardent supporter of such measures arguing that cholera spread through the air and primarily affected those already weakened or predisposed to illness.¹⁸⁰

Contagionist theory provided a seemingly simpler explanation for the dissemination of disease. It held that transmission occurred only after direct contact with individuals who were sick. Thus, for advocates of this philosophy the solution for mitigating epidemics was relatively straightforward. Contagionists favoured isolation of the sick and the imposition of quarantines. However, quarantines, particularly those enforced upon industrialised towns and cities, generated considerable opposition as they impacted significantly on trade.¹⁸¹ Anti-contagionists were strongly opposed to quarantine, arguing that it would not only inflict significant economic damage but also exacerbate the spread of cholera by increasing unemployment and poverty. In February 1831, the proposed British quarantine measures were criticised in Parliament by the MP for Middlesex Joseph Hume, who contended that restricting commercial intercourse between infected and non-infected areas would intensify, rather than mitigate, the crisis, stating that; The only effect, then, of the proposition... would be, to add famine to pestilence, and aggravate tenfold the

¹⁷⁸ Ibid., p. 97; Morris, *Cholera 1832*, p. 171.

¹⁷⁹ Ibid., p. 173.

¹⁸⁰ McCormac, *Observations on spasmodic cholera*, p. 10.

¹⁸¹ Anthony S Wohl, *Endangered lives; Public health in Victorian Britain* (J.M. Dent and Sons, London, 1983), p. 121.

evils of both.’¹⁸² By March, such objections had prevailed, and quarantine measures were abandoned.¹⁸³

Throughout the world, even the most strictly enforced quarantines never managed to arrest the spread of cholera entirely. The disease followed troop movements in Asia and Europe, as well as worldwide trade routes and large-scale migrations of people such as those making religious pilgrimages.¹⁸⁴ However, there is evidence that on a smaller scale quarantine was a relatively successful tool. In Sunderland, for example, James Butler Kell, placed the Eighty-Second Regiment under quarantine from 2 November 1831 until 1 Feb 1832. It was an unpopular but apparently successful measure, as no cholera cases occurred among the soldiers or their families during its imposition.¹⁸⁵

Almost without exception, the isolation of the sick in specialist cholera hospitals or wards was also not normally well received. Entry into such institutions was largely voluntary and the fear and resentment of medical professionals, especially among the lower classes, meant that they often would not consent to be admitted.¹⁸⁶ However, in Belfast, Henry McCormac, despite being convinced that cholera was spread by miasma, sometimes took a contagionist stance and implemented a strict policy of quarantine in the town’s cholera hospital. Much like Kell’s quarantine of soldiers in Sunderland, McCormac’s policy was relatively successful, and the *Belfast Newsletter* recorded that he was highly commended for his efforts at the end of the outbreak.¹⁸⁷

¹⁸² *Hansard*, x, cc265-71 (13 February 1832).

¹⁸³ Wohl, *Endangered lives*, p. 31; Morris, *Cholera 1832*, p. 31.

¹⁸⁴ Pollitzer, *Cholera*, pp. 22-8.

¹⁸⁵ Kell, *On the appearance of cholera at Sunderland*, pp. 180-3.

¹⁸⁶ Morris, *Cholera 1832*, p. 172.

¹⁸⁷ *B.N.L.*, 10 Jan. 1834. See also, p. 90 below.

The debate between contagionists and anti-contagionists was a constant throughout the nineteenth century with no real compromise found until the end of the period. Even after cholera had ceased to pose a major epidemic threat, uncertainty remained. At an International Sanitary Conference in 1874, delegates proved reluctant to adopt a definitive position on the disease's transmission. Although they agreed that cholera could not be spread through the atmosphere, they nonetheless endorsed a motion asserting that 'ambient air is the principal vehicle of the generative agent of cholera.' This apparent contradiction underscores the difficulty of reconciling emerging scientific evidence with entrenched sanitary beliefs.¹⁸⁸

Both theories carried distinct advantages and disadvantages, leaving governments to confront two competing policy dilemmas during the early epidemics. On the one hand, quarantine offered a potentially effective means of containment but entailed significant economic disruption. On the other, large-scale programmes of cleansing, fumigation, and poor relief aligned with anti-contagionist principles but required substantial financial outlay. In the absence of firm scientific consensus or authoritative medical guidance, British and Irish authorities adopted a compromise approach; and, as Anthony Wohl has argued, they, 'chose, like many governments in the same position, to do a little bit of both and did neither very well.'¹⁸⁹ This lack of a coordinated and decisive central response to epidemic diseases like cholera is further underscored by subsequent developments including the fact that in both Britain and Ireland rates of cholera morbidity and mortality declined significantly only the implementation of more systematic public health reforms

¹⁸⁸ Robins, *The miasma*, p. 218. Valeska Huber, 'The unification of the globe by disease? The International Sanitary Conferences on cholera, 1851–1894' in *The Historical Journal*, Vol. 49 (2006), pp. 453–76.

¹⁸⁹ Wohl, *Endangered lives*, p. 31.

from the mid-nineteenth century onward, suggesting that effective intervention depended more on long-term structural change than simple reliance on theory or ideology.¹⁹⁰

Mortality

Cholera's high mortality rate was, of course, one of its defining features. However, in most settings, cholera morbidity and mortality figures cannot be established with precision. As Hamlin observes, 'the numbers of cholera deaths were not mere facts but attempts to shock or to deny,' with, in his view, some figures constituting, 'wild guesses' and others outright 'lies.'¹⁹¹ Yet cholera was by no means the leading cause of death in the nineteenth century. Although contemporaries frequently likened it to plague, its mortality rate in both Britain and Ireland was significantly exceeded by tuberculosis and the various fevers prevalent during the period.¹⁹²

Irish statistics also present their own set of issues because deaths were not subject to statutory registration until after 1864.¹⁹³ Even then, the General Board of Health returns for cholera were often inconsistent and, in many cases, were tainted by the inclusion of statistics for diarrhoea and dysentery. Local statistics therefore present probably the most accurately recorded figures for cholera over the course of the four epidemics in Ireland. Of these, the returns for Belfast can be said to provide some of the most accurate morbidity and mortality rates recorded for the whole country. Incidences and deaths from cholera appear to have been studiously recorded by the town's medical officers and were

¹⁹⁰ Morbidity and mortality in both Britain and Ireland will be discussed in detail in the following chapters of this thesis.

¹⁹¹ Hamlin, *Cholera: The biography*, p. 3.

¹⁹² Greta Jones observes that tuberculosis (TB) was the biggest killer in nineteenth-century Ireland and Margaret Pelling observes that mortality from cholera was far less significant than TB or fever. See, Jones, 'The Campaign Against Tuberculosis,' p. 158; Pelling, *Cholera, fever and English medicine*, pp. 3-6.

¹⁹³ See, *Registering the people: 150 years of civil registration* (<http://www.groireland.ie/history.htm>) (12/04/2013).

regularly published in the local press. Examination of the cholera files in the National Archives in Dublin also corroborates the accuracy of Belfast's newspaper statistics and it is additionally notable that Sir William Wilde, Medical Commissioner to the Irish Census commended the Belfast hospital statistics for being, 'the only good and extensive country return of the kind afforded by the census inquiry.'¹⁹⁴

Conclusion

At the beginning of the nineteenth century, Belfast had developed from a small but strategically significant river crossing into Ireland's only industrialised town. However, its rapid expansion generated acute social problems for which civic administrators were largely unprepared. Recurrent epidemics of fever and cholera, served, as was the case in other major urban towns, to expose the inadequacies of embryonic public health provision and underscored the limited medical understanding of the time in relation to disease.

Throughout the United Kingdom and beyond the experience of combatting Asiatic cholera during the nineteenth century did nevertheless have some constructive consequences. There can be little doubt then, that cholera epidemics, while not solely responsible for reform, did stimulate support for sanitary improvement and brought the absence of centralised systems of public health provision into focus, arguably for the first time. Above all, cholera laid bare the interrelationship between disease, dirt, and the dirty, particularly in rapidly industrialising and expanding towns and cities. It also forced issues of poverty into the attention of both elites and the state and created a sense of urgency regarding public health responses.

¹⁹⁴ See Cholera Papers, National Archives of Ireland (NAI) (cholera returns) OP1832/568 and Census of Ireland (1841), p. xx.

After 1832 however, cholera passed quickly from the public consciousness and because it was an intermittent visitor, its epidemics did not generate sustained long-term public health planning. In Belfast, as elsewhere, subsequent epidemics would find similar conditions of unpreparedness and although its high death rate would stimulate government reform of public health legislation in England leading to the introduction of the 1848 Public Health Act, in Ireland, towns like Belfast largely had to rely on local administrators and piecemeal local legislation until the 1870s by which point cholera had already ceased to pose a severe epidemic threat.

Chapter Two

Cholera in Belfast 1832-34

Introduction

On 23 October 1831 William Sproat, a keelman from Sunderland became the first official victim of Asiatic cholera in the United Kingdom.¹ The disease spread quickly over the course of the next several months and by the end of the year there was a notable sense of concern that the arrival of a severe epidemic in Ireland was inescapable.²

The subsequent narrative of cholera's 1831/32 epidemic and its impact on the principal towns, cities and counties which it affected has been extensively documented for Britain.³ However, in Ireland cholera has not received a similar scale of scholarly attention. Apart from the work of Joseph Robins, who argues that policy concerning poverty and illness lay outside the scope of laissez-faire government and that the resolution of such social ills was therefore regarded as a matter for individuals and communities themselves, the historical study of cholera has largely been limited to a small number of book chapters and occasional journal articles focusing on the experiences of specific localities.⁴ While Robins' assessment is broadly valid at the national level, local administrations nonetheless appear to have recognised a degree of obligation towards their populations. Consequently, the management of social crises such as cholera epidemics was

¹ Cases suspected as cholera had been reported as early as August however they were dismissed by both Sunderland's Local Board of Health and the General Board of Health in London as severe bouts of endemic (English) cholera. See, Morris, *Cholera 1832*, p. 11 and p. 40; Kell, *On the appearance of cholera at Sunderland*, pp. 27-9.

² Robins, *The miasma*, p. 67.

³ See, Underwood, 'The history of cholera in Great Britain,' pp. 165-73; Creighton, *History of epidemics*; Morris, *Cholera 1832*; Durey, *The return of the plague*; Gilbert, *Cholera and nation*.

⁴ See, Robins, *The miasma*; O'Neill, 'Fever and public health in pre-famine Ireland,' pp. 1-34; Duffy, 'Cholera in County Louth,' pp. 117-26; Connolly, 'The blessed turf,' pp. 214-32; Fenning, 'The Cholera Epidemic in Ireland,' pp. 77-125.

increasingly understood as a necessary component of civic responsibility. Localised studies therefore play an important role in understanding how the impact of, and responses to, cholera and other epidemics shaped the experiences of individual communities.

In the North of Ireland in particular, there remains a notable paucity of research examining the impact of cholera on Ulster towns. While recent studies, including those by Alison Jordan, Stephen Royle, Christine Kinealy, and Gerard MacAtasney, have begun to explore nineteenth-century Belfast in greater detail, including aspects of public health, none has yet provided a sustained analysis of cholera's impact on Ireland's only industrialised town.⁵

The following chapter addresses this gap by offering the first comprehensive examination of cholera morbidity and mortality in Belfast between 1832 and 1834. It argues that, while cholera had a moderate but still significant impact in terms of actual mortality, those responsible for managing the outbreak did as much as could reasonably be expected with the resources available to them. Moreover, their relatively early adoption of precautionary measures contributed to limiting what might otherwise have been substantially higher levels of morbidity and mortality.

⁵ While most recent works on Belfast access the political make-up of the town aspects of poverty and social conditions in the towns are also touched upon. See in particular; Bew, *The glory of being Britons*; Sean Connolly (ed.), *Belfast 400*; Griffin, *The Bulkies*; Johnson, *Middle class culture and civic identity*; Jordan, *Who cared?*; Kinealy, and McAtasney, *The hidden famine*; Purdue (ed.), *Belfast: The emerging city*; Royle, *'Clanging Belfast'*; Wright, *The 'Natural Leaders.'*

When the statistics for morbidity and mortality in Belfast are considered, a number of important questions concerning cholera arise. These include whether the methods employed to combat the disease in Belfast differed from those implemented elsewhere, and, if not, why they appear to have been comparatively more successful in limiting morbidity and mortality rates. While the statistical dimensions of the outbreak are analysed throughout the following chapter, morbidity and mortality figures alone do not, and cannot, provide a complete account of the epidemic. This chapter therefore also considers a range of additional factors directly related to the responses implemented before and during the outbreak. These include, in particular, local and national socio-political reactions to cholera, as well as the responses and treatments adopted by the medical profession in their efforts to combat the disease. Comparisons are also made with the experience of other Irish towns, most notably Dublin. However, as cholera response in Ireland was largely shaped by measures introduced by the British government, it is first necessary to begin with a brief overview of the response to, and treatment of, the epidemic in Britain.

Cholera in Britain: 1831-32

The authorities in Britain first became aware of the progress of cholera in Europe in September 1830 from reports submitted to the Foreign Office by Lord Heytesbury, the British Ambassador in St Petersburg.⁶ The Foreign Office sent Heytesbury's reports to the Privy Council, the body responsible for Britain's public health administration and at the beginning of 1831 they enlisted the services of Thomas Walker, an English doctor living in St Petersburg asking him to provide detailed information as to the nature,

⁶ Durey, *The return of the plague*, p. 8.

progress and treatment of the disease.⁷ However, Walker's reports which were largely based on conflicting testimony concerning whether the disease was contagious proved to be of limited practical value. His accounts included depositions from Russian physicians who maintained that cholera was not contagious and while Walker himself was convinced of its contagious nature, he was unable to provide firm evidence to substantiate his position.⁸ In an effort to obtain more reliable information, Charles Greville, Clerk to the Privy Council, and Sir Henry Hallford, President of the Royal College of Physicians, concluded that a medical mission to St Petersburg was warranted. Accordingly, they dispatched two physicians, William Russell and David Barry, to observe and report on the progress, treatment, and epidemiology of cholera.⁹

While they waited for information there was considerable debate both at the Privy Council and in government circles about the effectiveness of implementing a policy of quarantine throughout the country. Quarantine was a highly divisive issue worldwide and many governments were reluctant to apply strict measures as its implementation was believed to have failed to prevent cholera's progress in India and in Europe. Moreover, it was perceived by merchants as a significant threat to trade.¹⁰ Despite having similar concerns, the British government could see no other way in which cholera could be prevented from entering the country on board foreign shipping and consequently enforced a system of quarantine measures at its major ports in April 1831.¹¹ The policy caused widespread resentment in England and was blamed for loss of trade and concurrently the loss of

⁷ For more on the role of the Privy Council see Fraser Brockington, 'Public health at the Privy Council 1831-34' in *Journal of the History of Medicine and Allied Sciences*, Volume xvi (2) (1961), pp. 161-85. Durey, *The return of the plague*, pp. 10-11; Robins, *The miasma*, p. 63; Morris, *Cholera 1832*, p. 25.

⁸ Robins, *The miasma*, p. 63.

⁹ Morris, *Cholera 1832*, p. 25; Durey, *The return of the plague*, p. 11.

¹⁰ *Ibid.*, pp. 28-31.

¹¹ Robins, *The miasma*, p. 64.

employment, most notably in both Manchester and London.¹² Many MPs also objected and in March 1832 the measures were abandoned.¹³

Quarantine was not the only issue to dominate discussions within the British Privy Council. Considerable attention was also devoted to the question of how government might most effectively gather information and organise a defensive strategy against cholera. One proposed solution drew upon earlier responses to epidemic threats, and, upon investigation, the Council determined that provisions existed for the establishment of a General (Central) Board of Health during periods of crisis.¹⁴

On 21 June 1831, a Central Board consisting of eleven men, mostly wealthy and aristocratic figures, and headed by Halford, was inaugurated and in June and July 1831, the board submitted its recommendations for the management of cholera.¹⁵ Their proposals were harsh and suggested that upon the discovery of any case, victims and anyone who had been in contact with them should be immediately removed to a temporary lazaretto (pest house), by 'expurgators' and kept in quarantine using the military or police to guard the establishments if necessary.¹⁶ Expurgators were to live apart from the general public and victims that died were to be buried as close to the lazaretto as possible.¹⁷ The proposals caused understandable concern, and while the

¹² Morris, *Cholera 1832*, p. 30.

¹³ *Ibid.*, p. 31; Wohl, *Endangered lives*, p. 31; Robins, *The miasma*, p. 64.

¹⁴ A General Board of Health had been established in 1805 when it was thought Yellow Fever would reach Britain. See, Durey, *The return of the plague*, p. 12.

¹⁵ Aside from Halford, the board included six fellows of the Royal College of Physicians, Henry Holland, Dr, William George Maton, acquaintance of the King and Queen and attendant to The Duke of Kent, Thomas Turner, treasurer of the Royal college of Physicians, Pelham Warner, William McMichael, court physician and James Edward Seymour, the remainder of the board was comprised of eminent civil servants. See, Durey, *The return of the plague*, p. 11 and pp-15-16; Morris, *Cholera 1832*, pp. 25-6 and p.31; Brockington, 'Public health at the Privy Council,' p. 162.

¹⁶ Though usually defined as a quarantine station for maritime travellers the term also referred to hospitals which treated contagious diseases.

¹⁷ Durey, *The return of the plague*, pp. 15-16.

scheme was logical it was proposed, as Robert Morris has noted, ‘without a jot of human feeling or understanding.’¹⁸

Nevertheless, the board did make further recommendations which established the mechanisms for dealing with epidemics in Britain and Ireland for the next several decades. Their most significant innovation was the creation of an extensive system of Local Boards of Health on a scale previously unknown. Local boards were loosely linked to the central agency but brought parochial sources of power and authority to the forefront of the fight against cholera.¹⁹ As Fraser Brockinton has noted, ‘this was the beginning of the sort of public health that represents the sanitary ideal through local government...and which has influenced a large part of the globe.’²⁰

The Privy Council found the proposals impossible to accept, but in October it was forced to act when cholera reached Hamburg.²¹ This development raised fears that the disease could be rapidly introduced into Britain via commercial shipping. The concerns proved well founded and were realised within weeks when reports began to emerge that the disease had reached the north-east port of Sunderland. In anticipation of the epidemic a local board of health had been already been established there in mid-June.²² The board appointed William Reid Clanny, a native of Bangor Co Down and senior physician of the Sunderland Infirmary, as chairman of its medical committee.²³ However, its responses to the outbreak were obstructed by uncertainty regarding early cases, pressure from local merchants who objected to quarantine measures and public opposition against the establishment of a cholera hospital.²⁴ Doubts concerning the reliability of information on

¹⁸ Morris, *Cholera 1832*, p. 32.

¹⁹ *Ibid.*, p. 31.

²⁰ Brockington, ‘Public health at the Privy Council,’ p. 163.

²¹ Durey, *The return of the plague*, p. 20.

²² Kell, *On the appearance of cholera at Sunderland*, p. 53.

²³ Durham Mining Museum Archives <http://www.dmm.org.uk/archives> (11/05/2011).

²⁴ Morris, *Cholera 1832*, p. 44.

suspected early cases of the disease also meant that the central board did not provide immediate instruction or assistance. Fortunately for both boards, the outbreak was relatively small claiming just 215 lives.²⁵ Still, *The Lancet* was scathing in its attack of the events which had occurred, particularly the local response to the imposition of quarantine measures:

That a posse of starving colliers should threaten to burn the doctors who dare to admit the existence of the disease is scarcely a matter of surprise...but that there should be found a set of well-educated men weak enough to pander to the clamorous prejudices of the populace, is almost beyond credibility.²⁶

The arrival of cholera also marked the end of the tenure of the Central Board of Health. It was replaced in November 1831 following allegations which suggested that it had failed to instigate sufficient preventative action against cholera and that its eminent medical members had been chosen more for their social status than their authority.²⁷ This was a view shared by *The Lancet* who called the board's members 'a crowd of drones, sycophants and courtiers.'²⁸ When the board was reconstituted, its new membership was selected primarily on the basis of bureaucratic and medical expertise rather than social standing. The change attracted little attention. However, following its re-establishment, the new board began to relax a number of the regulatory measures proposed by its predecessor.²⁹ Regulations formally constituting local boards in every town and city within the United Kingdom were issued in a series of three circulars on 20 October, 14 November, and 13 December 1831 by Order in Council.³⁰ These directives also placed

²⁵ *Ibid.*, p. 55; Creighton, *History of epidemics*, p. 799. For contemporary accounts of the outbreak in Sunderland see; William Reid Clanny, *Hyperanthrax or the cholera of Sunderland* (Whittaker, Treacher and Arnott, London, 1832) and Kell, *On the Appearance of Cholera at Sunderland*.

²⁶ *The Lancet*, 26 Nov. 1831.

²⁷ Morris, *Cholera 1832*, p. 32.

²⁸ *Ibid.*, p. 26; Brockington, 'Public health at the Privy Council,' p. 162.

²⁹ Morris, *Cholera 1832*, pp. 32-3.

³⁰ *B.N.L.*, 28 Oct. and 15 Nov. 1831; Morris, *Cholera 1832*, p. 33.

significantly greater emphasis on sanitary precautions than had previously been the case. Established local boards were made responsible for the removal of nuisances, while the orders issued in November and December outlined a range of measures relating to isolation, ventilation, cleanliness, fumigation, food and clothing, the purification of linen, and the prompt burial of the dead.³¹

Following the outbreak at Sunderland, cholera spread relatively slowly through the north-east of England before extending into Scotland. However, it soon became apparent that the directives issued by the Central Board of Health neither provided sufficient information nor conferred adequate authority for local boards to respond effectively.³²

These shortcomings compelled the government to seek additional powers from the Privy Council. In response, legislation entitled *An Act for the prevention, as far as may be possible, of the disease called the cholera, or spasmodic, or Indian cholera, in England*, more commonly known as the Cholera Act (1832) was urgently introduced.³³ The act enabled two privy councillors to make, renew or revoke rules and regulations for preventing contagion as well as enabling speedy interment of the dead and the provision of relief to the sick. More importantly, the act made financing the cost of preventative measures the responsibility of the English Poor Law Authorities and Parish Vestries. In Scotland, where there was no regular poor rate system, a separate act was passed enabling funds to be raised from the police rate and other sources.³⁴ In Ireland, where separate legislation was also required, financial provision for the establishment of local boards of

³¹ Brockington, 'Public health at the Privy Council,' p. 177.

³² Morris, *Cholera 1832*, p. 71.

³³ *Ibid.*, p. 72; See also: 'The Cholera Act' 1832 (2 and 3 Will. IV. c.11); The stipulations of the act were also published in *The Cholera Gazette*, 3 Mar. 1832, pp. 178-81.

³⁴ Morris, *Cholera 1832*, pp. 72-3.

health and for the management of the cholera epidemic was based on a system of repayable government loans.³⁵

On 6 March 1832, the Privy Council issued an order enabling areas in England threatened by cholera to establish local boards of health, empowered to set up cholera hospitals and to purchase blankets, medicines, and other supplies, as well as to employ domestic and nursing assistance.³⁶ In July and August, as the epidemic spread rapidly, further sanitary regulations were issued under the Cholera Act. These measures conferred more effective powers for cleansing, fumigation, and the removal of nuisances, and authorised the appointment of medical officers to inspect lodging houses and to order the cleaning or covering of open drains, cesspools, and watercourses.³⁷ The orders also stipulated that the dead were to be buried within twenty-four hours, with associated costs to be met from parish rates

However, while the Cholera Act clearly extended the powers of the Privy Council, often, delays in the implementation of the legislation meant that it had little practical impact in terms of curbing the spread of the epidemic. As a result, local boards continued to lack effective authority, particularly in regard to the removal of nuisances, until the outbreak was already well established. Local responses were further undermined by uncertainty over how anti-cholera measures were to be financed. Consequently, as Morris observes, ‘the situation got rapidly out of control...and the decline of the epidemic was only really brought about by the natural effect of winter cold.’³⁸ Demographically, however, the impact of the epidemic in England and Wales was relatively limited, with approximately

³⁵ See: *Second Report On the prevention and treatment of spasmodic cholera, General Board of Health Dublin* (1831), p.12. Hereafter, *Second report GBH 1831*; Robins, *The miasma*, pp. 109-10; O’Neill, ‘Fever and public health in pre-famine Ireland,’ p. 18.

³⁶ Morris, *Cholera 1832*, p. 73.

³⁷ Brockington, ‘Public health at the Privy Council,’ p. 178.

³⁸ Morris, *Cholera 1832*, p. 74.

32,000 deaths recorded.³⁹ By contrast, in both Ireland and Scotland, as Table 2.1 below demonstrates, mortality rates relative to population were significantly higher.

Table 2.1: Approximate Cholera Mortality in Britain 1831/2 and Ireland 1832/3

Region	Population 1831	Cholera Deaths	% Mortality
England and Wales	13,897,187	21,882	0.16%
Scotland	2,365,114	9,592	0.41%
Total Britain	16,252,301	31,474	0.19%
Ireland	7,784,536	25,378	0.33%

Cholera statistics for Britain taken from Creighton, Underwood and Morris. Irish statistics from Census of Ireland (1841), pp xix-xx. Population statistics from Census of Britain (1831), p. xxi and Census of Ireland (1831), p. 1.⁴⁰

Preparing for cholera in Ireland 1831

As cholera spread throughout Britain concern also grew in Ireland. In common with the British Privy Council in London the anxious Irish authorities were keen to gather as much advanced information as they could on the disease's symptoms, its treatment and the physical appearance of its victims.⁴¹ Two Dublin physicians, Dr Law and Dr John Ferguson, were subsequently sent to Sunderland to observe and assist.⁴² Ferguson, who also travelled to Newcastle, reported back that no information of value had been

³⁹ See Table 2 above. Deaths in England and Wales; 21,882; Scotland; 9,592. See, Creighton, *History of epidemics*, p. 816; Underwood, 'The history of cholera in Great Britain,' p. 168; Morris, *Cholera 1832*, p. 79.

⁴⁰ Cholera statistics for Britain taken from Creighton, Underwood and Morris. For Ireland see: Census of Ireland (1841), pp. xix-xx. Population statistics from: Census of Great Britain, 1831, *Abstract of the answers and returns made pursuant to an Act, passed in the eleventh year of the reign of His Majesty King George IV. Intituled, "An Act for taking an account of the population of Great Britain, and of the increase or diminution thereof." Enumeration abstract*. Vol. I. 1831, BPP 1833 xxxvi (149), p. xii; Hereafter, Census of Great Britain (1831); For Ireland: Census of Ireland, 1831, *Return of population of the counties of Ireland, 1831* BPP 1833 xxxix (254), p.1: Hereafter, Census of Ireland (1831).

⁴¹ Kell, *On the appearance of cholera at Sunderland*, pp. 71-8.

⁴² *Ibid.*, pp. 71-8; Robins, *The miasma*, p. 67. Throughout the following thesis where I have been unable to identify without question the Christian names of individual physicians, I will use the formal title of Dr followed by the surname. For more on Dr Ferguson see John Creery Ferguson: Dictionary of Irish Biography: <http://dib.cambridge.org>. (8/01/14).

uncovered about the disease and that there were no settled guidelines for its treatment.⁴³

Later he would warn the public to expect the worst.⁴⁴

Within Irish administrative circles there was already grave concern regarding the susceptibility of the public to disease. Ireland had already experienced two serious epidemics of fever between 1816-19 and 1826-27 and in a report on the prevention and treatment of cholera the Irish General Board of Health stated that:

Judging from the frequent recurrence of epidemic fever of late years in Ireland, it is much to be apprehended that the same causes which have contributed to extend fever, would also render spasmodic cholera epidemic in this country.⁴⁵

The report observed that this view, ‘although leading to gloomy anticipations,’ did lend a positive perspective, as the experience of combating previous fever epidemics in Ireland meant that there was already a ‘preventative system’ in place. A large portion of which, the board confidently predicted, ‘would be applicable to the prevention of spasmodic cholera.’⁴⁶

Unlike Britain, where prior to 1831, there was no central department for implementing public health policies, the prevalence of fever in the period between 1816 and 1822 meant that the Irish administration had become increasingly forced to intervene and centralise in terms of public health provision.⁴⁷ Government intervention, as Gerard O’Brien has argued, was evident in a number of areas and was particularly prominent in the management and supervision of public affairs. In 1817 for example, corruption and

⁴³ Robins, *The miasma*, p. 67.

⁴⁴ *Ibid.*, p. 67; *Dublin Evening Post*, 4 Feb. 1832.

⁴⁵ *Second report GBH* 1831. See also Chief Secretary’s Office, Official Papers, National Archives of Ireland (NAI) CSOOP/1832/33. For more on the fever epidemics see, O’Neill, ‘Fever and public health in pre-famine Ireland,’ pp. 1-16; Crawford, ‘Typhus in nineteenth-century Ireland,’ pp. 121-37. For the 1816-19 outbreaks, see, Robins, *The miasma*, pp. 33-61.

⁴⁶ *Second report GBH* 1831, p. 6.

⁴⁷ Robins, *The miasma*, p. 64; O’Brien, ‘State intervention and the medical relief of the Irish poor,’ p. 200.

mismanagement of local construction projects had led to the appointment of commissioners tasked with overseeing the appropriation of government loans.⁴⁸ In the same year, the Irish administration had also approved the establishment of a national network of lunatic asylums ushering in a new era of state regulated institutional care.⁴⁹ As O'Brien notes, 'the government was developing the habit of intervening and taking control, even though the habit did not yet have any foundation in ideology or policy.'⁵⁰

During the fever crisis of 1817, centralised assistance for disease prevention and control was made available only to support local initiatives that were already in operation.⁵¹ Intervention was likewise contingent upon evidence that fever was significantly present in an area and where hospitals were open and accommodation for the sick funded through the subscriptions of wealthier inhabitants. In practice, these arrangements proved ineffective, and as both O'Brien and O'Neill have observed 'the system of aiding local subscriptions worked against poorer districts and areas with absentee landlords.'⁵²

It was clear therefore, that a much better system of aid was required. This came in the form of two new acts, 'The Fever Hospital (Ireland) Act' (1818) and 'The Contagious Diseases (Ireland) Act' (1819).⁵³ Together these acts were seen as the last stand of Sir Robert Peel, against state intervention and central control in the area of public health in Ireland.⁵⁴ Peel understood fever to be caused by unemployment and poverty, a poor quality diet, roaming beggars, the traditional custom of waking the dead and bad weather,

⁴⁸ Ibid.

⁴⁹ For more on asylums in the early nineteenth century see, Mark Finnane, *Insanity and the insane in post-famine Ireland* (Croom Helm, London, 1981), pp. 18-52 and Markus Reuber, 'Moral management and the 'Unseen Eye': Public lunatic asylums in Ireland 1800-1845' in Jones and Malcolm (eds), *Medicine, disease and the State*, pp. 208-233.

⁵⁰ O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 200.

⁵¹ Ibid., O'Neill, 'Fever and public health in pre-famine Ireland,' p. 11.

⁵² O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 200; O'Neill, 'Fever and public health in pre-famine Ireland,' p. 11.

⁵³ Hospitals (Ireland) Act (1818) (58 Geo. III c.47); Contagious Diseases (Ireland) Act (1819) (59 Geo. III c.41).

⁵⁴ O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 201.

with the consequent want of fuel. This connection between famine and fever was well understood and similar claims recurred frequently throughout the century in relation to both fever and cholera.⁵⁵ Under the statutes, the responsibility for public health administration was resolutely focused on a local level. Boards of health set up under the legislation were funded by Grand Jury presentments and run by bishops and gentry and were therefore generally conservative in nature.⁵⁶ They were predominantly designed to deal with local epidemics, but they were furnished with reasonably extensive powers for cleaning streets, removing nuisances and disinfecting houses and possessions. Until the arrival of cholera in 1832, when further legislative measures were introduced, the 1818 act in particular represented the keystone of official public health policy.⁵⁷

In March 1820, the intervention of the Irish administration in matters of public health and medical relief increased significantly when Charles Grant who succeeded Peel as Irish Chief Secretary created an Irish General Board of Health, a body which at the time was exclusive to Ireland.⁵⁸ In the period following its inception, Ireland's general board acted essentially in an advisory capacity, providing guidance on matters of public health and contagious diseases, collecting statistics and advising on when and where local boards of health should be set up and when grants should be made to hospitals.⁵⁹ However, the Irish administration, as it had done in the previous century, continued to rely on local rather

⁵⁵ O'Neill, 'Fever and public health in pre-famine Ireland,' p. 1.

⁵⁶ O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 201.

⁵⁷ O'Neill, 'Fever and public health in pre-famine Ireland,' p. 12.

⁵⁸ In England, a similar General Board of Health was not in place prior to the Public Health Act of 1848 and a central department to control and implement policies relating to public health did not exist before 1831. This, as Robins notes, reflected the laissez-faire policy of the period and that the dual threats to society and economy that were posed by cholera meant that the British government became aware of the need for a centralised body to implement a response. See Robins, *The miasma*, pp. 64-5. However, as O'Neill observes, the English board had many similarities to the Irish system, and the later English administration was likely to have been highly influenced by the experiences of the Irish board. See O'Neill, 'Fever and public health in pre-famine Ireland,' p. 13.

⁵⁹ Robins, *The miasma* p. 65; O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 201.

than national initiatives in the first instance.⁶⁰ But when the need arose, especially during times of crisis, the board could assume a more active role and administer medical relief.⁶¹ The emergence of the general board was, in terms of the centralisation of medical relief, a considerable step forward for Irish public health policy despite the fact that it had, as O'Brien states, a peculiar combination of non-salaried officials and a 'national' remit.⁶²

The board was particularly active during the fever epidemics of 1822 and 1826 where it provided grants to local relief committees and issued advice on fever prevention and the fitting-up, where required, of temporary fever hospitals in remote situations.⁶³ During 1826 however, little aid was given to areas outside Dublin. Consequently, fever victims in provincial towns and cities had to rely on local institutions and voluntary relief organisations.⁶⁴ Following the epidemic, the board remained largely dormant until the arrival of cholera in England brought it back into the forefront in October 1831. After its re-emergence, the Board submitted two advisory reports to the Lord Lieutenant outlining strategies for addressing the encroaching cholera epidemic. The Irish recommendations were closely based on the advice distributed by their London counterpart, whose papers, it noted: 'Would supersede many observations which the General Board of Health in

⁶⁰ For more on local initiatives in the eighteenth century see Sneddon, 'State intervention and provincial health care,' pp. 5-21.

⁶¹ O'Neill, 'Fever and public health in pre-famine Ireland;' O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 201.

⁶² *Ibid.*, p. 201.

⁶³ During 1822, £8,414 was distributed. O'Neill, 'Fever and public health in pre-famine Ireland,' p. 15. See also; *Report of the commissioners for the relief of the poor in Ireland in Eleventh report of the commissioners and return of the amount of grants or loans of public money which may have been made in aid of the distressed in any part of Great Britain since 1825*, p. 3, H.C. 1842 (577), xxvi, 443.

⁶⁴ Approximately £15,792 of funding was distributed in 1826/27. O'Neill notes: 'The figure is quite large when it is remembered that it was used mainly to finance the Dublin hospitals for nine months, and that even with this expenditure only a quarter of Dublin fever victims were being helped.' O'Neill, 'Fever and public health in pre-famine Ireland,' p. 25. See also, Geary, 'The poor and the sick in pre-famine Ireland,' p. 188.

Dublin might have to offer and form the ground-work of a portion of the preventative system which they would propose for his Excellency's adoption in Ireland.'⁶⁵

The General Board of Health appear to have been highly confident that its proposals would be effective and considered its experience of combating recurrent bouts of epidemic fever to be to its advantage. Comparing the two diseases it observed that second stage cholera had, 'in many cases, assumed so much of the form of typhus fever, as to be scarcely distinguishable from that disease.'⁶⁶ Its proposals therefore, largely reflected those previously used to combat fever. The board notified the public of proposed quarantines on shipping, the appointment of local officers of health or, boards of health consisting of not more than thirteen members, 'to be selected from among the governors or members of the corporation of any infirmary or fever hospital, or other hospital, and from the parishioners and medical practitioners.'⁶⁷ The onus was on the establishment of local boards, owing to the ability for individual counties to finance them which removed the necessity for the appointment of expensive officers of health to poorer parishes.⁶⁸ Boards could apply to the central administration for advances of money subject to an undertaking to repay them later.⁶⁹ But with an eye on possible issues of debt, the general board also recommended that local authorities should not be formed until cholera had been confirmed 'to their satisfaction' in a particular locality.⁷⁰ Local boards were directed to; 'Give all such directions for the doing and performing of all acts, matters, and things, necessary for the preventing the communication of contagion, and for restoring the sick

⁶⁵ *Second report GBH* 1831, pp. 7-10; 'Hospitals (Ireland) Act' 1818 (58 Geo. III c.47); 'Contagious Diseases (Ireland) Act' 1819 (59 Geo. III c. 41), a similar act was not in place in England or in Scotland at the time; Robins, *The miasma*, p. 65; See also, *Edinburgh Medical and Surgical Journal*, Vol.19 (1823), pp. 607-8.

⁶⁶ *Ibid.*, p. 7.

⁶⁷ *Ibid.*, pp. 13-14; *Ibid.*, p. 10; NAI, Chief Secretary's Office Registered Papers, CSORP 1832/33.

⁶⁸ Robins, *The miasma*, p. 65.

⁶⁹ *Ibid.*, pp. 109-110; *Second report GBH* 1831, p. 12.

⁷⁰ *Ibid.*, p. 13.

to health.⁷¹ The directive also required them to submit detailed weekly reports on the progress of their actions. However, as it later transpired, the returns usually amounted to little more than statistical information on the number of cases, deaths and recoveries.⁷²

The Irish Board's additional guidance likewise closely echoed that previously issued by the British Central Board of Health. It recommended the immediate separation of the sick from the healthy, the hospitalisation of cholera patients in detached buildings and the provision of carriages, 'of peculiar construction,' to be used exclusively for the transfer of victims.⁷³ However, the Board was careful to avoid the harsher tone that had characterised earlier directives issued by its British counterpart. It emphasised that the removal of patients should be undertaken 'with regard to the comforts of the patients and their families,' recognising that any perceived insensitivity or coercion might prompt families and neighbours to conceal cases, thereby facilitating the further spread of infection.⁷⁴ The report further advised that local boards in towns, villages, and the poorer parishes of large cities should establish additional temporary hospitals or, alternatively, create medical depots supplied with adequate medicines and staffed by qualified physicians. It also recommended the imposition of quarantine restrictions at the level of individual districts and provided guidance on appropriate medicines and methods of treatment.⁷⁵

In order to assist the public in recognising a potential attack, detailed guidance on symptoms was also issued. Early warning signs were said to include a general sense of uneasiness, weakness or faintness, headache, and mild bowel disturbance or diarrhoea.

⁷¹ *Second report GBH* 1831, p. 11.

⁷² *Ibid.*, p. 12. The returns for Belfast were published in the local press. However, countrywide returns from Local Boards can be found in the cholera archive of NAI. See, CSO RP/1832.

⁷³ *Second report GBH* 1831, pp. 15-19; *Freeman's Journal (F.J.)*, 31 Oct. 1831.

⁷⁴ *Second report GBH* 1831, p. 10.

⁷⁵ *Ibid.*, pp. 20-23, 30, 40-5 and 50-8; *F.J.*, 31 Oct. 1831.

The symptoms of a developing attack, however, were described in far more severe terms as; ‘a sudden sinking of the powers of life, a weak and accelerated pulse, and coldness of the extremities and tongue.’ The guidance noted that these symptoms were typically accompanied by vomiting and diarrhoea, the latter resembling ‘whey imperfectly strained, rice water, or a mixture of paste or starch and water,’ often in very large quantities and, in some cases, expelled with considerable force. Victims, it added, would also suffer painful muscle spasms and a blue or livid tinge around the eyes and body and warned that the symptoms, ‘too frequently encrease [sic] until the final close.’⁷⁶

In common with advice previously issued regarding fever a great deal of focus was also placed on the importance of general as well as personal hygiene. Local boards were instructed to ensure the removal of manure heaps, the draining or filling of cesspools, and the cleaning, and, where necessary, covering, of public sewers. They were also required to oversee the cleansing and purification of all streets, lanes, and courts. Houses, specifically those of the sick, their rooms, yards, gardens, or other areas, were to have any nuisances removed and the dwellings were to be ventilated, fumigated, and whitewashed. All beds, bedsteads, bedding, and furniture were to be exposed to the air, washed, cleansed, and if absolutely necessary, burned or destroyed. Marks, numbers or tokens were to be placed on the houses of the infected and fines were to be imposed on those who did not comply with any orders issued by the boards. The public was told to avoid overcrowding and damp currents of cold air in their dwellings. They were also advised to ensure that their houses, persons, possessions and clothes were kept clean.⁷⁷ A summary of the instructions by the Lord Lieutenant published in the Dublin press even went as far as to suggest that waste hot water from steam engines be deposited in reservoirs for, ‘the

⁷⁶ For the full account see *Second report GBH 1831*, pp. 45-8.

⁷⁷ *Second report GBH 1831*, p. 11.

accommodation of the poorer classes in washing their clothes.⁷⁸ Stress was also placed on the importance of pure supplies of water, and the value of exercise, regularity of hours, temperance and the avoidance of food likely to cause indigestion.⁷⁹ Taken together, these measures reflected an increasingly interventionist and preventative approach to disease control. Although framed by central authority, responsibility for the execution of anti-cholera measures rested predominantly with local boards once authorised. A pattern from which Belfast notably diverged having established its board of health prior to central confirmation of cholera's presence in the town.

Preparations in Belfast

Owing to the spread of cholera elsewhere in the United Kingdom, Belfast's authorities benefited from prior knowledge of the measures adopted to combat the disease. Forewarned, and to some extent forearmed, the chronology of Belfast's preparations for the epidemic is therefore crucial to understanding how cholera gradually came to dominate public health discourse and how the measures implemented may have helped to limit its spread within the town.

Throughout Belfast, local newspapers, particularly the *Belfast Newsletter* and the *Northern Whig*, regularly published reports on cholera's progress and informed readers of the procedures being put in place to contain the advancing disease throughout Europe. While the accuracy of these reports is sometimes open to question, they nevertheless demonstrate that a considerable volume of information was reaching both the public and the town's authorities well in advance of cholera's arrival. Although this published information was useful in encouraging preparedness, it also contributed to a growing

⁷⁸ *Dublin Gazette*, 29 Oct. 1831; *F.J.*, 31 Oct. 1831.

⁷⁹ *Second report GBH 1831*, pp. 33-40.

sense of foreboding and as Sir Ian Fraser has noted, throughout Belfast the cry: 'It comes-it comes' could frequently be heard.⁸⁰

Owing to the level of panic associated with cholera, false alarms regarding its presence in individual localities prior to official confirmation of its arrival were relatively common. In late September 1831 for example, the first reports of deaths from cholera, or cholera-like illness, began to appear in Ulster. The earliest concerned two medical students from Dromara, County Down, who, suspected of acting as resurrectionists, were apprehended following the discovery of two bodies that had been prepared for export to Scotland. One of which was identified as that of a man from Ballynahinch who had reportedly died a few days earlier from an attack of cholera.⁸¹ The second report was in connection with a respectable family from Dunmurry, between Belfast and Lisburn, where a female servant had been accused of administering poison to three members of the family. They had not in fact been poisoned, but instead, had been victims of an illness resembling cholera which had also affected several families in the local vicinity.⁸² It is virtually impossible however, to establish whether or not these were the first true cases of epidemic cholera in Ulster, but it is indicative of the level of concern that was felt across virtually the whole province.

The first preventative actions in Belfast, based on the recommendations made by the General Board of Health in June and July 1831, had been instigated well in advance of these early reports. They were largely prompted by an increase in the number of fever cases especially among the town's poor, a common characteristic which had often preceded the onset of cholera in other localities. On 25 September 1831, the committee

⁸⁰ Sir Ian Fraser, 'Father and son - A tale of two cities, Presidential address to the Ulster Medical Society' in *Ulster Medical Journal*, Vol. 37(1) (1968), p. 7.

⁸¹ *B.N.L.*, 20 Sept. 1831.

⁸² *Ibid.*, 23 Sept. 1831.

of the Belfast Fever Hospital convened a special meeting which was also attended by a deputation of the embryonic and hastily formed local board of health.⁸³ The board's establishment, at this time clearly went against the recommendations of Dublin's central board.⁸⁴ However, its committee quickly assumed the role as the main driving force behind the initial responses to the threat of cholera in the town. At the meeting, the attending members of the committee, Dr Henry McCormac and Dr Henry Forcade, requested to be informed whether the committee of the Belfast Fever Hospital would be prepared to admit the first cases of 'Indian Cholera' as they presented themselves.⁸⁵ The Fever Hospital Commissioners resolved to cooperate and a deputation from its committee consisting of Dr W. M. Wilson, Dr Magee and William Perrie were sent the following day to the board of health with their solution which proposed that:

Should any doubtful case of cholera make its appearance in Belfast, before the Board of Health shall have provided a proper place for the reception of persons attacked by that disease that the Lock Ward attached to the hospital be instantly cleared for the exclusive accommodation of such cases - until the Board of Health shall have provided a suitable place for the treatment of the disease.⁸⁶

In the first instance the new board of health was a supervisory body, and thus, physical sanitary responses such as street cleaning and the removal of nuisances remained the responsibility of the Belfast Commissioners and Committee of Police.⁸⁷ Nevertheless, the minutes of the Fever Hospital Committee indicate that it considered neither body to be

⁸³ This appears to be the first reference to the formation of a local board of health in Belfast at this time. Minute Book of the Belfast Fever Hospital, Office of Archives, Royal Victoria Hospital Belfast, 25 Sept. 1831, p. 19. I would like to express my thanks to Professor Richard Clarke, former archivist for access to this resource. The following were initially appointed as members of the Belfast Board of Health: Sir Stephen May, Rev. A.C. Macartney, Dr. James Forsythe, Right Rev. Dr. William Crolly, Dr. James McDonnell, Rev R.W. Bland, William Clarke Dr. Henry Purdon, Rev. Dr. Cooke, Dr. Thompson, Rev. J. Morgan, C.M. Skinner, Dr Robert Tennent, Dr, Henry Forcade and Charles Trevor (Secretary): *B.N.L.*, 25 Oct. 1831. Curiously, Henry McCormac who attended a meeting in September 1831 as a representative of the committee (see below) is not listed as a member.

⁸⁴ *Second report GBH* 1831, p. 13.

⁸⁵ Minute Book of the Belfast Fever Hospital, 25 Sept. 1831, p. 19.

⁸⁶ *Ibid.*, p. 19.

⁸⁷ For more on the corporation and its various sub-committees see, Budge and O'Leary, *Approach to crisis*; Johnson, *Middle class culture and civic identity*; Slater, *Belfast politics*.

making sufficient efforts to maintain cleanliness within the town. On 12 October, it resolved that an application be made to the commissioners requesting that the lanes, courts, and alleys of the town be cleansed more regularly. The commissioners, evidently unsettled by this criticism, did not respond until 20 November, when they replied that a 'more than ordinary system of cleaning' had been implemented, and requested to be informed by 'any gentlemen concerned with this situation when they observe any neglect of such system.'⁸⁸

The main sanitary issue that faced the police commissioners was the unhygienic accumulations of filth that were collected behind the homes of Belfast's poorest residents, a factor which the committee noted that the police commissioners were unable to prevent.⁸⁹ However, it is clear that although the local Board of Health wished to support the commissioners' efforts, its response was initially slow. For instance, it was not until the following March that it appointed Mr F. Magennis to the position of Inspector General of Nuisances in an effort to address the problem more systematically.⁹⁰ Under Magennis' direction, unsanitary material was removed from the rear of many dwelling houses. He also oversaw the construction of sewers to drain stagnant water in several areas and ensured that the slaughterhouses of the notoriously unhygienic Hercules Street were regularly cleansed, with refuse removed to the public dung heaps. His efforts were later acknowledged as having made a significant contribution to the prevention of cholera.⁹¹

In addition to working with the Belfast Police Commissioners and Committee, the board also appealed to the Belfast Charitable Society for assistance.⁹² However, while the

⁸⁸ Minute Book of the Belfast Fever Hospital, 20 Nov. 1831, p. 28.

⁸⁹ *Ibid.*, 20 Nov. 1831, p. 28.

⁹⁰ *B.N.L.*, 16 Nov. 1832.

⁹¹ *Ibid.*

⁹² Strain, *Belfast and its Charitable Society*, p. 260. For a more recent study of the society see Jonathan Bardon, *An interesting and honourable history: The Belfast Charitable Society, the first 250 years 1752-2002* (Belfast Charitable Society, Belfast, 2003).

society's committee initially resolved to 'be at all times ready to co-operate with the board of health, as far as lies in their power,' their support did not extend to accommodating victims of the disease and it subsequently resolved to shut its doors to the public at the earliest sign of an outbreak.⁹³ Later, it did agree to supply coffins to the board, virtually their only contribution, and while the epidemic raged during June 1832 the poorhouse was shut and its inmates were effectively imprisoned within the institution.⁹⁴ It should be noted however that this self-imposed quarantine ensured that there were no cases of cholera recorded within the poorhouse walls.

Against this backdrop of anxiety in Belfast, the extension of the epidemic to Scotland in early November 1831 had raised considerable concern within the town resulting in a public meeting being convened in the Commissioners Room of the Commercial Buildings in Waring Street.⁹⁵ The meeting was chaired by the sovereign (mayor) Sir Stephen May, and was attended by local magistrates, clergy, medical practitioners and prominent householders.⁹⁶ Fever, was the initial concern of the attendees and Dr W. M. Wilson, physician to the fever hospital, who had visited Musselburgh and Edinburgh during their recent cholera outbreaks to study the disease and modes of treatment, observed that there had been a greater number of fever patients admitted to the town's hospital than had been previously seen.⁹⁷ This, Wilson observed, 'proved the necessity for active measures for investigating into the state of the town-especially in enforcing the propriety of cleanliness

⁹³ According to Strain on the day the first case was recognised, 'Messrs. Clarke, Mateir, and Sufferin were authorised to erect a wooden gate and barrier within the entrance to the Poor House.' See, Strain, *Belfast and its Charitable Society*, p. 260.

⁹⁴ *Ibid.*, p. 260; Committee Book Belfast Charitable Society 1826-33, 10 Mar. and 16 June 1832, PRONI, MIC/61/6.

⁹⁵ *B.N.L.*, 12 Nov. 1831.

⁹⁶ *Ibid.*, 11 and 15 Nov. 1831.

⁹⁷ *Ibid.*, 15 Nov. 1831. 69 patients were under treatment at the time of Wilson's report and 687 had been admitted since the previous April, more than double the figure for 1830 when 317 patients had been admitted.

and ventilation.⁹⁸ Attendees were also provided with a report on cholera's progress by Dr Thomas Thompson who urged that all who were able should 'zealously attend' to the condition of the poor, whom he described as 'peculiarly obnoxious' to the disease and 'from whom it must doubtless extend to every class of the community.'⁹⁹ Cleanliness and ventilation, he continued, 'were of all things desirable not only in the lanes and houses but in the persons of the poor.' He also referred to both private and public philanthropy, recommending that, where possible, steps should be taken to improve the diet of the poor and provide them with warm and clean clothing.¹⁰⁰

Although the *Belfast Newsletter* and the minutes of the town's fever hospital both show that a preliminary Board of Health was already in place, the principal focus of the meeting was to oversee its official appointment in accordance with the appropriate Act of Parliament.¹⁰¹ Officially constituted on 22 November 1831, the board's members consisted of representatives of the town's male elite and included politicians, clergy and members of the medical establishment.¹⁰² While the board's composition might suggest the influence of social status and civic hierarchy, there is little evidence that this materially impeded its preparatory activity. Indeed, the physician and public health campaigner Dr Andrew Malcolm later observed that the Board 'endeavoured, and with great success, to arouse the different authorities in the town, with a view to set everything in order and to strengthen all the defences in proper time.'¹⁰³

⁹⁸ *B.N.L.*, 15 Nov. 1831.

⁹⁹ *Ibid.*

¹⁰⁰ *B.N.L.*, 15 Nov. 1831.

¹⁰¹ 'Hospitals (Ireland) Act' (58 Geo. III, c.47); *B.N.L.*, 15 Nov. 1831.

¹⁰² List of the members of the Belfast Board of Health from November 1831, Sir Stephen May, Dr James McDonnell, Dr Thomas Thompson, Dr W. M. Wilson, Rev. Thomas Hinks, Right Rev. Dr William Croll, Rev. Dr Cooke, William Clarke, William Cairns, Colonel Coulson, Robert Tennent, Robert Gordon, and Charles Trevor (Secretary). See, Minute book of the Belfast Fever Hospital, p. 33. Belfast Street Directory, 1831-32, p. 74. <http://streetdirectories.proni.gov.uk> (21/09/2012).

¹⁰³ Andrew George Malcolm, *The history of the General Hospital Belfast and the other institutions of the town* (W and G Agnew, Belfast, 1851), p. 97.

Financial concerns relating to the management of the epidemic were also raised at the meeting and there was particular focus on the inclusion of the nearby suburb of Ballymacarrett as part of the district managed by the board. Attendees were inclined to include Ballymacarrett, but were concerned that money advanced from the Consolidated Fund for Ireland to combat the epidemic would have to be subsequently appropriated from the assets of County Antrim.¹⁰⁴ The fact that Ballymacarrett was in the municipal area of County Down therefore, presented an obstacle which they feared, 'might afterwards prove embarrassing.'¹⁰⁵ Subsequently, the residents of Ballymacarrett, anxious that a bureaucratic stalemate would result, took matters into their own hands and applied to the Lord Lieutenant for permission to form their own board of health.¹⁰⁶

Another issue raised during these discussions suggests that some of Belfast's more prominent residents remained preoccupied with matters of civic infrastructure and urban order, at times appearing to prioritise these concerns over more immediate preventative measures against cholera.¹⁰⁷ Robert Montgomery, a local attorney, for example, drew attention to the issue of the inadequate condition of the Belfast Police Office, where, he noted, 'numerous prisoners of the lower orders are huddled together in such a manner as to...generate and diffuse disease of every kind.'¹⁰⁸ The commissioners of police had already demolished their former premises in Fountain Street, but upon doing so realised that they were prevented by law from raising the necessary sums for erecting a new building.¹⁰⁹ Montgomery therefore proposed that the Belfast Charitable Society might construct a new office which could be rented by the commissioners. A subsequent

¹⁰⁴ *B.N.L.*, 15 Nov. 1831.

¹⁰⁵ *Ibid.*

¹⁰⁶ *B.N.L.*, 15 Nov. 1831.

¹⁰⁷ For civic pride in Belfast see Sean Connolly, 'Belfast: The rise and fall of a civic culture' and Johnson, *Middle class culture and civic identity*.

¹⁰⁸ *B.N.L.*, 15 Nov. 1831. For more on the history of Belfast policing in the nineteenth century see, Griffin, *The Bulkies*.

¹⁰⁹ *B.N.L.*, 15 Nov. 1831.

meeting of the commissioners on 29 November indicates that they too did not wish to miss an opportunity to bring their own plight regarding the relocation of the police office into the political foreground. Addressing the attendant members of the board of health, the commissioners state that:

The confined situation of the present police office is more likely to produce disease and spread contagion than any other places they know, and further that this committee having ineffectually endeavoured to have the same removed now respectfully call your attention to it.¹¹⁰

Despite these appeals, no immediate action was taken, and the police office was not relocated until September 1833.¹¹¹ This was a period in which the civic improvement of Belfast's principal commercial and municipal buildings held considerable importance for the town's elite.¹¹² Nevertheless, it is evident that the Belfast Board of Health prioritised more urgent concerns. As reports reached the town of cholera's arrival in Sunderland, the growing realisation that its spread to Ireland would be difficult, if not impossible, to prevent compelled the members of the board to act with greater urgency.

Like many similar bodies, Belfast's Board of Health was convinced of the contagious nature of cholera. However, this view was not universally shared. The *Belfast Newsletter*, for example, reported that although medical practitioners in Sunderland had claimed the disease had appeared there, the evidence remained presumptive and was 'by no means proven.'¹¹³ The paper was also anxious to downplay assertions regarding cholera's contagiousness, informing its readership that:

¹¹⁰ Police Committee minutes 1831-32, 29 Nov. 1831, PRONI, LA/7/2/BA/1/6; Minutes of the Commissioners Police, PRONI LA/7/2/BA/2/4. Hereafter Police Committee Minutes and Police Commissioners Minutes.

¹¹¹ *B.N.L.*, 24 Sept. 1833. Agreement was reached to relocate the police office in July 1833. Griffin, *The Bulkies*, p. 42.

¹¹² Building projects in the 1820s and 30s, for example, had increased the size of the town while adding little to its aesthetic appearance. They continued into the following decades with increased focus on public buildings and infrastructure. See, Connolly, 'The rise and fall of a civic culture,' p. 36.

¹¹³ *B.N.L.*, 18 Nov. 1831.

Under proper regulations, as to ventilation, cleanliness and other precautions, this dreaded disease is not necessarily contagious, and it is besides certain, that however malignant the cholera may be in the countries in which it originated, it becomes greatly modified by the climate of the countries to which it has been imported; and from these circumstances should it unhappily reach our shores we are induced to entertain a confident expectation that it will be far less formidable than public fear has made it.¹¹⁴

Shortly afterwards, the Commissioners of Police also began to implement a more stringent model of sanitary provision in Belfast. On 29 November 1831, a meeting of the commissioners received a deputation from the newly formed board of health, consisting of Dr Thomas Thompson, Dr Robert Tennent, William Cairns and Colonel Coulson.¹¹⁵ Although the minutes do not record the precise details of the Board's recommendations regarding the most effective means of cleansing the town, it is evident that its members were keen to assert their views on the matter. The Commissioners, for their part, indicated a willingness to cooperate and accordingly resolved to:

Exert themselves to the utmost to fulfil the wishes of the board of health in improving and extending the general cleanliness of the town, and in acting in concert with them in every case where it may be found necessary, and coming within their jurisdiction.¹¹⁶

A more rigorous programme of street cleansing was subsequently introduced, with additional labourers and carts employed to carry out the additional duties.¹¹⁷ However, the commissioners remained concerned about the financial implications of complying with the board of health's requests. Accordingly, at a further meeting on 13 December 1831, it was resolved that a separate account be maintained of all expenses incurred in

¹¹⁴ Ibid.

¹¹⁵ Police Committee and Commissioners of Police Minutes, 29 Nov. 1831.

¹¹⁶ Ibid.

¹¹⁷ Police Committee and Commissioners of Police minutes, 9 Jan. 1832.

implementing the board's recommendations, with such costs to be charged to the Board itself.¹¹⁸

The board, had many more concerns than the commissioners, including the supervision of the medical attendance of the town and of its cleaning. In order to manage these responsibilities effectively the board split Belfast into a manageable number of six medical districts; Hospital, Dock, Smithfield, Shankill, Cromac, and College.¹¹⁹ Each district was supervised by two members of the board, aided in specified divisions of each, by visitors.¹²⁰ The visitor's duties included inspecting the condition of streets, lanes, entries and courtyards. They also observed whether there were sewers to service residential areas and were required to present reports on any parts of the town that required immediate cleaning, ventilation, paving as well as those that needed to be provided with sewers.¹²¹

Sewerage provision was one area in which deficiencies were particularly evident. The vast majority of dwellings inhabited by the poor lacked running water and had no access to water closets. In many cases, a single shared privy served an entire street, while waste of every description accumulated in communal middens. Although the supervision of street cleaning fell under the remit of the board of health, responsibility for the removal of nuisances was lay primarily with of the commissioners, as did the task of pursuing or requiring street owners to construct and pay for the provision of sewers for the areas that they owned. Occasionally, however, accountability for payment was placed on the

¹¹⁸ Ibid., 13 Sept. 1831.

¹¹⁹ For the district boundaries and the duties of the visitors see the Board of Health Notices in Appendix Two of this thesis and Andrew Malcolm's map of cholera districts in 1832 and 1848/9 in Appendix Three. Source: Bound volume of cuttings relating to cholera in Belfast, Royal College of Physicians Ireland (RCPI), BMS/19 and Andrew George Malcolm, *The sanitary state of Belfast and suggestions for its improvement: A paper read before the statistical section of the British Association* (Henry Greer, Belfast, 1852).

¹²⁰ *B.N.L.*, 3 Feb. 1832.

¹²¹ Ibid.

residents of a particular area or on the commissioners themselves who would undertake construction and then pursue the owners for reimbursement.¹²²

Visitors were also tasked with visiting the houses of the poor and were required to provide reports on the cleanliness of dwellings, the residents' state of health, the necessity of whitewashing and the condition of bedding material.¹²³ Upon discovering dwellings which were deemed harmful, visitors were, in the first instance, required to contact landlords and impress upon them the 'humanity and justice' of repairing tenements or were to report the conditions to the superintendents of the district.¹²⁴ Visitors were advised to press upon the poor the importance of temperate living and 'regular habits of life' warning the poor against drunkenness, 'either occasional or habitual,' but were warned to conduct themselves in a conciliatory manner at all times.¹²⁵

Consequently, many of these houses were whitewashed and fumigated, streets were cleaned and food, clothing, blankets and straw for bedding was supplied to those most in need.¹²⁶ However, the attention of visitors and board members was not always welcome and there is evidence that officials were occasionally met with hostility, insult, and even threats from the very people they sought to assist.¹²⁷ Tensions were particularly prevalent during the first weeks of the cholera epidemic. In April 1832, for example the *Belfast Newsletter* reported how two members of the board, Dr John Kidley and Dr W. M. Wilson, upon visiting a patient, were 'rudely assailed by a number of individuals, with stupid clamours about 'poison, poisoners' etc.'¹²⁸

¹²² See, Police Committee and Commissioners of Police Minutes 1831-32.

¹²³ *B.N.L.*, 3 Feb. 1832.

¹²⁴ *Ibid.*

¹²⁵ *B.N.L.*, 3 Feb. 1832.

¹²⁶ *Ibid.*

¹²⁷ *B.N.L.*, 20 Apr. 1832.

¹²⁸ *Ibid.*

Incidents like these, clearly show that mistrust of officials, as well as a considerable atmosphere of fear, confusion and lack of knowledge, existed among the public. Nevertheless, it is notable that overt violence or abuse of officials in Belfast remained relatively muted. While there is no definitive explanation for this, it is plausible that public appeals, frequently circulated in the local press which urged the public not to engage in the type of disgraceful acts which had been witnessed in other urban areas discouraged disorder.¹²⁹ In comparative terms, attacks on board members or doctors in Belfast never approached the scale often witnessed elsewhere. In Dublin for example, public mistrust of the medical establishment was much more pronounced. Doctors sometimes required police protection and carriages carrying the sick to hospital were occasionally set upon, the patients ‘rescued’ and the carriages thrown in the Liffey.¹³⁰ In Britain, violent responses were more extreme still, with cholera riots widespread throughout England, Scotland and Wales. In March 1832 for instance, twenty civilians were killed by troops used to quell disturbances in Merthyr, South Wales, and riots were also experienced in areas including but not limited to, Exeter, Manchester, London, Edinburgh and Glasgow.¹³¹

Many of the disturbances were instigated after local authorities insisted on the suspension of traditional practices such as waking the dead.¹³² However, there was also considerable concern regarding the establishment of cholera hospitals and the practices associated with

¹²⁹ Cholera riots had been widespread throughout Britain and Europe. In March, an article in the *Belfast Newsletter* urged the public not to engage in the type of disgraceful acts witnessed in Glasgow and Paisley. For examples see *B.N.L.*, 20 Mar. and 24 Apr. 1832. For more on cholera and popular protest specifically in the early part of the nineteenth century see Michael Holland; Geoffrey Gill and Sean Burrell (eds), *Cholera and conflict: 19th century cholera in Britain and its social consequences* (Medical Museum Publishing, Leeds, 2009) and Durey, *The return of the plague*, pp. 158-9.

¹³⁰ Robins, *The miasma*, p. 75. A similar incident occurred in Leith near Edinburgh, see, *Caledonian Mercury*, 17 Mar. 1832.

¹³¹ Durey, *The return of the plague*, p. 16; Morris, *Cholera 1832*, pp. 106-14. Similar violent protest was also common throughout large European towns and cities.

¹³² Wakes often accompanied by festivity were a type of vigil where family and friends watched over the body of a deceased person before burial.

them. One particularly persistent fear was that the bodies of cholera victims would be ‘burked’ and used for anatomical dissection.¹³³ In the Scottish town of Paisley and in Manchester in the north-west of England incidences related to burking, including the discovery of empty coffins, and mutilated bodies, provoked serious unrest culminating in riots and mob attacks on their respective cholera hospitals.¹³⁴

While Belfast remained largely free from similar acute hostility directed at the medical fraternity, aggressive and violent protests did occur in other parts of Ulster. Although boards of health were anxious to ensure the separation of the sick from the healthy through the establishment of dedicated cholera hospitals, in some areas residents feared that such institutions would themselves endanger the lives of the nearby populace and this led, on occasion, to significant local resistance throughout 1832.¹³⁵ In Donegal town, for example, ‘a set of ruffians’ caused considerable damage to the hospital and burned down the house of a nurse.¹³⁶ In Clones, Co. Monaghan, board members had to be given police protection when the opening of a temporary hospital was proposed, and in Downpatrick, Co. Down, opposition to its cholera hospital meant the victims of the disease had to be looked after in cheap lodgings by local prostitutes.¹³⁷

Yet, for the majority of municipal bodies, the establishment of specialist cholera hospitals or temporary wards presented the most viable solution to the problem of dealing with the sick. In Belfast, the local authorities, clearly apprehensive of the seemingly unavoidable progression of the disease, arranged meetings in early February 1832 to secure to

¹³³ The term was coined in reference to the practices of the Irish born resurrectionists William Burke and William Hare in nineteenth-century Edinburgh. For more on dissection, resurrectionists and fears associated with burking see Durey, *The return of the plague*, pp. 170-84.

¹³⁴ *Ibid.*, pp. 109-11. For the riots in Manchester see *The Morning Post*, 6 and 7 Sept. 1832. For an example of a disturbance in Paisley see *Caledonian Mercury*, 2 Apr. 1832.

¹³⁵ Robins, *The miasma*, p. 92.

¹³⁶ *Ibid.*

¹³⁷ Robins, *The miasma*, p. 92.

accommodation for a cholera hospital in the town.¹³⁸ But the fear associated with cholera hospitals was also evident in the attitudes of the towns established institution towards its location. Objections were raised against using the existing fever hospital, chiefly by its resident physicians, on the basis that it would endanger fever patients and discourage the poor from attending the hospital if taken ill with fever.¹³⁹

Consequently, two alternative sites were suggested, one at Millfield, a densely populated industrial and residential area in the centre of the town associated with the weaving trade, and another, a row of unoccupied terraced houses, on the Dublin Road, a significant arterial route.¹⁴⁰ However, the rental of these properties was deemed impracticable and at a subsequent meeting it was therefore proposed that temporary structures be erected at the rear of the town's Fever Hospital on Frederick Street. Following this decision, Dr John Kidley, secretary of the board of health, issued a public appeal for subscriptions to fund its provision.¹⁴¹ It was a proposal which expressly contradicted a resolution that had been passed at a meeting of the hospital committee the previous September.¹⁴² The *Northern Whig* reported that, at that earlier meeting, several physicians had expressed the opinion that, 'charity should not be appropriated to the reception of cases of cholera' and questioned the apparent reversal in the committee's position.¹⁴³

The *Whig's* objections were seemingly disregarded, and after securing approximately £700 in public subscriptions, the temporary site at the rear of Frederick Street, initially providing for fifty beds, was selected for the treatment of cholera patients.¹⁴⁴ The hospital

¹³⁸ Malcolm, *History of the General Hospital*, p. 97.

¹³⁹ *B.N.L.*, 17 Feb. 1832. *The Northern Whig (N.W.)*, 14 Feb. 1832.

¹⁴⁰ *B.N.L.*, 17 Feb. 1832.

¹⁴¹ *N.W.*, 16 Feb. 1832.

¹⁴² *Ibid.*

¹⁴³ *N.W.*, 16 Feb. 1832.

¹⁴⁴ *B.N.L.*, 17 Feb. 1832; Malcolm, *History of the General Hospital*, p. 97; Robert Marshall, 'The open window, A paper read to the British Tuberculosis Association at its annual meeting in Belfast, June 1948' in *Ulster Medical Journal*, Vol.17(2) (1948), pp. 188-99.

was placed under the control of Dr William Duncan before later being transferred to Dr Henry McCormac who remained in charge for the duration of the epidemic.¹⁴⁵ Additional accommodation for the isolation of individuals who had suffered direct contact with cholera victims was also secured in Lancaster Street, directly adjacent to the fever hospital and two further houses were rented in other parts of the town to serve as night-stations for the supply of medicines and to store the palanquins (covered cars) for the transport of patients to hospital.¹⁴⁶ It therefore appeared that Belfast was as well prepared for the arrival of the disease as circumstances allowed. Indeed, in comparison with other towns in the United Kingdom, Dr Andrew Malcolm, recalling the epidemic in 1851, remarked that, ‘no town of the same magnitude was placed in more effective defence.’¹⁴⁷

However, significant concerns remained among the local authorities. One of the most pressing was the repatriation of Irish paupers from areas of England and Scotland where cholera had already been prevalent. Arriving primarily on packet ships from Scotland, the returning poor had, in many cases, been provided with bundles of old clothes and other basic provisions.¹⁴⁸ Authorities feared that such items, having potentially belonged to cholera victims, might inadvertently act as vectors of infection and thereby introduce the disease into Irish ports alongside their wearers.¹⁴⁹

On 17 February 1832, the *Belfast Newsletter* issued a warning that, ‘crowds of poor persons’ from various parts of Scotland had landed on coal boats at Bangor and Donaghadee and had drifted into Belfast.¹⁵⁰ The report also observed that there had been a notable absence of quarantine measures at ports both in Scotland and Ireland, noting

¹⁴⁵ Malcolm, *History of the General Hospital*, p. 98.

¹⁴⁶ Clarke, *The Royal Victoria Hospital*, p. 11; Malcolm, *History of the General Hospital*, p. 97; Marshall ‘The Royal Victoria Hospital, Belfast,’ p. 21.

¹⁴⁷ Malcolm, *History of the General Hospital*, p. 98.

¹⁴⁸ *B.N.L.*, 21 Feb. 1832.

¹⁴⁹ *Ibid.*

¹⁵⁰ *B.N.L.*, 17 and 21 Feb. 1832.

that ‘the immense number of persons who have been lately brought over this way was cause for serious alarm; for the quarantine on steam packets is the merest ineffectual mockery, if such a system as this can be resorted to.’¹⁵¹ With no boards of health in place at points of disembarkation such as Bangor and Donaghadee, the *Newsletter* urged the Belfast Board to seek additional powers to ‘stop this dangerous evasion of the quarantine,’ warning that, ‘not a moment may be lost for a single arrival may, in this surreptitious way, bring us the cholera with all its horrors.’¹⁵²

The Board responded almost immediately to this report, requesting that the Lord Lieutenant order the closure of both Bangor and Donaghadee to all passengers and merchandise arriving from Portpatrick.¹⁵³ However, no immediate reply was received, and the ports do not appear to have been closed. In fact, further arrangements were said to have been made between the owners of Scottish steamboats and the Lord Provost of Glasgow by which paupers could return to Ireland, ‘on easy terms.’¹⁵⁴ This was an arrangement that the proprietors were prepared accept on the understanding that no quarantine measures would be in place. The *Belfast Newsletter* warned ominously; ‘If this arrangement be sanctioned, we may have cholera in a few days.’¹⁵⁵ The concerns put forward by both the *Newsletter* and later by the *Northern Whig* were quickly borne out as within a week cholera had struck the town.¹⁵⁶

The Epidemic in Belfast 1832.

On 28 February 1832, Bernard Murtagh, a 34-year-old cooper, became the first, though unofficial, victim of cholera in Belfast. Murtagh, who resided at a lodging house kept by

¹⁵¹ *Ibid.*, 17 Feb. 1832.

¹⁵² *Ibid.*

¹⁵³ *B.N.L.*, 21, Feb. 1832.

¹⁵⁴ *B.N.L.*, 13 Mar. 1832.

¹⁵⁵ *Ibid.*

¹⁵⁶ *B.N.L.*, 20 Mar. 1832; *N.W.*, 26 Mar. 1832.

his brother Peter at 14 Quay Lane, a narrow street near the River Lagan, had suffered from diarrhoea for two or three days previously but became seriously ill around midnight. His symptoms were described as severe vomiting and diarrhoea and were said to be whitish like milk, or meal and water. During the morning of 29 February, he began to experience painful cramps and was attended by Surgeon McBurney and other medical practitioners as well as members of the board of health who found him to be in a severe state of collapse.¹⁵⁷ His condition was described as follows:

The skin was throughout cold, clammy, and damp to the touch; the tongue cold and white; the general colour of the body and face of a livid paleness; the features shrunk, and the skin on the fingers shrivelled.¹⁵⁸

Around midday he was given a mustard emetic and seemed to revive a little. However, it was only a temporary respite and he died between seven and eight o'clock the following evening only nineteen hours after becoming ill.¹⁵⁹ The attending physicians believed Asiatic cholera to be the cause and speculated, though they could find no evidence of contagion, that the disease could have been brought by a couple who came from Glasgow and lodged at the house for one night on 20 February, later, however, the board of health declared that the couple had been perfectly well.¹⁶⁰ Ever mindful of causing alarm among an already anxious public, the board decided to make sure that the death was not publicised. However, as a precautionary measure it burned Murtagh's bedding, cleaned, whitewashed and fumigated the house with chlorine gas, and placed the house into isolation, for several days, preventing the other residents from leaving by installing a

¹⁵⁷ Belfast Board of Health - Second report From Belfast - General state of health of the town, prevalence of fever etc., in *The Cholera Gazette*, 19 Mar. 1832, pp. 249-51; Malcolm, *History of the General Hospital*, p. 98.

¹⁵⁸ *The Cholera Gazette*, p. 250.

¹⁵⁹ *Ibid.*, p. 250.

¹⁶⁰ *The Cholera Gazette*, p. 250. The couple suspected of transporting the disease were later deemed by the Board of Health, to have been perfectly well.

guard of constables.¹⁶¹ Despite these restrictions, a woman named only as McCluskey, who had been employed to assist in cleaning the house following the death, took ill and died after the restrictions had been removed. However, the board continued to deny the existence of cholera and claimed that she had, 'drunk herself to death on her liberation,' stating that a postmortem examination of her body had provided no further conclusive evidence to suspect otherwise.¹⁶²

Within the space of just a few days several more deaths occurred in the immediate vicinity. On 6 March, a man named only as McNally and described as old and frail, died in twenty hours. On 14 March, a woman named only as Fanny in the report, who lived in the same house as McCluskey's stepdaughter, Bridget McClean (6 Johnny's Court, Talbot Street) became ill after returning from a four-day return walk between Belfast and Newry, where she had suffered diarrhoea on route. Arriving at the house exhausted around one in the morning, by 9 o'clock the same evening, she was found to be weak, cold and feeble having suffered vomiting as well as leg and abdominal cramps. She died at eight the following morning.

On the same day, McClean's next-door neighbour, George McKeown a lighterman became violently ill, suffering severe diarrhoea, vomiting and cramps.¹⁶³ McKeown survived for four days and died on 18 March when he became the first official victim of cholera in Belfast. His wife and son who lived in the same room and his brother, who had stayed in the room while visiting, also became ill. All three were taken to hospital where McKeown's wife and brother were expected to recover but his son, aged twenty-seven, succumbed to the disease and died at three o'clock the same afternoon, just two hours

¹⁶¹ Ibid., Malcolm, *History of the General Hospital*, p. 98.

¹⁶² Robins, *The miasma*, p. 68; *The Cholera Gazette*, pp. 250-1.

¹⁶³ Ibid., p. 251. Lightermen operated flat bottomed barges, transporting goods from vessels to the quayside.

after his father. The medical attendants reported that prior to death he had turned a deep indigo blue in the hours before his passing.¹⁶⁴ The *Belfast Newsletter* reported that the McKeown cases were traceable to the earlier outbreak in Quay Lane and the board of health was subsequently forced to publicly declare that cholera was present in Belfast.¹⁶⁵

The news that the disease had established a presence in Ireland spread quickly, but the reports from Belfast were later dismissed with considerable derision by the Dublin press. On 27 March, the *Freeman's Journal* reported that, 'there is yet, at least no such disease in Dublin and we do not believe it is in Belfast.'¹⁶⁶ The following day, another article blamed a 'Northern contagionist of the press' for the reports and again wholly denied the existence of 'The Indian Cholera.'¹⁶⁷ However, it was prepared to admit to the presence of a, 'common cholera' or a dangerous 'belly-ache' among, 'the drunken, the filthy, the profligate and those obliged to live upon unclean and unwholesome food, and to shiver in rags.' Nevertheless, it stated vociferously, that this disease 'was not akin to, or the species of, Indian Cholera.'¹⁶⁸

As Belfast had not experienced any further cases in the week following the initial announcement, the authors of the reports were denounced for having, 'practised a gross delusion upon the community,' and were also labelled as the 'drivellers and fabricators and knavish excitors of false alarm.'¹⁶⁹ When rumours emerged that the disease had spread from Belfast to Dublin, the *Dublin Times* also rejected the reports as speculation and curtly dismissed the case of an alleged victim in the city as having been caused by, 'a liberal indulgence of Cape Madeira, with perhaps an extra tumbler of whiskey after

¹⁶⁴ *B.N.L.*, 20 Mar. 1832.

¹⁶⁵ *Ibid.*

¹⁶⁶ *F.J.*, 27, 28 Mar. and 4 Apr. 1832; *Dublin Times*, 13, 19, 29 Mar. 1832; Robins, *The miasma*, pp. 68-9.

¹⁶⁷ *F.J.*, 28 Mar. 1832.

¹⁶⁸ *Ibid.*,

¹⁶⁹ *F.J.*, 28 Mar. and 29 Mar. 1832.

oysters.’¹⁷⁰ While it is possible that these early cases were, as had been the case in Ulster, little more than false alarms, medical men in Dublin were clearly concerned and some expressed the opinion, albeit tentatively, that the disease had been in existence in the city for anything up to a month.¹⁷¹

Dr Francis Barker, secretary of the General Board of Health however, remained relatively unconcerned about cholera’s arrival, particularly its presence in Belfast.¹⁷² Barker insisted that the conditions of the ‘lower orders’ of Belfast society, those statistically most likely to be affected by the disease in the first instance, was considerably more comfortable than those of the poor in other areas. This, he believed, would render them less vulnerable to any significant cholera outbreak, principally because their circumstances were bolstered by the considerable number of affluent residents in Belfast who were able to contribute to relief funds to assist their less fortunate peers.¹⁷³

Barker’s lack of concern at first appeared to be warranted when the epidemic became neither widespread nor attacked Belfast with the rapidity which had been forewarned in the press. In fact, following the six initial cases, of which there had been only one survivor, the disease stuttered to a halt almost immediately.¹⁷⁴ By the end of March the board prematurely claimed with some pride that the town was free of cholera.¹⁷⁵ The *Belfast Chronicle* reported that, ‘any temporary apprehensions that have existed may now be set at rest.’¹⁷⁶ The *Belfast Newsletter* also congratulated the board’s ‘active and zealous labours.’¹⁷⁷ However, it was critical of the ungrateful attitudes of some of the lower and

¹⁷⁰ *The Dublin Times*, 19 Mar. 1832; Robins, *The miasma*, p. 69.

¹⁷¹ *Ibid.*, p. 69.

¹⁷² Robins, *The miasma*, p. 68.

¹⁷³ *Ibid.*, p. 68.

¹⁷⁴ Malcolm, *History of the General Hospital*, p. 98.

¹⁷⁵ *B.N.L.*, 27 Mar. 1832; *N.W.*, 29 Mar. 1832.

¹⁷⁶ *The Belfast Chronicle*, 31 Mar. 1832; *The Morning Post*, 3 Apr. 1832.

¹⁷⁷ *B.N.L.*, 27 Mar. 1832.

upper orders of the town, and moreover, resented the fact that some inhabitants of the town's 'filthier houses' had obstructed the board in their actions.¹⁷⁸

No further cases were reported until 15 April 1832.¹⁷⁹ In the meantime, the board continued to implement their preventative measures. Following the confirmation of the initial cases, the board acted by appointing Dr John Kidley as its medical inspector for cholera cases and posted handbills throughout Belfast detailing its actions and advising the public of the precautions that they should employ in order to protect themselves from the disease.¹⁸⁰ On 20 March, the board issued additional instructions urging the town's poor to attend hospital when an attack of cholera was suspected. In addition, the board also informed the public that the customary practice of waking the dead would be suspended for the duration of the epidemic and that anyone ignoring this instruction would be prosecuted for the offence.¹⁸¹

The next cases occurred between the middle and end of April 1832 in Orr's Entry off High Street where two women, Mrs Heaney and Mrs Murphy, who lived in the same house, died in quick succession.¹⁸² Around the same time, a sailor, Thomas Kirkpatrick, recently arrived from the Scottish town of Greenock near Edinburgh died on 16 April at the house of his father-in-law Andrew McKenzie in George's Place, just a short distance from the Frederick Street hospital.¹⁸³ While doctors attended to Kirkpatrick an angry mob gathered outside the house and attempted to force the front door while issuing threats against the attending physicians inside. They were subsequently dispersed by the police in 'considerable force.'¹⁸⁴ After the incident, McKenzie wrote to the *Belfast Newsletter*

¹⁷⁸ Ibid. See also, *N.W.*, 29 Mar. 1832.

¹⁷⁹ Malcolm, *History of the General Hospital*, pp. 98-9.

¹⁸⁰ For examples of Belfast's Board of Health Notices see Appendix Two.

¹⁸¹ Ibid.

¹⁸² *B.N.L.*, 27 April 1832.

¹⁸³ Malcolm, *History of the General Hospital*, p. 99.

¹⁸⁴ *B.N.L.*, 20 Apr. 1832.

noting the distress which had been caused by the actions of the crowd. 'Their noise and importunity,' he said, 'added most painfully to the affliction which had already paralysed my mind.'¹⁸⁵ However, McKenzie still made an impassioned appeal to the public supporting the efforts of the town's medical men and urged people to listen to the advice regarding the prompt removal of cholera victims to hospital; 'if my warning voice' he exclaimed, 'should be the instrument of inducing one solitary individual, under the dreadful visitation, to apply for aid, while a chance of preserving life may yet remain, I shall be fully rewarded.'¹⁸⁶

On 22 April, Mrs Murphy's husband, who along with Mrs Heaney's husband and their four children, had been admitted into the Lancaster Street lazaretto as a precaution died after taking ill the previous day. Mrs Duncan from Corr's Lane, who had dressed Kirkpatrick's corpse, also took ill on the twenty-first. She refused to go to hospital but survived. Her husband was not so fortunate, he became ill on 25 April after showing premonitory symptoms the previous day, but the family concealed his illness, and he too was not sent to hospital. He died the next day.¹⁸⁷ In all, the *Belfast Newsletter* reported that six cases and four deaths had occurred in the space of just ten days. Two others, Mr Heaney and his daughter had also shown premonitory symptoms, but they had not developed further.¹⁸⁸ On 28 April, the *Freeman's Journal*, which had previously dismissed reports of the existence of cholera in Belfast, could do so no longer and reported that the epidemic had recommenced.¹⁸⁹

¹⁸⁵ *Ibid.*, 24 Apr. 1832.

¹⁸⁶ *B.N.L.*, 24 Apr. 1832.

¹⁸⁷ *Ibid.*, 27 Apr. 1832.

¹⁸⁸ *B.N.L.*, 27 Apr. 1832; Malcolm, *History of the General Hospital*, p. 99.

¹⁸⁹ See, *F.J.*, 27, 28 Mar. 4 Apr. and 28 Apr. 1832.

The outbreak, while highly fatal, progressed slowly during May and the board did not include any statistics for Belfast until returns for the town were published in mid-June. By subtracting the figures for Belfast published at the end of April from those published in mid-June, it appears that from the beginning of May until 11 June there were eight cases of cholera resulting in seven fatalities.¹⁹⁰ The reason for the board's failure to publish these figures is unclear. It may have been an administrative oversight or indeed a deliberate action aimed at avoiding the instigation of panic among the public. Within a week however, the situation changed rapidly. Case numbers increased almost fourfold and the number of deaths more than doubled.¹⁹¹ As a result, the Belfast press began to publish the daily returns of the board from early June, and in order to cope with the escalation of the outbreak the board also appointed two additional medical inspectors, Dr Hawthorn and Surgeon McBurney. Sanitary responses in the town intensified with the commissioners of police issuing a directive stating that that, 'all entries throughout the town be cleansed twice a day' and calling for the employment of additional labourers to carry out the work.¹⁹² Precautionary measures were also implemented elsewhere. On 19 June, the County of Antrim Gaol in Carrickfergus issued a notice prohibiting the admission of visitors and in Belfast local pawnbrokers also suspended all business.¹⁹³ This was a move which they believed was benevolent, but as a consequence of their actions, many of the town's poorest citizens who regularly pawned articles of clothing or furniture were left reliant on private charity or on the kindness of friends or relatives.

¹⁹⁰ Totals to 25 April 1832, 11 cases and 8 deaths. No other figures were published for Belfast until 12 June 1832 when a total of 19 cases and 15 deaths were returned for the period from the commencement of the epidemic. See *B.N.L.* 27 Apr. and 12 June 1832.

¹⁹¹ *Ibid.*, 19 June 1832; (cases until 18 June - 77 - deaths 35).

¹⁹² Commissioners of Police Minutes, 19 June 1832.

¹⁹³ *B.N.L.*, 22 and 26 June 1832.

Supernatural and religious reaction

Precautionary measures could do little however to prevent the fear which accompanied the rise in the number of incidences of cholera countrywide. Over the course of six days from 9 to 15 June the heightened sense of fear led to an outbreak of popular panic among the country's Catholic population, many of whom became convinced of the power of a religious charm said to prevent the disease.¹⁹⁴ The panic arose after an alleged appearance of the Virgin Mary at the altar of the chapel in Charleville, Co. Cork. The apparition was said to have left ashes which she warned were the only protection against cholera and gave instructions to distribute small packages to neighbouring houses. Once delivered residents were told to circulate additional packages to houses which had not already been visited, giving the inhabitants of each directions to distribute the ashes in the same manner. As the message progressed rapidly throughout the country, 'blessed turf' straws or stones were used to disseminate the charm with some messengers, as Sean Connolly has proved using the Chief Secretaries Outrage Papers, claiming that they were acting on the orders of the Catholic clergy.¹⁹⁵ The clergy unsurprisingly denied any association with the events. Still, the message spread to three quarters of the counties of Ireland including the Ulster counties of Armagh, Donegal and Londonderry. Belfast, however, appears to have been entirely unaffected by the events, a fact which is relatively surprising as in many other areas the panic was seen to be part of a wider Catholic conspiracy designed to orchestrate an anti-Protestant rebellion.¹⁹⁶ As it was, the episode was virtually devoid of violent action, and when it finally came to an end it was dismissed in some quarters as little more than a practical joke that had got out of hand. Yet, as Connolly notes, the

¹⁹⁴ Connolly, 'The blessed turf,' pp. 214-32.

¹⁹⁵ Ibid., p. 224-5. For more on religion and the supernatural in pre-famine Ireland see Sean Connolly, *Priests and People in Pre-Famine Ireland 1780-1845* (Gill and MacMillan, Dublin, 1982).

¹⁹⁶ Connolly, 'The blessed turf,' p. 226.

incident offers evidence of, ‘the way in which the real threat of cholera was transformed at one point into the story of a purely supernatural destruction,’ and of ‘a widespread willingness to believe in an immediate and concrete divine intervention at a time of crisis.’¹⁹⁷

Religious reaction, however, was not solely limited to Irish Catholics, and was certainly evident among Protestant clergymen in Belfast. One of whom in a pamphlet entitled, *Religious Consideration of Pestilence*, wrote that that the sick should call on ministers and elders to attend them and that prayer and anointing with oil, a practice previously neglected by Protestant churches, were the spiritual and visible remedies recommended in the Scriptures.¹⁹⁸ While Protestant ministers in other areas of Ireland had been accused of refusing to attend to cholera patients, the anonymous author of the Belfast pamphlet studiously denied that the town’s ministers had neglected their duty of care.¹⁹⁹ Local ministers, he insisted, had habitually visited cholera patients in hospitals ‘as a daily and important duty.’²⁰⁰ Both Catholic and Protestant religious and supernatural reactions to cholera show evidence of an attempt to encourage a widespread acceptance of divine protection during a sustained period of crisis. In reality however, religion proved to be a source of divisiveness, and prayer a poor substitute for quarantine, disinfection or the removal of nuisances.²⁰¹

Escalation of the epidemic

From the end of June the epidemic spread rapidly in Belfast with the official daily returns of the Belfast Board of Health showing that 281 cases and fifty-one deaths occurred in

¹⁹⁷ Ibid., p. 230.

¹⁹⁸ Anon., *Religious consideration of pestilence by a minister and medical treatment by a physician of the Cholera Hospital Belfast* (William McComb, Belfast, 1832). p. 333.

¹⁹⁹ Robins, *The miasma*, p. 107; Anon., *Religious consideration of pestilence*, p. 335.

²⁰⁰ Ibid., McCormac, *Cholera morbus*, p. 7.

²⁰¹ Hamlin, *Cholera: The biography*, p. 73.

the town between 19 June and 2 July.²⁰² This rapid increase was to set the tone for the remainder of the month when the number of cases averaged more than thirty-six and deaths more than four per day.²⁰³ At the Belfast Lunatic Asylum, there was clear concern at the speed at which the epidemic was escalating, and as a result, the governors and physician recommended, as a further precaution, that no patients should be admitted to the institution except in cases of extreme urgency.²⁰⁴

Most notable among the fatalities which occurred in July was that of Dr William Buchanan, physician to the Ballymacarrett cholera hospital, who at the start of the epidemic in Britain, had gone to Glasgow to observe the nature of the disease. According to his death notice in the *Belfast Newsletter*, he had been one of the busiest and most active doctors in the Belfast area during the outbreak. Praising his efforts, the *Newsletter* also observed that during the epidemic; ‘His attendance in the hospital, and through the houses in his district, was without almost any intervals of repose,’ and that he had seldom been able to, ‘snatch more than three or four hours sleep out of the twenty-four.’²⁰⁵ His undoubted fatigue was blamed as a predisposing cause of his subsequent infection, but perhaps most poignantly of all, he had left no provision for his wife and five children. The press called on the public to subscribe to a relief fund for their assistance. However, by January 1833 subscriptions appear to have been scarce, and it was noted in the *Newsletter* that no permanent relief for the family had been forthcoming.²⁰⁶ Buchanan’s death stands alone as the only one officially recorded among Belfast’s medical men during the epidemic, nevertheless, it shows that medical professionals were not immune

²⁰² *B.N.L.*, 22 June and 3 July 1832.

²⁰³ The returns for July record 1124 cases and 142 deaths for July see *B.N.L.*, and *N.W.*, 3 July - 3 Aug. 1832.

²⁰⁴ Proceedings book of the Belfast Lying in Hospital, 2 July 1832, PRONI HOS/28/1/2/1.

²⁰⁵ *N.W.*, 12 July 1832; *B.N.L.*, 13 July 1832; Fenning, ‘The cholera epidemic in Ireland,’ pp. 77-125.

²⁰⁶ *B.N.L.* 15 Jan. 1833.

to infection.²⁰⁷ At the town's cholera hospital, for example, Henry McCormac reported that several nurses had contracted the disease, though most appeared to have recovered. McCormac also recorded that there had been at least four deaths among the hospital's staff of male assistants.²⁰⁸

Throughout July and August, the number of cases and deaths in Belfast soared. Between 8 and 14 July, 312 cases and forty-six deaths were recorded, the highest weekly total logged during the course of the epidemic.²⁰⁹ During the following week, thirty-seven deaths were notified to the board, including the driver of the town's cholera hearse, who left, the *Newsletter* noted, 'seven orphan children in a state of utmost distress.'²¹⁰ The level of fear among the town's inhabitants was palpable, and was noticed by almost everyone who visited Belfast. Edinburgh doctor, William Howison, for example was struck by the rattle of the hearses and cholera carts which traversed night and day throughout the town's cobbled streets. The sights and sounds of the vehicles, he observed, 'appalled the strongest minds.'²¹¹ As the epidemic intensified, several other Ulster towns including Coleraine and Strabane in the north-west experienced fresh outbreaks, while closer to Belfast itself, new cases were also reported in the nearby towns of Donaghadee, Lurgan and Downpatrick.²¹²

During the remainder of August, the number of cholera cases in Belfast remained in the hundreds but by the beginning of September the ferocity of the epidemic waned

²⁰⁷ Hugh Fenning notes that 'the actual number of professional victims must have been higher than one can gather from press notices.' However, many would simply not have been recorded as victims of cholera due, at least in part, to the stigma associated with the disease. See Fenning, 'The cholera epidemic in Ireland,' pp. 77-8.

²⁰⁸ McCormac, *Cholera morbus*, p. 7.

²⁰⁹ *B.N.L.* and *N.W.*, 7-14 July 1832.

²¹⁰ *B.N.L.*, 20 July 1832.

²¹¹ William Howison, 'Remarks on the malignant cholera in Ireland and Scotland' in *The Lancet*, Vol. 19(480) (10 Nov. 1832), pp. 203-207.

²¹² *B.N.L.*, 28 Aug. 1832. Lasting around a month the Coleraine outbreak accounted for approximately 254 cases and 84 deaths, *B.N.L.*, 25 and 28 Sept. 1832.

considerably and the average number of cases slowed to around seven per day.²¹³ A similar average was recorded for the first few weeks of October and the board of health, anticipating that the epidemic had ended, reduced the number of its medical inspectors. The cholera hospital's physician Henry McCormac was incensed by the board's actions and wrote to the local press stating that cases had been of a more severe cast than previously experienced and that there had been notable delays in the procurement of medical assistance.²¹⁴

By the end of the month the number of cases in Belfast and in nearby towns had slowed almost to a halt. In Donaghadee the cholera hospital was shut on 1 October and the reduction of cases in Belfast also prompted a relaxation of the frequency of the board's reports.²¹⁵ By mid-November, Belfast was almost completely free of cholera, with only seventeen further cases and six deaths reported in the official figures until the nineteenth of the month.²¹⁶ A final case was reported on 20 November, and on the same day, the Belfast Chamber of Commerce issued a statement informing the town's merchants and other interested parties that clean bills of health would be issued at the Custom House office after the final day of the month.²¹⁷ No other official announcement of the epidemic's cessation appears to have been issued by the Belfast Board of Health, and no further cases were recorded during 1832. On 16 December Belfast's cholera hospital was closed, and the crisis was thought to have been finally brought to a close.²¹⁸

²¹³ *B.N.L.*, 4 – 28 Sept. 1832. Total case numbers for September 222. See, Table 2.2 below.

²¹⁴ *B.N.L.*, 12 Oct. 1832.

²¹⁵ *Ibid.*, 1 Oct. and 30 Oct. 1832. After this time, the board began to produce weekly tallies in place of their previous daily counts.

²¹⁶ *N.W. and B.N.L.* 29 Oct. – 19 Nov. 1832.

²¹⁷ *B.N.L.*, 30 Nov. 1832.

²¹⁸ Malcolm, *History of the General Hospital*, p. 101.

Overall Morbidity Mortality Rates

The final official figures issued by the Belfast Board of Health on 20 November put the total number of cases and deaths registered in the town at 2,831 and 418 respectively (14.8% mortality). These same reports show that 2,413 people had been treated successfully and had recovered.²¹⁹ However, while Table 2.2, compiled from the weekly reports of the Board of Health published in the *Belfast Newsletter* and the *Northern Whig*, provides an accurate tally of the officially reported figures, it is highly unlikely that these statistics reflect the true extent of cholera morbidity and mortality in Belfast over the course of the epidemic. As already argued, hesitancy regarding the admission of cholera being present in Belfast as well as uncertainty surrounding early cases which likely led to misdiagnosis, meant that some instances of cholera were not captured in the official statistics. Nevertheless, it is doubtful that their inclusion would have significantly altered the overall totals. Moreover, patients treated at home or in private practice did not come to the attention of the board's medical inspectors and would also therefore have been excluded from the official returns. Taken together, these limitations indicate that the true death toll was likely somewhat higher than that recorded in the final returns to the Central Board of Health in Dublin. However, the scale of underreporting was probably modest, and does not significantly alter the broader statistical picture or the general conclusions that may be drawn from the official data.

²¹⁹ See, Table 2.2 below; *B.N.L.*, 20 Nov. 1832. This figure also tallies with that recorded by the Census of Ireland (1841), pp. xix-xx and with the report of the Central Board of Health. See, Appendix 2.

Table 2.2: Approximate Number of Cases and Deaths from Cholera in Belfast February-November 1832.²²⁰

Month	Cases	Deaths	Recoveries
February/ 11 June 1832	19	15	(4 remaining under treatment)
12- 30 June	354	84	197
July	1124	142	847
August	882	98	891
September	222	20	277
October	205	51	156
November 1-19	17	6	12
Totals	2823	416	2380
Final BOH totals from <i>B.N.L.</i> 20/11/32 ²²¹	2831	418	2413

Compiled from the weekly board of health returns published in *B.N.L.* and *N.W*

There was also some variation in the number of deaths recorded for Belfast during 1832 in the returns of the Irish Census Commissioners. In 1841 the census recorded that the town's death toll in 1832 had been 573, a difference of 155 from the figures issued by the board of health.²²² There is no official explanation for this anomaly, but it may be possible that census enumerators incorporated deaths from neighbouring districts into the Belfast totals. For example, if the final figures published in the press for Ballymacarrett (351 cases and 39 deaths), Bangor (172 cases and 28 deaths) and Donaghadee (152 cases and 55 deaths), are taken into consideration, an additional 122 deaths can be added to Belfast's total. This brings the figures published in the press much closer to those recorded by the Census Commissioners.²²³ While this remains a purely speculative use of the available

²²⁰ NB. While local statistics for Belfast printed in the *Northern Whig* are used here and throughout the remainder of this thesis the returns published in the *Belfast Newsletter*, due to the consistency of its reporting, have been utilised as the principal source for the figures published by the town's local authorities covering all of the cholera outbreaks between 1832 and 1866. See: *Belfast Board of Health, Weekly Cholera Returns*, *B.N.L.* 20 Mar-20 Nov 1832 and *N.W.* 26 Mar-10 Dec 1832.

²²¹ The final totals published in the press only differ from the returns recorded by the Central Board of Health in Dublin by 2 cases. See Appendix 2 for a copy of the central board's final returns; Source (NAI) CSOOP/1832/33.

²²² Census of Ireland (1841), p. 114.

²²³ The final totals for Ballymacarrett, Bangor and Donaghadee were recorded in: *B.N.L.*, 4 Sept. 1832, 7 Sept. 1832 and 25 Sept. 1832.

data, it nonetheless offers a potential explanation for the disparity between the returns of the Central Board of Health and those of the Census Commissioners.

What is clear, as Table 2.3 below shows, is that the rate of mortality experienced in Belfast had been significantly lower than elsewhere in the country.²²⁴ In Dublin, for example, where the commissioners recorded that there had been 18,693 cases and 5,798 deaths, the mortality rate (thirty-one per cent) was almost twice that of Belfast.²²⁵ Belfast's statistics also prove that the town compared favourably to the rates of mortality recorded in large British towns and cities as is shown in Table 2.4 below.²²⁶

Table 2.3: Cholera morbidity and mortality in selected large towns/cities in Ireland 1832/33

Town/City	Cases	Deaths	% Mortality
Waterford	560	245	48.03% (43.75%) ²²⁷
Galway	1270	596	46.92%
Drogheda	1215	491	40.41%
Limerick	3052	1105	36.2%
Cork	4945	1619	32.74%
Dublin	18693	5798	31.01%
Belfast	2833	418	14.76%

Compiled from Census of Ireland (1841), p. xx.

²²⁴ See Table 2.3 below.

²²⁵ Census of Ireland (1841), p. xx.

²²⁶ See Table 2.4 below.

²²⁷ Note, the figure of 48.03 is that recorded in the 1841 census however this is a miscalculation. Therefore, I have included the corrected figure in red in the above Table 2.3.

Table 2.4: Cholera morbidity and mortality in selected large towns/cities in Britain 1831/32

Town/City	Cases	Deaths	% Mortality
Edinburgh	1886	1065	56.46%
Manchester	1325	674	50.86%
Glasgow	6208	3005	48.40%
London	11020	5275	47.86%
Bristol	1612	626	38.83%
Sunderland	554	215	38.80%
Leeds	1817	702	38.65%
Liverpool	4912	1523	31.01%
Exeter	1135	345	30.39%
Newcastle	3487	801	22.97%

Compiled from statistics in Creighton, Gaulter and Underwood.²²⁸

Nonetheless, it is impossible to furnish firm national statistics for cholera morbidity and mortality for cholera between 1833/34, as Robins and O'Neill have both suggested.²²⁹ However, it is important to recognise that both historians differ in their assessment of the accuracy of the census returns. O'Neill contends that the figures were, in most cases, reliable, noting that the published statistics were subject to close scrutiny and extensive contemporary discussion.²³⁰ Robins, by contrast, disputes this view, arguing that the totals recorded by the Census Commissioners, largely dependent on returns submitted by local Boards of Health to the Central Board, were 'incomplete and unreliable.'²³¹

As O'Neill further observes, the difficulty in establishing an overall picture comes from omissions rather than the inclusion of false returns.²³² The panic that accompanied the onset of cholera meant that infections were often concealed from the authorities, while in some regions, particularly rural areas lacking Boards of Health, large numbers of deaths

²²⁸ See, Creighton, *History of epidemics*, pp. 796-813 and 820-9; Henry Gaulter, *The origin and progress of the malignant cholera in Manchester* (Longman, London, 1833), p. 156; Morris, *Cholera 1832*, p. 55 and 61. See also, Underwood, 'The history of cholera in Great Britain,' p. 168; Idem., 'The history of the 1832 cholera epidemic in Yorkshire' in *Proceedings of the Royal Society of Medicine*, Vol. xxviii(603) (1935), pp. 603-16.

²²⁹ Robins, *The miasma*, pp. 107-109; O'Neill, 'Fever and public health in pre-famine Ireland,' p. 21.

²³⁰ Ibid.

²³¹ Robins, *The miasma*, p. 108.

²³² O'Neill, 'Fever and public health in pre-famine Ireland,' p. 21.

went entirely unrecorded.²³³ Contemporary accounts likewise suggest that the true mortality was higher than official figures indicate. In his assessment of the statistics, the eminent physician and statistician Sir William Wilde, for example, criticised the inefficiency of the reporting system, remarking that the returns were ‘very defective.’²³⁴ Yet, despite their inaccuracies, the final returns for Ireland, which recorded 66,020 cases and 25,378 deaths (38.4 per cent mortality), indicate that mortality relative to population was significantly higher than in Britain, where it was estimated that nearly 32,000 deaths occurred among a population exceeding 16 million.²³⁵ Although Belfast appears to have escaped the most severe impact of the disease, the broader Irish returns suggest that, elsewhere in the country, the preventive and containment measures introduced were far less effective in practice. As a result, large sections of the population experienced considerably higher levels of both morbidity and mortality, which suggests an unevenness of institutional capability, sanitary provision, and medical response across Ireland during the epidemic.

The Aftermath of the Epidemic, 1833-34

In treatises published towards the end of the epidemic Belfast physicians Dr Henry McCormac and Dr Thomas Thompson detailed their experiences and the methods of treatment which they had employed during the outbreak.²³⁶ McCormac’s report in particular provides evidence of his dedication to the patients under his care, and notes that he was in almost constant attendance at the town’s cholera hospital, even resorting to sleeping there throughout the course of the epidemic.²³⁷ In all, McCormac reported that

²³³ Robins, *The miasma*, p. 108.

²³⁴ Census of Ireland (1841), pp. xix-xx.

²³⁵ *Ibid.*, p. xix; Robins, *The miasma*, p. 108; Creighton, *History of epidemics*, p. 816; Underwood, ‘The history of cholera in Great Britain,’ p. 168; Morris, *Cholera 1832*, p. 79; See also Table 2.1 above.

²³⁶ McCormac, *Cholera morbus*; Thomas Thompson, *Practical remarks on the epidemic cholera which at present prevails in Belfast and its vicinity* (James Wilson, Belfast, 1832).

²³⁷ McCormac, *Cholera morbus*, p. 7; *B.N.L.*, 13 Nov. 1832.

1165 cases and 277 deaths had occurred in the hospital most of which he had attended to personally.²³⁸

The treatments administered to the patients under McCormac's supervision, predominantly bloodletting, and the administration of calomel and opium, mirrored those employed by physicians with experience of treating cholera in India.²³⁹ Some of his other patients were also treated with tincture of opium, which he gave either in plain or peppermint water. However, McCormac observed that this approach was too costly for widespread use and suggested that a more economical alternative, dilute sulphuric acid, produced equally favourable outcomes. He argued that this method was so inexpensive that a single pound of strong sulphuric acid, could be used to treat up to 2,000 cases, costing only one penny per patient. On this basis, he even proposed that supplies be positioned at the end of every street 'in the event of or during the presence of an epidemic.'²⁴⁰

Not all practitioners agreed with McCormac's approach, however. In his paper *Practical Remarks on the Epidemic Cholera which at Present Prevails in Belfast and its Vicinity*, Thomas Thompson offered a critical assessment of both bloodletting and the use of calomel. While he acknowledged having bled some patients himself, he cautioned that its application as a general treatment was a dangerous practice. He was similarly sceptical of calomel, which he believed had little capacity to restore or sustain the circulation in cholera patients.²⁴¹ Other members of the medical community expressed similar reservations, and in January 1834, Dr W. M. Wilson, Dr George Hawthorne and Dr Henry McCormac became embroiled in a heated public dispute in the Belfast press regarding

²³⁸ McCormac, *Cholera morbus*, pp. 8-9 and p. 11.

²³⁹ *Ibid.*, pp. 8-9.

²⁴⁰ *Ibid.*

²⁴¹ *Ibid.*, p. 15.

McCormac's use of calomel.²⁴² Dr Wilson condemned the so-called 'oriental mode' of treatment denouncing the use of calomel and alcohol as both dangerous and unnecessary.²⁴³ Dr Hawthorn, noting that he had administered calomel separately from opium, in order to test its effects, found that, 'calomel alone tended to hasten the fatal event.'²⁴⁴ The medical community in the town were appalled by the public nature of the argument and issued a collective statement in which they firmly condemned the public nature of the dispute, and argued that airing such disagreements in the press was unprofessional and, 'fairly liable to the imputation of being calculated to administer to the vanity and to promote the interests of the individual, at the expense of his professional brethren.'²⁴⁵

Later, Belfast's medical inspectors entered the debate, though they were careful to preface their remarks by expressing regret at the recent public controversy surrounding the treatment of the disease.²⁴⁶ They also sought to rebut accusations made by McCormac and his colleague John Kidley, who had alleged that inspectors had misclassified cases of diarrhoea as cholera during the epidemic. The inspectors noted that as diarrhoea was a predisposing symptom of cholera it was inevitable that a few cases might have been reported incorrectly. They insisted, however, that no case had been recorded as cholera that they would not themselves have recommended for hospital admission had the patients consented.²⁴⁷ They further criticised the physicians of the fever hospital for requesting that hopeless cases not be referred to them, and for claiming to have regularly visited the various medical districts of Belfast. While the inspectors did not dispute that such visits

²⁴² *B.N.L.*, 7, 14, 17 and 21 Jan. 1834.

²⁴³ *Ibid.*, 14 Jan. 1834.

²⁴⁴ *B.N.L.*, 14 Jan. 1834.

²⁴⁵ *Ibid.*, 17 Jan. 1834.

²⁴⁶ *B.N.L.*, 17 Jan. 1834.

²⁴⁷ *Ibid.*

may occasionally have taken place in the immediate vicinity of the hospital, they stated that they could recall no instance in which these physicians had assisted them in any of the other districts under their supervision.²⁴⁸

The arguments waned quickly and both the board of health and the subscribers of the hospital expressed their thanks to the town's medical community.²⁴⁹ Methodist minister, Rev. Matthew Tobias noted, that it had been regrettable that the mode of treating cholera had been the subject of newspaper discussion and that 'there was not the slightest intention to incite an unpleasant feeling in the mind of any medical practitioner in the town.'²⁵⁰ Non-subscribing Presbyterian minister Rev. Dr Henry Montgomery agreed, and added that treatments administered, both at the hospital and outside, had been very successful.²⁵¹ Dr McCormac and Dr Kidley were later singled out for their efforts and both were awarded commemorative silver tea services.²⁵² The board of health was also personally praised for their efforts by McCormac who noted that it had provided poor patients with 'everything that could contribute to their comfort' and had gone as far as to provide destitute patients who had recovered with a supply of clothing upon their discharge.²⁵³

While the epidemic itself was largely over in Ireland by November 1832, cholera had not entirely disappeared. Further sporadic outbreaks, accounting for an approximate total of 5,308 and 4,419 deaths respectively, occurred throughout the country during both 1833 and 1834.²⁵⁴ Around Belfast, occasional outbreaks were also experienced in country

²⁴⁸ *B.N.L.*, 17 Jan. 1834.

²⁴⁹ *Ibid.*, 21 and 24 Jan. 1834; *N.W.*, 23 Jan. 1834.

²⁵⁰ *B.N.L.*, 24 Jan. 1834; *N.W.*, 23 Jan. 1834.

²⁵¹ *Ibid.*, *B.N.L.*, 24 Jan. 1834.

²⁵² Fraser, 'Father and son a tale of two cities,' p. 8. Fraser notes that tea service - teapot, sugar basin, etc., all of Dublin Georgian silver (maker: Richard Sawyer) was a valuable gift in those days, but priceless today.

²⁵³ McCormac, *Cholera morbus*, p. 7.

²⁵⁴ Census of Ireland (1841), pp. xx-xxi.

districts surrounding the town. However, in Belfast itself, there was a general confidence that the disease had abated permanently.²⁵⁵

For ten months Belfast remained free of cholera, and its apparent cessation meant that the measures which had been employed to combat the epidemic diminished markedly.²⁵⁶ However, the disease re-emerged in Belfast on 29 September 1833, though little concerted action was taken until early 1834, when the cholera hospital was once again reopened.²⁵⁷ Even so, the return of cholera's to the town appears not to have provoked any notable public alarm until August 1834 when the deaths of a husband and wife occurred in Church Street on the fourteenth and seventeenth respectively.²⁵⁸ Despite these deaths, there is no evidence to suggest that either the board of health or the police commissioners introduced further precautions until October, when Dr William Johnston and Surgeon D. Moore were appointed as district attendants to monitor any subsequent cases.²⁵⁹ Fortunately, for the Belfast's residents, this reoccurrence did not progress on any significant scale, and only thirty-seven deaths were recorded in the town during the course of 1834 with the final fatality, Samuel Napier, reported on 7 November.²⁶⁰ Napier's death was initially thought to have been caused by laudanum poisoning, but a subsequent inquest confirmed that his death had in fact been caused by cholera.²⁶¹ After this brief extension cholera quickly subsided with only twenty further deaths recorded for Belfast in the period preceding 1839.²⁶²

²⁵⁵ Malcolm, *History of the General Hospital, Belfast*, p. 101.

²⁵⁶ *Ibid.*

²⁵⁷ Malcolm, *History of the General Hospital, Belfast*, p. 101; *B.N.L.*, 14 Feb. 1834.

²⁵⁸ *Ibid.*, 19 Aug. 1834.

²⁵⁹ *B.N.L.*, 24 Oct. 1834; Malcolm, *History of the General Hospital, Belfast*, p. 101.

²⁶⁰ Census of Ireland, 1851, Part. V. Tables of deaths. Vol. I BPP 1856 xxix [2087-I], p. 215; Hereafter Census of Ireland (1851); Census of Ireland (1841), p. 114; Malcolm, *History of the General Hospital, Belfast*, p. 101.

²⁶¹ *B.N.L.*, 14 Nov. 1834.

²⁶² Census of Ireland (1841), p. 114.

Conclusion

By the time the first cholera epidemic in 1834 had ended, Belfast had emerged relatively unscathed in comparison to other populous towns and cities in both the United Kingdom and Ireland. This outcome is particularly notable given that the initial preventive measures adopted, street cleaning, whitewashing, the fumigation of infected houses as well as the treatments which were administered to patients, closely mirrored the precautions recommended by the central authorities of both Britain and Ireland.

While nineteenth-century Belfast suffered from severe sanitary problems arising from industrialisation and rapid urban expansion, there appears to also have been a lack of a sustained, coordinated effort to address these conditions comprehensively, particularly in the poorest districts. However, this situation was by no means unique to Belfast. As in many other large towns, sanitary reform was largely reactive, pursued in earnest only during moments of crisis such as outbreaks of fever and cholera. Nevertheless, during the cholera epidemic of 1832–34, Belfast's mortality rate was almost certainly moderated by the comparatively early introduction, in comparison to many other towns, of precautionary measures in anticipation of the outbreak.

The early establishment of Belfast's Board of Health, for example, was undoubtedly the principal driving force behind the measures introduced to combat cholera. Significantly, and in contrast to other towns, its formation ran counter to instructions issued by the Irish central administration regarding the management of the epidemic. This decision proved advantageous for Belfast's civic authorities. By disregarding directives that stipulated Boards of Health should only be established once cholera had been officially confirmed in a locality, Belfast's board was able to implement a structured programme of public health interventions prior to the verification of the first cases, thereby securing a valuable

degree of preparedness. The Board also appears to have liaised reasonably effectively with the principal bodies responsible for sanitary regulation in Belfast, the Committee and Commissioners of Police, in order to implement its plans across the town. Street cleaning, whitewashing, fumigation, and the removal of nuisances all increased markedly in the period immediately preceding and during the epidemic, and it is likely that these measures contributed to lowering mortality by improving overall sanitary conditions. However, preventative sanitary measures like these largely subsided once the immediate crisis had passed, and, as the following chapter will demonstrate, Belfast's sanitary conditions subsequently reverted to a state comparable to, if not worse than, that which had existed prior to the outbreak.

With regard to the medical treatment of cholera victims, it is evident that the therapies administered were, for the most part, largely ineffective. However, given the absence of contemporary understanding of cholera's mode of transmission, this outcome is unsurprising. As with sanitary measures, the treatments used by Belfast's physicians did not differ significantly from those adopted elsewhere. Nevertheless, as has been shown above, there appears to have been comparatively less resistance in Belfast to hospital admission than in many other Irish towns, which most likely limited household transmission. Furthermore, in relation to the practices of the town's cholera hospital, Henry McCormac's strict policy of isolating patients and, by extension, their households, may have contributed to limiting the spread of infection and mitigating the severity of the outbreak. Its effectiveness, however, was inevitably constrained by those patients who refused admission.

The wider community response also mattered. Belfast's expanding mercantile and industrial elite raised subscription funds to support hospital care and relieve the poor. Dr

Francis Barker, secretary of the General Board of Health, even suggested that the poorer classes of Belfast were better supported than elsewhere. Whether his claim was entirely accurate or not, the presence of an active philanthropic middle class was often vital.

Overall, Belfast's management of the cholera epidemic between 1832 and 1834 can be considered relatively successful in comparative terms. Nevertheless, it is arguable that the response of local authorities such as those in Belfast would have been materially strengthened by clearer direction and more sustained institutional support from Ireland's Central Board of Health. Even after the introduction of the Irish Poor Law in 1838, public health continued to be framed primarily as a local responsibility, left to the capacity and resources of individual administrative bodies rather than being fully coordinated at a central level. As a result, responses remained uneven: some authorities, as the following chapter will demonstrate, performed better than others, but all would ultimately experience markedly increased mortality associated with the combined epidemics of fever and cholera in the late 1840s.

Chapter Three

Preparing for cholera: the changing nature of public health in Belfast 1838-48

Introduction

After the end of Ireland's first cholera epidemic in 1834 the disease had all but passed from public concern, however, what did remain was a legacy which saw an increasing awareness and acceptance within the Irish administration of the link between poverty and disease.¹ While, it is true to say that cholera was not simply a disease of the poor, the appalling social conditions which were experienced by this social group, as Joseph Robins has argued, had rendered them highly susceptible to its worst ravages.² Moreover, as Stephen Royle has shown for Belfast, in terms of their health it is evident that the poor were unable or often unwilling to take responsibility for their personal hygienic and sanitary requirements. This reluctance placed an additional and significant strain on local civic authorities, which themselves appear to have absorbed few lasting lessons from the experience of the 1832 cholera epidemic.³ In Belfast, the civic authorities continued to face significant sanitary and public health issues caused by industrialisation and inward migration.⁴ However, in common with many other large towns in Britain and Ireland, Belfast failed to implement a comprehensive and sustained programme of preventive sanitary reform in the aftermath of the cholera epidemic. The failure to do so, except during periods of crisis, as the previous chapter has concluded, meant that epidemic diseases like cholera and fever, when they emerged, could rapidly become established,

¹ O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 204.

² Ibid., p. 199; Robins, *The miasma*, p. 110.

³ Pleas to encourage Belfast's population to make efforts to keep their streets and homes clean had been ongoing since at least the mid-eighteenth century. See, Royle, '*Clanging Belfast*,' pp. 21-5.

⁴ These issues will be discussed in greater detail throughout this chapter.

ruthlessly exposing how little local authorities had been able to achieve in terms of developing continuous public health measures.⁵

The following chapter will examine the development of public health and the preparations made in anticipation of the cholera and fever epidemics of the late 1840s by exploring both national responses as well as those implemented in Belfast. This decade, which has been recognised as a pivotal era in Belfast's economic and political progress, was one of intense economic growth and political change.⁶ While Belfast was rapidly transforming into one of the United Kingdom's most important and economically successful industrial centres, its development was accompanied by increased poverty and questions regarding Ireland's unequal place within the union. This also served to sharpen political and sectarian divisions particularly after the attempted nationalist uprising of 1848.⁷ However, as this chapter will demonstrate, it was also a period that witnessed some of the earliest attempts to introduce comprehensive, nationwide legislation in Ireland aimed at addressing public health concerns, particularly those relating to the spread of endemic and epidemic diseases such as cholera and fever.

From the late 1830s, a growing acceptance in Ireland of the link between poverty and disease saw key actions taken by local and national authorities, the most prominent of which, was the introduction of an Irish Poor Law. The Poor Law was the first comprehensive attempt to alleviate the situation of the poor by providing welfare, but it also, as Gerard O'Brien has observed, laid the foundations for the development of

⁵ Wohl, *Endangered lives*, p. 122.

⁶ See, Kinealy and MacAtasney, *The hidden famine*, p. 9; J.L. McCracken 'Early Victorian Belfast' in Beckett, and Glasscock (eds), *Belfast: The origin and growth of an industrial city*, p. 89. See also, Slater, *Belfast politics*; Budge, and O'Leary, *Approach to crisis* and Wright, *The 'Natural Leaders.'*

⁷ Maguire, *Belfast*, p. 56; Kinealy and MacAtasney, *The hidden famine*, p. 9. For rebellion and accompanying political and sectarian divisions see, Ch. 6. See also, Slater, *Belfast politics* and Budge, and O'Leary, *Approach to crisis*.

centralised measures aimed at combatting disease and improving the infrastructure of public health policies.⁸ This chapter develops this argument by contending that the Poor Law, prompted in part by the marked increase in fever cases, evolved into a form of public health intervention, providing institutional care for the sick poor.⁹ Within a decade of its introduction in Ireland, for example, Boards of Guardians had been ‘entrusted with responsibility for outdoor relief as well as fever and other state-aided hospitals,’ underscoring the expanding medical and sanitary functions of the system.¹⁰

While centralised control of public health took time to become established and was often ineffective under the Poor Law, in Belfast, it can be shown that the board of guardians and the corporation attempted to be progressive rather than reactionary in their efforts to improve health and sanitation.¹¹ It is clear for example, that on occasion the Belfast Board of Guardians acted semi-autonomously in terms of the administration of the Poor Law, refusing to seek permission for some measures from the outset. This is particularly evident in the guardians’ openly defiant stance towards the principles of the Poor Law Commissioners, who were strongly opposed to the provision of hospital accommodation. In direct challenge to the central authority, the Belfast guardians opened the town’s

⁸ See, O’Brien, ‘State intervention and the medical relief of the Irish poor,’ pp. 195-207.

⁹ For the most recent and comprehensive study of the Poor Law see, Peter Gray, *The making of the Irish Poor Law 1815-43* (Manchester University Press, Manchester, 2009), and for the latter half of the nineteenth century see Virginia Crossman, *Poverty and the Poor Law in Ireland 1850-1914* (Liverpool University Press, Liverpool, 2013); Other notable works include; Helen Burke, *The people and the Poor Law in nineteenth-century Ireland* (The Women’s Education Bureau, Dublin, 1987), and Virginia Crossman, *The Poor Law in Ireland 1838-1948* (Irish Economic and Social History Society, Dundalk, 2006); Eadem., *Politics, pauperism and power in late nineteenth-century Ireland* (Manchester University Press, Manchester, 2006). For general studies of Poor Law Policy in Ireland see also Peter Gray, *Famine, land and politics* and Kinealy, *This great calamity*. For studies in relation to medicine and charity see, Laurence Geary, *Medicine and charity in Ireland* and Ronald Cassell, *Medical charities, medical politics: The Irish dispensary system and the Poor Law, 1836-1872* (Boydell Press, Woodbridge, 1997).

¹⁰ Budge and O’Leary, *Approach to crisis*, p. 51.

¹¹ O’Brien, ‘State intervention and the medical relief of the Irish poor,’ p. 205.

workhouse in May 1841 with ten beds already set aside for the reception of the sick, thereby pre-empting and effectively undermining official policy.¹²

Although the Belfast Corporation had not continued to apply with any consistency the sanitary measures introduced prior to the arrival of cholera in 1832, it is nevertheless evident that during the 1840s it began to make renewed efforts to introduce provisions aimed not only at improving the town's appearance but also at enhancing public health. As this chapter will contend, the implementation of three Town Improvement Acts in 1845, '46 and '47, significantly expanded the powers and civic responsibilities of the corporation. In combination with the Board of Guardians' assumption of near-complete responsibility for the care of the sick by the end of the decade, these developments were instrumental in mitigating the high mortality rates experienced elsewhere in Ireland, as well as in comparable industrialising towns in Britain.¹³

Alongside the efforts of civic authorities, philanthropic relief also played a vital role in mid to late nineteenth-century Belfast. As the final section of this chapter will show organisations including the Belfast General Relief Fund, the Belfast Society for the Amelioration of the Condition of the Poor, the Destitute Sick Society and the Belfast Ladies Association attempted to provide additional solutions to assist the poor particularly during the outbreak of fever after 1847. The intervention of these organisations provided valuable supplies of clothing, food, money and washing facilities

¹² Overseen by the workhouse's first medical officer, Dr Thomas Andrews, the number of beds provided in the institution rapidly grew to 100. See, David H. Craig, 'A history of the Belfast City Hospital,' Presidential Address to Ulster Medical Society, Session 1973-1974, in *Ulster Medical Journal*, Vol. 43 (1974), p. 1.

¹³ 'An Act for the Improvement of Belfast' (1845) (8 and 9 Vict., c.142) a full transcript of the act can be obtained in PRONI ref LA7/19/1/K/1/2. 1846 (9 and 10 Vict., c.294); 1847 (10 and 11 Vict., c.254). Hereafter referred to as The Belfast Improvement Act, with relevant year. For more on the changes to the political make-up of mid-nineteenth-century Belfast see, Slater, *Belfast politics*; Budge, and O'Leary, *Approach to crisis*; and Wright, *The 'Natural Leaders.'* For more recent examinations of the civic development of the town see also Connolly, 'Belfast: The rise and fall of a civic culture' and Johnson, *Middle class culture and civic identity*.

supplementing official relief and further contributing to the relatively lower mortality rates experienced in the town compared with other regions. However, these initiatives were frequently hampered by financial constraints and moral objections, and their impact was often short-lived.¹⁴ Consequently, potentially valuable private as well as municipal schemes such as the provision of public washhouses failed to secure sustained support from the local administration, thereby limiting their potential contribution to disease prevention through improved public hygiene.

The Condition of Belfast after 1832

In the years following the 1832 epidemic, cholera appears to have receded almost entirely from both official consciousness and public concern in Belfast. As a result, although the possibility of a renewed outbreak remained a persistent underlying threat, comparatively little sustained effort was made to address the town's underlying sanitary deficiencies. Already an established industrial and commercial centre by the late 1830s, Belfast was entering into what McCracken has called 'a decisive period in its development,' its progress mirroring comparable English towns, earning Belfast laudable epithets which described the town as, 'the Irish Liverpool' and as, 'a clean Manchester.'¹⁵ Contemporary observers likewise remarked upon its apparent respectability; the Scottish journalist, novelist and travel writer Leitch Ritchie, for example, observed that Belfast; 'If transported with its whole population to England, would be reckoned a credit to the country.'¹⁶

¹⁴ For a comprehensive examination of the involvement and legacy of philanthropic organisations in Belfast during this period see, Kinealy and MacAtasney, *The hidden famine*, pp. 109-38 and Jordan, *Who cared?* For the rest of Ireland see also Geary, *Medicine and charity in Ireland*.

¹⁵ J.L. McCracken, 'Early Victorian Belfast,' p. 88.

¹⁶ Leitch Ritchie, *Ireland picturesque and romantic* (Volume II, Longman, Orme, Brown, Green and Longmans, London, 1838), p. 54; David John Owen, *History of Belfast* (W and G Baird, Belfast, 1921), p. 248.

Largely boosted by the industrialisation of linen manufacture, the population of Belfast continued to grow apace with just over 70,000 people recorded as being resident in the town in the 1841 census.¹⁷ Rural poverty and a growing disenchantment with an agricultural lifestyle also meant that people turned to Ireland's only major industrialising centre with the hope that an industrially focused urban standard of living would considerably improve their prospects.¹⁸ Aside from linen, other manufacturing industries were also prospering. By 1838 for example, nine iron foundries were employing 500 men, including Coates and Young which launched the "Countess of Caledon" the first Iron ship constructed in Belfast. Within a generation of building the first passenger steamship in Ireland, "The Aurora" in 1839 shipbuilding provided over 200 jobs in the yards as well as associated employment in engineering and cordage and canvas manufacture.¹⁹ Belfast, therefore appeared to have developed into a flourishing boom town, prompting the English novelist William Makepeace Thackeray to note in 1842 that the town looked 'hearty, thriving and prosperous as if it had money in its pocket and roast beef for dinner.'²⁰

Behind this façade of prosperity however was the underlying issue of poverty caused by the collapse of the cotton industry, low wages and trade depressions in 1837 and 1839-42.²¹ This economic hardship, combined with rapid population growth, produced a marked deterioration in the social conditions experienced by large sections of Belfast's population. Living conditions, particularly in the areas concealed from public view and unseen by the visitors who praised the town's appearance, were, in most cases appalling,

¹⁷ (70,447); Census of Ireland (1841), p. 286.

¹⁸ Maguire, *Belfast*, p. 38.

¹⁹ McCracken, 'Early Victorian Belfast,' p. 88; Robin Sweetnam, 'The development of the port.' in Beckett and Glasscock (eds), *Belfast: The making of the city*, p. 64, For the Countess of Caledon's launch see: *B.N.L.*, 11 Dec. 1838.

²⁰ *Ibid.*, p. 95; William Makepeace Thackeray, *The Irish sketchbook of 1842* (Charles Scribner, New York, 1911), p. 396.

²¹ See Kinealy and MacAtasney, *The hidden famine*, p. 24.

as were standards of public and personal hygiene. The comments of one local doctor, reporting to the *Northern Whig* exemplifies the severity of the conditions endured by some families:

I have lately seen many families deprived from every necessary of life...their houses-such wretched abodes! - damp, filthy and noisome, admitting the rain and wintery blast through a thousand chinks, and presenting on the whole a picture of desolation and distress that I have never seen equalled in any part of the world.²²

Conditions in charitable institutions designed to alleviate at least some of the distress of poverty-stricken families were little better. In December 1838, the *Northern Whig* reported that the state of the town's poorhouse was just as deplorable as those outside its doors, noting that; 'The Poorhouse of Belfast is in such a state of filth that a benevolent gentleman lately protested that it appeared to him that the place ought to be burned down to prevent infection.'²³ Ascribing poverty as a predisposing factor in disease was, of course, far from unique to Belfast, and in many respects it represented a common denominator across almost every Irish town.²⁴ However, as the link between poverty, poor hygiene, sanitation and disease increasingly came to dominate public health discourse, the question of how best to address poverty and its associated social consequences became more pressing.²⁵ As Virginia Crossman has observed, it occupied, 'the minds of politicians, economists and philanthropists during more than three decades of inquiry and debate over the desirability and feasibility of introducing a statutory system

²² *N.W.*, 16 Feb. 1847. See also, T. P. O'Neill, 'The famine and its consequences.'

²³ *N.W.*, Dec. 1838 reprinted in *The Operative* and *The Era* (London), 9 Dec. 1838.

²⁴ Gray, *The making of the Irish Poor Law*, p. 1.

²⁵ O'Brien, 'State intervention and the medical relief of the Irish poor,' p. 203.

of poor relief.²⁶ The solution, a system of relief modelled on the new English Poor Law which had been introduced in 1834 was however, neither new, innovative, nor popular.²⁷

The Poor Law: A Public Health Exercise?

Unlike England and Scotland Ireland, had no national statutory provision for poor relief before the introduction of the Poor Law in 1838.²⁸ Yet, Ireland was arguably superior in terms of medical provision, as a network of grant-aided medical institutions (infirmaries, dispensaries and fever-hospitals) had been created in stages from the mid-eighteenth century onwards.²⁹ A number of other urban municipal institutions dedicated to the relief of the poor including ‘houses of industry,’ ‘poorhouses’ and ‘mendicity institutions’ had also emerged from the 1770s.³⁰ However, as Peter Gray notes, they, ‘were in widely varying conditions, and suffering from generally parlous financial crises by the early nineteenth century.’³¹

It was within this somewhat fragmented and financially strained institutional landscape the responsibility of dealing with poverty and disease in Belfast, fell largely to the endeavours of a small number of private individuals and philanthropic organisations including the Charitable Society’s Poorhouse, the House of Industry in Howard Street

²⁶ Virginia Crossman ‘The Poor Law in Ireland, 1838-1948,’ *Institute of Historical Research* (2008) <http://www.history.ac.uk/ihr/Focus/welfare/articles/crossmanv.html#f1> (28/08/2012).

See also Crossman, *Poverty and the Poor Law in Ireland 1850-1914* (Liverpool University Press, Liverpool, 2013).

²⁷ Kinealy and McAtasney, *The hidden famine*, pp. 25-26.

²⁸ Peter Gray, ‘The Irish Poor Law and the great famine’ in *XIV International Economic History Congress Helsinki* (2006, session 123), pp. 5-6. See also, Kinealy and McAtasney, *The hidden famine*, p. 24.

²⁹ Gray, ‘The Irish Poor Law and the great famine,’ pp. 5-6. See also, Gray, *The making of the Irish Poor Law*, pp. 1-18.

³⁰ Joseph O’Carroll, ‘Contemporary attitudes towards the homeless poor 1725-1775’ in David Dickson (ed.), *The gorgeous mask: Dublin 1700-1850* (Trinity History Workshop, Dublin, 1987), pp. 65-82; Idem, ‘In search of the old Irish Poor Law’ in Rosalind Mitchison and Peter Roebuck (eds), *Economy and society in Scotland and Ireland 1500-1939* (John Donald, Edinburgh, 1988), pp. 150-6; Geary, *Medicine and charity in Ireland*; Kelly, ‘The emergence of scientific and institutional medical practice in Ireland’; Sneddon, ‘State intervention and provincial health care,’ pp. 5-21.

³¹ Gray, ‘The Irish Poor Law and the great famine,’ p. 6; Idem, *The making of the Irish Poor Law*, pp. 11-14.

and by the Frederick Street Fever Hospital, supplemented intermittently by soup kitchens during periods of acute distress.³² This reliance on localised provision, however, was increasingly viewed as inadequate in the context of growing national concern over destitution. In 1832, a Royal Commission was appointed to investigate the best means of dealing with the poor and destitute in England and Wales.³³ It concluded that many of the poor were destitute because of their own lack of action and recommended the introduction of a countrywide system of workhouses.³⁴ Resulting legislation 1834 established the legal and administrative framework for the new poor relief system while an Irish Poor Law Commission was subsequently tasked with the detailed policy and administration of the new regime.³⁵ Three Poor Law Commissioners were appointed (George Nicholls, John Shaw-Lefevre and Thomas Frankland Lewis) with Edwin Chadwick appointed as their secretary.³⁶ The new Poor Law Act, however, received considerable criticism, particularly for the harshness of the workhouse regime. For many of those forced to enter the newly established institutions, admission quickly came to symbolise the ultimate form of institutional degradation.³⁷

Arguably prompted by the deteriorating social conditions in Ireland, which had contributed to significant levels of emigration to Britain, a government commission to investigate the condition of the Irish poor was appointed in September 1833.³⁸ Under the

³² Kinealy and McAtasney, *The hidden famine*, p. 24.

³³ Dorothy Porter, *Health, civilisation and the state: A history of public health from ancient to modern times* (Routledge, London, 1999), p. 117.

³⁴ Michael Farrell, *The Poor Law and the workhouse in Belfast 1838-1948* (Public Record Office of Northern Ireland, Belfast, 1978), p. 1. Porter, *Health, civilisation and the state*, p. 117.

³⁵ *An Act for the amendment and better administration of the laws relating to the poor in England and Wales* (1834) (4 and 5 Will. IV cap. 76). Porter, *Health, civilisation and the state*, p. 117.

³⁶ For more on the establishment of the commission see, Gray, *The making of the Irish Poor Law*, pp. 93-112. See also Burke, *The people and the Poor Law*, pp. 17-20. A special enquiry into the condition of Irish immigrants in Britain was also instigated and was completed by George Cornewall Lewis by late March 1834. Gray, *The making of the Irish Poor Law*, p. 104.

³⁷ Porter, *Health, civilisation and the state*, p. 117.

³⁸ For more on the establishment of the commission see, Gray, *The making of the Irish Poor Law*, pp. 93-103.

chairmanship of Dr R. Whatley, the Protestant Archbishop of Dublin, the commission initially concluded that the establishment of a workhouse system on the English model would be unsuitable for Ireland. Specifically, it argued that the application of the “workhouse test” was fundamentally flawed in the Irish context, as it was both socially divisive and practically ineffective, given the widespread absence of employment opportunities for the majority of the poor.³⁹ Instead the commission’s report proposed a threefold solution to solve the issue in Ireland. It recommended the establishment of a Board of Improvement and Development which would implement measures including improving housing, providing employment for the labouring classes and the enhancement of agricultural practices and output. Alongside these structural reforms, the report also voiced support for providing assistance and encouragement for emigration and envisaged a broader system of social welfare provision, including specialised institutional care for the infirm and incapacitated, state support for voluntary organisations, improved access to credit for the poor, and the appointment by Boards of Guardians of medical officers of health in every district.⁴⁰

The report of the Irish commissioners was dismissed in London as its proposals were seen as too costly to implement and at odds with prevailing government policy.⁴¹ In response, and in search of a more acceptable alternative, the English Poor Law Commissioner George Nicholls was dispatched to Ireland in early September 1836 to conduct a brief inquiry and review the earlier findings.⁴² Nicholls’ preference for extending the English Poor Law system to Ireland was already known prior to his arrival, but, unlike the

³⁹ Burke, *The people and the Poor Law*, p. 29.

⁴⁰ *Ibid.*, 30-36. Gray, *The making of the Irish Poor Law*, pp. 118-23.

⁴¹ Burke, *The people and the Poor Law*, p. 37; Gray, *The making of the Irish Poor Law*, p. 130; Kinealy and MacAtsney, *The hidden famine*, p. 25; J.C. Beckett, *The making of modern Ireland 1603-1923* (Alfred S. Knoff, London, 1966), p. 319.

⁴² Gray, *The making of the Irish Poor Law*, pp. 158-60. For Nicholls’ report see, pp. 160-8.

commissioners three-year study, he spent just nine weeks in Ireland, none of which was spent in Ulster, which he assumed would be broadly comparable to England in its social composition.⁴³

Nicholls concluded that Ireland should adopt the English system but without the provision of administering outdoor relief.⁴⁴ A bill based on his recommendations was introduced on 13 February 1837, but it was met with considerable opposition and failed to secure broad support. During a protracted debate in the House of Commons, the Irish political leader Daniel O'Connell made his opposition clear and stated that the work to be imposed under the Poor Law amounted to, 'a kind of slave labour.'⁴⁵ O'Connell also questioned the adequacy of Nicholls' proposals to provide only 100 workhouses, offering relief to just 80,000 people.⁴⁶ While O'Connell's denunciation was inconsistent, he changed his mind and his argument on several occasions, it was ominous.⁴⁷ The intended solution, would, he believed, prevent the natural flow of charity to the poor and the consequences of forcing people to seek relief in the workhouses, could, he warned, ultimately result in agitation and aggression.⁴⁸

In Belfast, the proposals of the bill were also received with caution but initial opposition during two public meetings held in April 1837 was not particularly strong.⁴⁹ At the first meeting, James Standfield, a member of the local gentry, proposed a resolution which stated that, 'a legalised provision for the poor of Ireland is expedient in the existing circumstances of the country, for the relief of destitution, the encouragement of industry

⁴³ Burke, *The people and the Poor Law*, p. 37; Kinealy and MacAtsney, *The hidden famine*, p. 25.

⁴⁴ *Ibid.*, p. 25; Burke, *The people and the Poor Law*, p. 42.

⁴⁵ *Hansard*, xxxviii, 360-405 (28 Apr. 1837).

⁴⁶ *Ibid.*

⁴⁷ *Hansard*, xxxviii, 360-405 (28 Apr. 1837); Burke, *The people and the Poor Law*, p. 46; Gray, *The making of the Irish Poor Law*, pp. 185-6. See also, pp. 232-40.

⁴⁸ *Hansard*, xxxviii, 360-405 (28 Apr. 1837).

⁴⁹ *B.N.L.*, 18 and 21 Apr. 1837.

and the suppression of crime.’⁵⁰ However, some of the attendees disagreed with the suggestion and insisted that an amendment recommending that such a strong proposal should not be made until the public had seen how the bill should work should be added. Consequently, members agreed to accept several resolutions including that the assessment of the amount of support for the poor should be determined by rate payers, along with others reflecting their view that many of the bill’s provisions were fundamentally flawed in principle. Despite these reservations, they ultimately consented to accept the scheme, but only on the understanding that it would operate as an experimental rather than a permanent measure.⁵¹

By the time of a further meeting on 2 February 1838, the opinions of Belfast’s middle classes had clearly changed to almost complete opposition. The movement of relief provision from local to central control in London was a major annoyance, and attendees voiced their desire to dissent from some of the fundamental assumptions of the bill, particularly Nicholls’ ‘mised’ opinion that people were generally opposed to the giving of outdoor relief.⁵² Those present also expressed concern at the ‘heavy expense of original buildings,’ repairs and staffing, and, most significantly, the enforced separation of families, as well as the ‘well-known demoralising effects of congregating large masses of the population into any common receptacle,’ which they regarded as an inherent consequence of the system.⁵³ Apprehension was also expressed that poor relief was being made too easily available and that the absence of a law of settlement comparable to the English system meant that in Ireland paupers without a sustained period of residence, whether continuous over three years or accumulated over five, would be eligible to claim

⁵⁰ Ibid., 18 Apr. 1837.

⁵¹ *B.N.L.*, 18 Apr. and 21 Apr. 1837.

⁵² Kinealy and MacAtasney, *The hidden famine*, p. 25.

⁵³ Ibid.

relief.⁵⁴ The unease regarding the lack of this legislation would result in significant repercussions for Irish boards of guardians when cholera returned in the late 1840s and repatriated paupers almost certainly were responsible for transporting the disease to a number of workhouses including that of Belfast.⁵⁵

In April 1838, further opposition to the bill was expressed by the Committee of the Belfast Fever Hospital, an institution dependant on private subscriptions. Its members were concerned that the financial burden placed on the local community in order to pay for the Poor Law would, ‘render it absolutely impossible to raise money off the community at large, for the heavy demand of the medical charities, increased in number as they will be by the present bill.’⁵⁶ A week later a final condemnation of the bill was published in an editorial in the *Newsletter*. The rejection of the legislation, it noted; ‘Would be a source of pleasure rather than regret. Never was any former measure introduced on more bungling, one-sided principles of legislation, than the poor-law measure intended for this country.’⁵⁷ Additional opposition was expressed in parliament by Irish MPs and peers, temporarily managing to unite Daniel O’Connell and Lord Castlereagh. A union which was praised by the *Belfast Newsletter*.⁵⁸ Despite the countrywide criticism and though

⁵⁴ *B.N.L.*, 13 Feb. 1838.

⁵⁵ For more on the beginning of the cholera epidemic in Belfast and the association with repatriated paupers see Chapter Four of this thesis. The migration of paupers also caused similar issues in other towns and cities most notably Cork and Dublin. In Britain, the outbreak of fever epidemics in Liverpool, Glasgow and other areas was also attributed to Irish emigrants, leading the disease to become known as ‘Irish Fever.’ See, Kinealy and MacAtasney, *The hidden famine*, pp. 81-2. See also, Graham Davis, ‘Little Ireland’s’ in Rodger Swift and Sheridan Gilley (eds), *The Irish in Britain, 1815-1939* (Barnes and Noble, Maryland, 1989), p. 115. For examples of sickness and health among Irish migrants in various areas of Britain see, Swift (ed.), *Irish migrants in Britain*, pp. 94-8. For the best study of migration and emigration however see, Donald MacRaild, *The Irish diaspora in Britain 1750-1939* (Second edition, Palgrave Macmillan, Basingstoke, 2011). And for more on the historiography of the Irish in nineteenth-century Britain see, Rodger Swift, ‘Recent writings on the Irish in nineteenth-century Britain’ in MacRaild (ed.), *The great famine and beyond*, pp. 14-39.

⁵⁶ *B.N.L.*, 17 Apr. 1838.

⁵⁷ *Ibid.*, 24 Apr. 1838.

⁵⁸ *B.N.L.*, 4 May 1838. For more on the bill’s passage through parliament see Gray, *The making of the Irish Poor Law*, ch.6, pp. 178-218.

delayed by the death of William IV, the new act: ‘For the more Effectual Relief of the Destitute Poor in Ireland’ was passed into law on 31 July 1838.⁵⁹

Between 1838 and 1840, Ireland was divided into 130 Poor Law Unions based on electoral divisions each to be administered by a board of guardians. By January 1839, the workhouse building project commenced, and by May 1843 the system was almost complete. Boards of guardians had been elected, rates were collected and 112 workhouses had been completed, ninety-eight of which were in use, with a further eighteen still under construction.⁶⁰ Modelled broadly on the English system, Irish workhouses were deliberately designed to be sufficiently austere so as to deter all but those in the most acute distress from seeking admission. Although entry to the workhouse was, in principle, voluntary, these institutions operated under regimes that closely resembled those of prisons. Families were separated, inmates wore uniforms and subsistence was minimal at best. It was therefore widely understood that the function of the workhouse was to ‘relieve utter destitution at minimal expense.’⁶¹ In this respect, the system, though highly controversial, did succeed in fulfilling its intended purpose. While fundamentally reactive rather than progressive in conception, the system, in both Britain and Ireland, represented, for the first time, the initial centralised steps towards dealing with the major public health issues of the United Kingdom.

In Belfast, while the implementation of the ‘Poor Relief Act’ and the opening of the workhouse in May 1841 marked the emergence of a new era in dealing with the increasing numbers of the poor, it came at the detriment of other charitable institutions. The House

⁵⁹ Ibid., p. 214. The Act is more commonly referred to by its short title the ‘Poor Relief (Ireland) Act’ (1838) (1 and 2 Vict., c.56).

⁶⁰ Gray, *The making of the Irish Poor Law*, pp. 286-93; Kinealy and MacAtasney, *The hidden famine*, p. 29. The Belfast Union, covering an area of 74 square miles, was officially announced on 21 December 1838. By March 1843, 110 unions were declared fit for use. Farrell, *The Poor Law and the workhouse in Belfast*, p. 4. 43 workhouses were located in Ulster: Gray, *The making of the Irish Poor Law*, p. 300.

⁶¹ Robins, *The miasma*, p. 114.

of Industry was forced to close, and the committees of the Charitable Society and Fever Hospital voiced concerns regarding the likelihood of shrinking levels of voluntary subscriptions in the wake of the imposition of the compulsory Poor Law tax.⁶² In a report to the Poor Law Commissioners the Charitable Society's committee stated that as early as 1839 many charitable people were withholding their subscriptions in the belief that the levying of a poor rate was imminent.⁶³ By 1841, it was clear that the society's financial situation was perilous when it claimed that; 'The operation of the Poor-Law will reduce the amount of annual subscriptions to the extent of at least £400.' Faced with this shortfall, the institution was forced to reduce its numbers in order to survive.⁶⁴

Providing for the Sick

As in Britain, the Irish workhouse system had no initial provision for the sick and the possibility of providing hospital type care was strongly resisted by the Poor Law Commissioners who regarded such measures as incompatible with the principles upon which the workhouse system was intended to operate.⁶⁵ However, as the link between poverty and sickness became increasingly clear, its administrators were forced to face the prospect of providing for the sick poor. Accordingly, once the workhouse system had been established, the Poor Law Commissioners were able to review the existing services for fever patients and the sick.⁶⁶ This led to the introduction of legislation specifically aimed at providing for fever patients, the 'Poor Relief (Ireland) Act' in 1843.⁶⁷ The act stipulated that Irish Poor Law Guardians were permitted to provide for the sick either

⁶² Kinealy and MacAtasney, *The hidden famine*, p. 30.

⁶³ Ibid.

⁶⁴ Strain, *Belfast and its Charitable Society*, p. 298.

⁶⁵ Robins, *The miasma*, p. 114.

⁶⁶ Ibid., p. 115.

⁶⁷ 'Poor Relief (Ireland) Act' (1843) (6 and 7 Vict., c.92); Robins, *The miasma*, p. 115.

within the workhouse, in rented accommodation or by paying for patients to be treated in fever hospitals other than the guardians own.⁶⁸

Belfast, however, possessed the advantage of an existing institution in the form of the Poorhouse, which already provided accommodation for both the sick and the insane poor.⁶⁹ Yet from 1840 its functions were more limited, and it had been largely relieved from its principal duties of supporting the poor and supplying water to the town. Increasingly too, Belfast's sick were being cared for within the confines of the Frederick Street hospital.⁷⁰ However, this was an arrangement which would also change markedly by the end of the decade, as responsibility for dealing with the sick came under the control of the guardians. With the opening of the Union Fever Hospital in 1847, the former institution was remodelled and renamed as the Belfast General Hospital after which it began to function almost exclusively as a surgical establishment.⁷¹

Reform of Local and National Legislation

The approach of the Irish administration to the problems of poverty and illness in the 1840s continued to be largely reactionary and tended to be limited to interventions to be undertaken only in dire circumstances.⁷² Reforming legislation, both local and national, would, nevertheless play a significant role in the development of provisions for the sick in Ireland and highlighted a growing national concern regarding the lack of adequate public health provision. While the 'Poor Law Act' (1838) introduced sweeping, if unpopular, changes in terms of providing relief to the poor; from 1840, another piece of

⁶⁸ Ibid.

⁶⁹ Strain, *Belfast and its Charitable Society*, pp. 272-97. Strain notes that until 1829 and the opening of the Belfast District Lunatic Asylum the Poorhouse had exclusive responsibility for the treatment of the insane see p. 286 and 289.

⁷⁰ Ibid., p. 297.

⁷¹ Annual report of the Belfast General Hospital, 1848/49, Office of Archives, Royal Victoria Hospital Belfast; Craig, 'A history of the Belfast City Hospital,' p. 4.

⁷² Robins, *The miasma*, p. 111.

national legislation brought substantial change at a local level. ‘The Municipal Corporations (Ireland) Act’ (1840) extensively changed the structure of the administration of local government. Its provisions saw the abolition of fifty-eight of Ireland’s corporations and of the ten which remained, including Belfast, a £10 voting qualification was established.⁷³ This change had important implications for the future composition of the Belfast Corporation. Under revisions proposed by teams of commissioners, it was further recommended that the parliamentary borough of Belfast be extended to incorporate the suburb of Ballymacarrett.⁷⁴ The borough was also divided into five wards, Dock, St Anne’s, Smithfield, St George’s, and Cromac, with each returning two aldermen and six councillors.⁷⁵

In practice, however, these structural reforms had limited effect on the political character of the corporation. The £10 franchise effectively excluded many Catholics, who were too poor to qualify as electors, thereby significantly reducing the potential base of Liberal support, while Protestant backing for the Liberals was further weakened by the inability of local merchants and mill owners to organise sufficiently effective opposition to the Conservatives.⁷⁶ A Belfast solicitor, John Bates, acting as the principal Conservative agent in the town, used his legal expertise and political acumen to engineer the removal of any possibility of ardent Liberal mobilisation.⁷⁷ Assisted by the absence of a secret ballot and the complexity of the electoral registration system, Bates’ influence ensured

⁷³ 3 and 4 Vict., c. 108; Budge and O’Leary, *Approach to crisis*, p. 51. The 10 surviving corporations were, Belfast, Dublin, Cork, Limerick, Waterford, Londonderry, Sligo, Kilkenny, Drogheda and Clonmel.

⁷⁴ *Reports and instructions by Lord Lieutenant, with reference to boundaries and divisions of cities, boroughs and Towns corporate in Ireland*, p. 19, HC 1837 (301), xxix 3. Hereafter, *Report on Municipal Corporation boundaries* (1837).

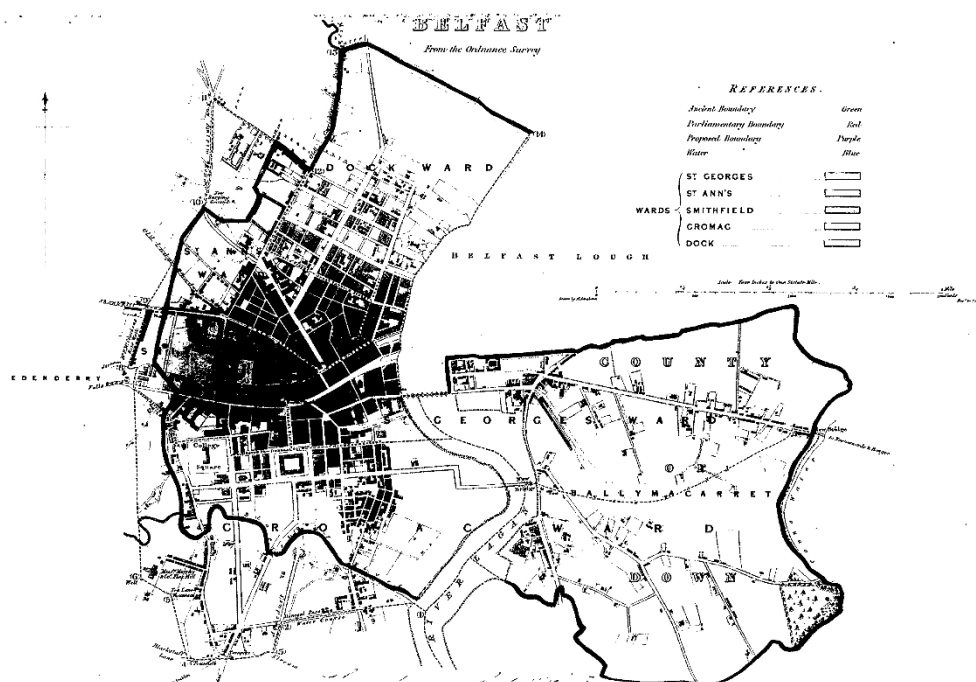
⁷⁵ *Report on Municipal Corporation boundaries* (1837), pp. 20-2. See map of municipal boundary of Belfast below. All forty of the elected members were Conservatives. For a list of elected representatives see, Owen, *History of Belfast*, pp. 262-3.

⁷⁶ Jonathan, Bardon, *Belfast: An illustrated history* (Blackstaff Press, Belfast, 1982), p. 94.

⁷⁷ For more on the political make-up of the corporation see Slater, *Belfast politics*. For John Bates’ influence see, Budge and O’Leary, *Approach to crisis*, pp. 41-65.

that subsequent corporation elections were overwhelmingly dominated by Conservative candidates.

Map of the Municipal Boundaries of Belfast (1837).



Map reproduced from, *Report on Municipal Corporation boundaries* (1837), p. 22.⁷⁸

The first meeting of the new corporation was held on 4 November 1842, ushering in an era of Conservative dominance which was to last until 1855.⁷⁹ George Dunbar was elected mayor and Bates, was appointed Town Clerk, a position which gave him official control over electoral registration.⁸⁰ Six committees were established,⁸¹ however, most of the remainder of their business was directed towards promoting a series of private bills.⁸² Yet, as Jonathan Bardon has observed, the Conservative corporation proved to be uncharacteristically reformist in its outlook with its enthusiasm for improvement only

⁷⁸ *Report on Municipal Corporation boundaries* (1837), p. 22.

⁷⁹ Budge and O'Leary, *Approach to crisis*, p. 53. No liberals were elected to the corporation until 1855 and of the six appointed the Belfast baker, Bernard Hughes was the first Catholic. See, Maguire, *Belfast*, p. 43.

⁸⁰ Bardon, *Belfast: An illustrated history*, p. 94.

⁸¹ The six committees were as follows. Finance, Audit, By-Laws, Parliamentary Bills, Property and General Purposes.

⁸² Budge and O'Leary, *Approach to crisis*, p. 53.

matched by the most progressive Liberals in England.⁸³ By 1848, only twenty-nine of the 178 municipal corporations in England and Wales had applied for powers to pave streets or effect other improvements and in prominent industrial towns such as Manchester, radicals opposed the compulsory purchase of houses for street widening and objected to the costs of proposed town improvements.⁸⁴ In sharp contrast, the Belfast Corporation, set about applying for additional powers to improve the town from the outset, and in 1844 in a further attempt to consolidate its dominance, it also assumed responsibility for the functions previously exercised by the committee and commissioners of police.⁸⁵

In 1845, the corporation applied for and acquired the first in a series of improvement acts under which most of the future development of the town including public health provision was to be managed.⁸⁶ The ‘Belfast Improvement Act’ (1845) permitted it to borrow £150,000 for paving and lighting parts of the town as well as widening old streets, constructing new streets, laying sewers and providing markets.⁸⁷ Additional improvement acts in 1846 and 47 saw the corporation authorised to borrow another £50,000 and gain the right to set up gasworks as well as further authorisation to borrow funds to address one of the town’s most prominent sanitary issues the Blackstaff River.⁸⁸ However, while the acts led to some notable improvements, including the establishment of a market at May’s Fields as well as the planning of a new Court House and Customs House and the construction of Victoria and Corporation Streets, effecting sanitary improvements did not

⁸³ Bardon, *Belfast: An illustrated history*, p. 95.

⁸⁴ *Ibid.*, p. 95.

⁸⁵ Budge and O’Leary, *Approach to crisis*, p. 54.

⁸⁶ *Ibid.*, p. 54.

⁸⁷ (8 and 9 Vict., c.142). The Belfast Improvement Act, (1845)

⁸⁸ Belfast Town Improvement Acts, 1846 (9 and 10 Vict., c.294); 1847 (10 and 11 Vict., c.254). The issues surrounding the Blackstaff will be discussed in more depth below and throughout the remainder of this thesis.

hold the same priority.⁸⁹ Despite their clear desire to modernise the town, litigation brought against the corporation in 1855 by the Presbyterian solicitor and agitator John Rea in the Court of Chancery Dublin found that, while there was no major corruption, the corporation had misappropriated the majority of the money borrowed for improvement.⁹⁰ It is certainly arguable therefore, that the corporation could not afford to implement a comprehensive programme of sanitary reform, due in part to Rea's accusation of the alleged corrupt practices of Bates and the corporation.

Public Health and the Sanitary Condition of Belfast from 1845

Between 1845 and 1849, concerns regarding public health in Belfast were shaped largely by the wider effects of the Famine. While it may be argued that the north of Ireland was comparatively spared the worst excesses of starvation experienced elsewhere in the country, it was nonetheless not immune to the waves of fever and epidemic disease that accompanied this traumatic period in Irish history. Despite its economic progress, Belfast, like many industrial towns in Britain, as well as large towns in Ireland, experienced increasing levels of poverty, and the 1840s were also marked by a number of trade and industrial depressions.⁹¹ This situation intensified after 1845, as increasing numbers of destitute rural migrants sought refuge in the town following the onset of the potato blight. Many of those who arrived also carried famine-related fever, compounding existing public health pressures.⁹² When outbreaks occurred, disease spread rapidly through

⁸⁹ For more on civic improvement in regard to buildings and streets see Johnson, *Middle class culture and civic identity*, pp. 177-95. See also, Budge and O'Leary, *Approach to crisis*, p. 56. And for the impact of the lack of sanitary improvement see Malcolm, *The sanitary state of Belfast*, pp. 1-39.

⁹⁰ Rea had played an active role in the Young Ireland movement. He had fought in the 1848 rebellion and was imprisoned in Kilmainham jail for nine months in 1848. For more on Rea see, Dictionary of Irish Biography, dib.cambridge.org and Dictionary of Ulster Biography, www.newulsterbiography.co.uk (10/01/14). For the details of the Chancery Suit see, Budge and O'Leary, *Approach to crisis*, pp. 60-1 and Slater, *Belfast politics*, pp. 280-7.

⁹¹ For more see, Kinealy and MacAtasney, *The hidden famine*, pp. 32-5.

⁹² Maguire, *Belfast*, p. 39.

overcrowded and unsanitary districts inhabited by the urban poor, placing severe strain on Belfast's rudimentary public health infrastructure.⁹³

Housing

After 1845, increased migration into Belfast had generated significant social pressures for both the Board of Guardians and the corporation, particularly in relation to housing, sanitation, and the provision of adequate water supplies for a rapidly expanding population. By the end of the decade, the pace of housing development, bolstered by the disposal of portions of the Marquis of Donegall's estate after 1850, had risen to approximately 1,000 new houses per year.⁹⁴ The introduction of new by-laws in 1847, which imposed improved standards of construction, ensured that much of this development represented advances in the quality of housing provision. These improvements were, however, unevenly distributed. The majority of Belfast's poorest inhabitants continued to reside in older, overcrowded, and insanitary dwellings, and the deep-rooted problems associated with such 'slum' accommodation, conditions that would persist well into the twentieth century, proved resistant to rapid or comprehensive reform.⁹⁵

New development in Belfast also exacerbated the ongoing issue of water supply which continued to be an acute and ongoing problem for which the town appeared to have no

⁹³ This point will be discussed in greater depth below and in Chapter Four.

⁹⁴ By 1855 the only substantial areas which remained in Donegall's hands were the Ormeau Demesne and the Deerpark at Cave Hill. See, Maguire, 'Lords and landlords.' For more on the disposal of the Donegall estate see also, William A. Maguire, 'Lord Donegall and the sale of Belfast: A case history from the Encumbered Estates Court' in *The Economic History Review*, Vol. 29(4) (1976), pp. 570-84. For housing development see; Emrys Jones, 'Late Victorian Belfast 1850-1900' in Beckett and Glasscock (eds), *Belfast: The origin and growth of an industrial city*, p. 109.

⁹⁵ A slum clearance programme was put in place until the beginning of the twentieth century. For a pictorial history of the condition of Belfast in this period see the Alexander Hogg collection of photographs in the Ulster Museum and online at PRONI: <http://www.flickr.com/photos/proni/sets.> (25/09/2013). For more on housing see also, Royle, '*Clanging Belfast*,' pp. 12-21 and Brenda Collins, 'The Edwardian city' in Beckett and Glasscock (eds), *Belfast: The making of the city*, pp. 167-82.

answer.⁹⁶ As Emrys Jones has argued, during its earlier development, the town, ‘relied entirely on resources within its own boundaries, with the result that in 1850, seven out of ten people depended on public springs and pumps.’⁹⁷ These provisions frequently failed to meet the most basic demands of the population, even when supplemented by water carts. Thus, the issue of securing an adequate unpolluted water supply, much like the problem of housing, would remain largely unresolved until the early twentieth century. During periods of crisis therefore, the Belfast Water Commissioners were occasionally forced to take actions that posed risks to public health. During a drought in 1845, for example, they resorted to pumping water from the heavily polluted River Lagan in an effort to supplement the town’s depleted supply.⁹⁸

Such measures not only underscored the inadequacy of Belfast’s water infrastructure but also highlighted the broader environmental conditions that were believed to influence public health. In an era during which the medical and public health arenas were dominated by the miasmatic theory of disease a range of other urban nuisances attracted significant concern for the health of the people of Belfast. The provision of sewers for example, remained poorly addressed by the corporation with responsibility often left largely to the owners of individual houses or streets. In 1844, the corporation had spent just £381 on sewers many of which were constructed to deposit their effluent directly into the town’s main watercourses.⁹⁹ This lack of municipal spending was particularly evident when the town experienced incidences of high tides or flooding. Raw sewage was regularly carried back onto the streets of central Belfast and into the homes of those who lived in the

⁹⁶ For more on the history of Belfast’s water supply see: Jack Loudan, *In search of water: Being a history of the Belfast water supply* (W.M. Mullan and Son, Belfast, 1940) and Strain, *Belfast and its Charitable Society*.

⁹⁷ Jones, *Late Victorian Belfast*, p. 109.

⁹⁸ *B.N.L.*, 4 Feb. and 8 Aug. 1845. Problems associated with the supply of water to Belfast will be discussed in greater detail in Chapters Five and Seven.

⁹⁹ Johnson, *Middle class culture and civic identity*, p. 200.

vicinity of the affected streets.¹⁰⁰ Almost exclusively the areas affected, particularly those in proximity to the Blackstaff River, which had become a fetid dumping ground, were those accommodating the residences of the poor.¹⁰¹ Thus, their already dire sanitary conditions, as well as their likelihood of contracting serious illnesses, was made inherently worse. While the Blackstaff had become a major concern to town officials attempts to effectively address the problem were severely hampered by the opposition of neighbouring mill owners and by a lack of commitment on behalf of the corporation.¹⁰²

The Blackstaff Nuisance

These persistent difficulties were clearly reflected in contemporary accounts of the river and its impact on surrounding communities. In 1852 Andrew Malcolm described the Blackstaff River as a ‘foul and open tortuous stream...the receptacle of the refuse of upwards of 400 houses, besides factories and public institutions, where many hundreds congregate or reside.’¹⁰³ In 1846, a memorial signed by over 300 residents of Durham Street and the surrounding area brought their grievances before the corporation.¹⁰⁴ Referring to an earlier memorial submitted in January 1845, which had stated that upwards of 180 houses had been flooded, the residents complained that, with the increase in population, more than double this number of homes had been recently inundated. Pleading with the corporation to take immediate action, they made it clear that they feared that cases of fever and other diseases would increase during the oncoming winter months if the issue remained unresolved.¹⁰⁵ The principal cause of the problems associated with the Blackstaff was identified as the weir at the Old Paper Mill, the bed of which had been

¹⁰⁰ Malcolm, *The sanitary state of Belfast*, p. 27.

¹⁰¹ *Ibid.*, p. 5; Budge and O’Leary, *Approach to crisis*, p. 56.

¹⁰² *Ibid.*, p. 56.

¹⁰³ Malcolm, *The sanitary state of Belfast*, p. 5. For Malcolm’s plan of Belfast and the Blackstaff nuisance in 1849 see Appendix 3 of this thesis.

¹⁰⁴ For a copy of the petition see *B.N.L.*, 2 Oct. 1846.

¹⁰⁵ *Ibid.*

progressively narrowed by its owners over time. Representing the affected residents, John Hind, a member of the committee of the fever hospital, proposed that the installation of floodgates might help to alleviate the situation. The Town Clerk, John Bates, however, maintained that the corporation lacked the authority to compel the mill owners to undertake such alterations.¹⁰⁶ His explanation was challenged by Councillor Hutcheson Posnett, who argued that, under the provisions of the Town Improvement Act, the corporation possessed the power to widen and deepen any river or stream within the borough, and could therefore intervene in the case of the Paper Mill dam. Despite this, and in a manner that reflected the corporation's broader reluctance to assume direct responsibility during the 1840s, the memorial was ultimately referred to the Committee on Police Affairs rather than acted upon decisively.¹⁰⁷

In 1847, the Belfast Town Improvement Committee did seek powers to straighten and culvert sections of the Blackstaff, and the corporation was authorised under the Town Improvement Act of that year to borrow £15,000 to drain the river from the Linen Hall to the present Bradbury Place.¹⁰⁸ The Act also permitted the corporation to purchase the Cromac Paper Mill, along with any dams and weirs obstructing drainage, with such acquisitions to be financed through funds raised under the 1845 Act.¹⁰⁹ The projected cost of the works was estimated at £9,000; however, the committee expressed concern that, as no direct financial return would be generated from compulsory land purchases, the scheme would necessitate increased local taxation. The *Northern Whig* echoed these

¹⁰⁶ *B.N.L.*, 2 Oct. 1846.

¹⁰⁷ *Ibid.*

¹⁰⁸ Budge and O'Leary, *Approach to crisis*, p. 54.

¹⁰⁹ *Local Government and taxation of towns inquiry commission (Ireland): part II: report and evidence, with appendices: Belfast, Trim and Wicklow*, p.2, H.C. 1877 (1775), xl, 1. Hereafter, *Taxation of towns inquiry commission* (1877).

objections, arguing that ratepayers should not be burdened with additional costs when ‘the great majority... would derive no direct benefit from it.’¹¹⁰

Local mill and iron foundry owners who were concerned by the possible loss of their source of water also opposed the work and campaigned successfully to have it delayed.¹¹¹

In September 1848, a deputation from the sanitary committee which included Drs Samuel Brown and Andrew Malcolm again brought the issue before the corporation and emphasising increasing levels of anxiety prompted by the spread of cholera throughout Western Europe.¹¹² Despite these renewed warnings, the improvement committee, constrained by financial concerns and under enormous pressure from objectors resolved not to sanction such a large payment (£9,000) from corporate funds (the property of the ratepayers). Instead, in an effort not to appear to avoid outright rejection of the project, they, ‘gladly recommended any measure of moderate expenditure which would abate the nuisance,’ suggesting for example, that the removal of the old weir at Joy’s Paper Mill would, ‘be calculated to lessen the evil very considerably.’¹¹³ Even so, brokering an arrangement to allow any works to be undertaken proved both difficult and protracted.

The Paper Mill was rented by the Joy family to James Blow at a rate of £230 per year, a figure which according to the committee far outweighed the value of the property. Blow was offered a deal whereby, in return for the removal of weir was the corporation would compensate him with an annual payment while the course of the river remained unobstructed. The corporation also offered to rebuild the weir, freeing Blow of any contractual obligations to the Joy family. However, Blow refused to accept the terms and,

¹¹⁰ *N.W.*, 16 June 1847.

¹¹¹ Budge and O’Leary, *Approach to crisis*, pp. 54-6.

¹¹² *B.N.L.*, 5 Sept. 1848.

¹¹³ Minutes and Proceedings of the Council of the Borough of Belfast 1847-1850, 2 Oct. 1848, PRONI LA/7/2/EA/2. Hereafter, Council Minutes 1847-50.

lacking compulsory powers to enforce the necessary alterations, the corporation was effectively unable to proceed.¹¹⁴ As a result, no substantive action was taken prior to the onset of the subsequent epidemics of fever and cholera, and the Blackstaff nuisance remained a persistent and serious public health problem for the succeeding three decades.

Public Health and the Impact of the Local Improvement Acts after 1845

The 1840s also saw the first attempts to implement regulated national legislation aimed at combatting infectious and epidemic diseases in Ireland. The ‘Disease Prevention’ and ‘Nuisance Removal’ Acts (1848 and 49) permitted boards of guardians to insist that residents of houses remove nuisances or use local rates to pay for the removal themselves.¹¹⁵ Yet, as Ruth Barrington has argued, few local authorities in Ireland, approached the problem with determination.¹¹⁶ While many were reluctant to incur the expense associated with implementing new sanitary regulations, Belfast presents something of an exception as the corporation had already anticipated national developments by incorporating sanitary provisions into the by-laws of its Town Improvement Acts.¹¹⁷

Belfast’s improvement acts had a significant impact in terms of public health provision in the town after 1845. Legislatively, the acts allowed the corporation to increasingly put pressure on landlords and residents to provide better sanitary facilities and impose fines on those who did not remove nuisances when requested.¹¹⁸ Almost immediately after their

¹¹⁴ Special report of the Town Improvement Committee, 2 Oct. 1848 in Council Minutes 1847-50.

¹¹⁵ 11 and 12 Vict. c.123. and 12 and 13 Vict. c.111.

¹¹⁶ Barrington, *Health, medicine and politics*, p. 12.

¹¹⁷ Powers granted by the 1845 act, for example, included the widening and opening of streets, provision of a sewerage system and the erection of public baths and washhouses. See, ‘Belfast Improvement Act’ (1845) (8 and 9 Vict., c.142).

¹¹⁸ Failure to comply with an order to remove nuisances resulted in the issue of a penalty of 10s to be charged for every day after a specified period during the period of default. Council minutes 1847-50, 2 Oct. 1848.

inception the corporation made extensive use of the powers of the acts, pursuing several tenement owners who had ignored orders to remove obstructions, to pave, level and drain streets in accordance with the relevant provisions of the legislation.¹¹⁹ They included some of Belfast's most eminent businessmen, members of the Joy family and the draper Adam McClean for example were ordered to enclose or repair unenclosed ground and to provide a sewer at the south end of Brunswick Street near the female penitentiary.¹²⁰ Even the well-known baker Bernard Hughes was not exempt from the recommendations of the street inspectors.¹²¹ On 3 Oct 1848 it was resolved that the inspectors:

Recommend the Corporation to put in force the provisions of the Town Improvement Act and of the Sanitary Act of the present session against Mr Bernard Hughes for keeping swine in his premises in Fountain Street.¹²²

Not all were supportive of the amended 1847 'Town Improvement Act' and Liberal opposition to its bill, both in Parliament and at a local level, was particularly strong. The *Northern Whig* voiced concern at the proposed sale of corporation owned land by way of granting building leases as well as the likelihood of increased local taxation and cautioned that the amended act would furnish the corporation with 'dangerous power.'¹²³ Liberal MP Robert James Tennent publicly expressed his opposition to the commissioners examining the proposed bill, prompting the publication of an exchange of letters between Tennent and Town Clerk John Bates in the Belfast press concerning the proposed

¹¹⁹ These included sections 78, 101, 104 and 25 of the 1847 act. (10 and 11 Vict., c.254).

¹²⁰ Council Minutes 1847-50, 13 Feb. 1849.

¹²¹ Most famous for baking, Hughes' innovative production and marketing ideas provided the city's working population with cheaper bread at a time when they needed it most, He was also recognised as a noted philanthropist, municipal politician, industrial reformer and Catholic lay spokesman. For more, see, The dictionary of Ulster biography; The dictionary of Irish Biography and Jack Magee, *Barney: Bernard Hughes of Belfast 1808-1878* (Ulster Historical Foundation, Belfast, 2001).

¹²² Minutes of Committee on Police Affairs, 3 Oct. 1848, PRONI LA/7/10/AB/1/3. Hereafter, Committee on Police Affairs.

¹²³ *N.W.*, 10 November 1847. A frank exchange of views between the *Whig* and the *Newsletter* regarding the bill continued for several months.

extension of the town's markets.¹²⁴ In Parliament, David Robert Ross and Morgan John O'Connell led Liberal dissent, opposing the bill during its third reading. They cited the cost of its implementation and claimed that 'the whole town of Belfast was against the bill' as the principal reasons for their objection.¹²⁵ Despite their protestations, the legislation was ultimately passed. Belfast MP, Lord John Chichester noted in its defence that only 133 people in the town had petitioned against the bill while the remaining ratepayers, some 11,000 in total, had been in its favour.¹²⁶ Liberal opposition had also aggravated the *Belfast Newsletter* which, in an editorial on the political representation of the town, launched an attack on Liberalism and on Robert Tennant in particular.¹²⁷ His self-appointed role as a guardian of public health was denounced, and he and his supporters were accused of 'expurgating from the Town Improvement Bill every clause, without exception, which provided for the sanatory[sic] improvement of his 'native town.' 'Positively,' the *Newsletter* concluded, 'these Liberals have face enough for anything.'¹²⁸

Yet, notwithstanding the intensity of this political rhetoric and the formal extension of municipal powers, the practical outcomes of the Town Improvement Acts were uneven in both scope and effect. While the acts did make the first conclusive steps to improving public health in Belfast including the paving of streets, the provision of sewers and the removal of nuisances, these measures were mostly reserved for prominent areas of the town. As a result, these measures remained largely superficial in terms of preventing disease as well as addressing the most acute deficiencies of the poorest districts during

¹²⁴ *B.N.L.*, 19 and 23 Feb. 1847; *N.W.*, 16 Feb. 1847. The letters were also published simultaneously by *The Banner of Ulster*.

¹²⁵ *B.N.L.*, 25 June 1847.

¹²⁶ *Ibid.*, 25 June 1847.

¹²⁷ *B.N.L.*, 23 July 1847.

¹²⁸ *Ibid.*

the 1840s and 1850s. Despite the additional provisions conferred under the amended act, including the initial introduction of public privies in 1848, many streets remained unpaved, insanitary and neglected.¹²⁹ In his 1852 treatise on the sanitary state of Belfast, Andrew Malcolm recorded 180 streets which remained unpaved in 1848 and observed that while principal thoroughfares were regularly cleansed, there was a ‘lamentable deficiency’ with regard to the removal of ‘offensive remains’ in the town’s poorest districts.¹³⁰

Stagnant pools of wastewater from local mills compounded these problems creating an persistent sanitary problem for the Surveyor of Works, who repeatedly reported cases of factory owners being ordered to remove the nuisances they had created to the committee on police affairs.¹³¹ Similar directives were also issued in relation to the nuisance of open drains, however, corporation directives did little to offer effective solutions. Where sewers were constructed, they were often designed to discharge wastewater directly into the Blackstaff or the Lagan. Branch drainage, as Andrew Malcolm observed, was, ‘in many thoroughfares wholly wanting and in still a greater number, decidedly imperfect.’¹³² It is therefore evident that municipal action was not necessarily driven by a coherent strategy of disease prevention in mind. On the contrary, by facilitating the discharge of sewage into the town’s watercourses, these measures frequently intensified and increased exposure to disease in overcrowded riverside districts. Unsurprisingly, it was in precisely these areas, particularly those inhabited by famine migrants, that fever and cholera were most prevalent between 1845 and 1849.

¹²⁹ The Police Committee recommended that the corporation should authorize them to erect a sufficient number of public privies throughout the town in convenient localities. In the meantime, the corporation resolved to erect temporary privies near the market in Smithfield and Mary’s fields. Minute Books of Belfast Board of Guardians, 2 Oct. 1848, PRONI BG/7/A/7. Hereafter BBOG.

¹³⁰ Malcolm, *The sanitary state of Belfast*, p. 7.

¹³¹ Committee on Police Affairs, 13 June 1848-25 Jan. 1853.

¹³² Malcolm, *The sanitary state of Belfast*, p. 5.

Disease and Public Health during the Famine

These developments must also be viewed in the context of the wider crisis unfolding across Ireland during this period. Reports of a disease affecting the potato crop began in Europe during 1845, and by early September, reports of blight in Ireland began to surface, but, due to its late arrival, some sixty per cent of the crop remained disease free.¹³³ By 1846 however, ninety per cent of the crop failed and it was clear, as Christine Kinealy has observed, that a national crisis had arrived.¹³⁴ In general terms, the devastating effects of the potato blight are thought to have been responsible for the deaths of at least one million people in Ireland during its peak years.¹³⁵ However, in a recent analysis, Joel Mokyr and Cormac Ó'Gráda having adjusted the figures from the 1841 and 1851 census' to account for underreporting, declines in fertility and outward migration, estimate as many as 1.5 million deaths related to famine occurred between 1846 and 1850.¹³⁶ The true mortality of the Great Famine remains a complex statistical problem and, while the precise death toll can never be determined, it is clear that many of those who perished died not from starvation alone, but from infectious diseases associated with the deprivation that it caused¹³⁷ Once the crisis took hold, typhus fever spread rapidly, affecting not only the destitute but also penetrating more affluent sections of urban society. In Belfast, where fever was widespread throughout the town in April 1847, the *Belfast Newsletter* remarked upon the increasing prevalence of the disease among the wealthier classes, observing that: 'The calamity up to a very recent date has hitherto

¹³³ Kinealy and MacAtasney, *The hidden famine*, p. 39

¹³⁴ Christine Kinealy, *A death dealing famine: The great hunger in Ireland* (Pluto Press, London, 1997), p. 66. For further discussion of the famine see, Daly, *The famine in Ireland*; Gray, *Famine land and politics*; Christine Kinealy and Trevor Parkhill (eds), *The famine in Ulster* (Ulster Historical Foundation, 1997); Kinealy and MacAtasney, *The hidden famine*; Mokyr and Ó'Gráda, 'What do people die of during famines,' pp. 339-63; Ó'Gráda, *Black '47 and beyond*; O'Neill, 'The Famine and its consequences.'

¹³⁵ Robins, *The miasma*, p. 116. The 1851 Census Commissioners recorded that 985,366 died. Census of Ireland (1851), p. 246.

¹³⁶ See, Mokyr and Ó'Gráda, 'What do people die of during famines,' pp. 339-63.

¹³⁷ Robins, *The miasma*, p. 116.

reached only the purses of the middle and wealthier classes; but the case is different now...Something of the misery which haunts the cottage of the poor is forcing its way into the castle of the rich.’¹³⁸

This observation highlights the extent to which disease, once established, transcended social boundaries. Throughout Ireland, the underlying social conditions, both within the wider population and in institutions intended to provide relief, remained a major cause for concern and became increasingly detrimental during the famine. No significant new legislation, aimed at combatting disease had been introduced in the wake of previous epidemics and while central and local administrators had accepted the correlation between poverty, dirt and disease, practical measures adopted to maintain urban cleanliness differed little from those employed during the cholera outbreaks of the 1830s.¹³⁹ Efforts to establish a centrally driven, coordinated and effective medical response to disease control were further impeded by what Robins has described as, ‘the extraordinary bureaucratic and complicated machinery created by the government.’¹⁴⁰

Much of the confusion was caused by the reluctance of the Irish administration to apportion responsibility, and by its keenness to place accountability for problems relating to issues of relief and medical care on the shoulders of the Poor Law Commissioners and the Central Board of Health.¹⁴¹ Individual unions also faced severe financial pressures, and tensions increasingly emerged between local boards of guardians and the central commissioners. In Belfast, for example, a proposal to borrow £3,500 for the construction of an expanded fever hospital was ultimately abandoned after the commissioners argued

¹³⁸ *B.N.L.*, 30 Apr. 1847. Kinealy and MacAtasney observe that with the exception of one week the Belfast Union recorded the highest rates of fever mortality in Ulster during April 1847. Kinealy and MacAtasney, *The hidden famine*, p. 95.

¹³⁹ See previous chapter. The measures implemented against cholera and fever will be discussed later in this chapter and in Chapter Four.

¹⁴⁰ Robins, *The miasma*, p. 135.

¹⁴¹ *Ibid.*, p. 135.

that granting such a loan to one of the wealthiest unions would set a precedent that could not be denied to others.¹⁴² Some of the country's wealthier unions also became increasingly resentful of the additional costs associated with treating fever patients, with some refusing the commissioners' requests to assume responsibility for temporary fever hospitals.¹⁴³ As a result, many sufferers were left in deplorable conditions, prompting the commissioners to appeal directly to individual unions not to close their facilities or allow patients to 'languish in unrelieved suffering.'¹⁴⁴

These immediate administrative failures were compounded by a broader lack of progress in medical understanding and public health provision in the years between the first cholera outbreak and the epidemic fevers of the famine period.¹⁴⁵ There had been no discernible advance in the scientific knowledge of contagion, and little improvement in the measures available to combat epidemic disease. Initial responses to cholera in Ireland had already ignored the controversial and largely ineffective quarantine systems imposed in Britain and Europe, with the Irish General Board of Health instead relying on existing methods developed to address earlier outbreaks of typhus. These measures focused largely on promoting cleanliness, including the removal of nuisances and the cleaning, whitewashing, and ventilation of dwellings. Thus, by the time cholera reappeared in Ireland in 1848, the approach of both central and local authorities had changed very little from the preceding decade. This stagnation would, therefore, have ominous consequences for a population already severely weakened by the effects of the famine.¹⁴⁶

¹⁴² Kinealy and MacAtasney, *The hidden famine*, pp. 85-6.

¹⁴³ Robins, *The miasma*, p. 130.

¹⁴⁴ *Ibid.*, p. 130; *F.J.*, 8 Oct. 1847.

¹⁴⁵ Robins, *The miasma*, p. 111.

¹⁴⁶ *Ibid.*, p. 113.

Contrasting Developments in England

In contrast, in England the recognition of the need for a more systematic centrally driven approach to sanitation and public health emerged more decisively in the aftermath of the 1832 cholera epidemic. It was largely directed by the efforts of one man, the celebrated public health reformer Edwin Chadwick. In 1840, shortly after Chadwick had initiated a national sanitary inquiry in 1839, a Select Committee investigating the health of towns in England emphasised the need for sanitary reform on grounds of both economy and humanity.¹⁴⁷ Taking account of the condition of some major British cities, as well as the Irish city of Dublin, it concluded that urgent action was required and that such measures were, ‘as necessary not less for the welfare of the poor than the safety of property and security of the rich.’¹⁴⁸

Following this, Chadwick became the principal figure associated with sanitary reform at parliamentary level. Although not a medical practitioner, his 1842 report on the Sanitary Condition of the Labouring Population of Great Britain demonstrated the extent of preventable illness and premature death in society, which he attributed to insanitary physical environments.¹⁴⁹ While Chadwick himself adhered to miasmatic theory, the acceptance of his conclusions, provided, as Robins has noted, ‘the rationale for the move

¹⁴⁷ *Report from the select committee on the health of towns; together with the minutes of evidence taken before them, and an appendix and index*, p. xv HC, 1840 (384), xi, 277. Hereafter, *Health of towns committee* (1840); See also. Michael W. Flinn (ed.), *Edwin Chadwick, Report on the sanitary condition of the labouring population of Great Britain* (Edinburgh University Press, Edinburgh, 1965), see also a further reprint with a new introduction by David Gladstone (Routledge/Thoemmes Press, London, 1997); James Hanley, ‘Edwin Chadwick and the poverty of statistics’ in *Journal of Medical History*, Vol. 46 (2002), p. 21.

¹⁴⁸ *Health of towns committee* (1840), p. xv. See also, Elizabeth Fee and Theodore M. Brown, ‘The Public Health Act of 1848’ in *Bulletin of the World Health Organisation*, Vol. 83(11) (2005), pp. 866-7.

¹⁴⁹ Chadwick, *Report on the sanitary condition of the labouring population of Great Britain*; Hanley, ‘Edwin Chadwick and the poverty of statistics,’ p. 21. Chadwick’s background was in Law. For more, see, George Davey Smith, Daniel Dorling and Mary Shaw (eds), *Poverty, inequality and health in Britain, 1800-2000: A Reader* (The Policy Press, University of Bristol, Bristol, 2001), p. 45. For more on the politics of public health and sanitary reform see: Christopher Hamlin, *Public health and social justice in the age of Chadwick: Britain, 1800-1854* (Cambridge University Press, Cambridge, 1998), pp. 245-74.

towards cleaner towns, better sanitation and purer water supplies,' and ultimately contributed to the passage of the Public Health Act (England) of 1848.¹⁵⁰ From the mid-nineteenth century onwards, the practical application of Chadwickian principles, despite their flawed scientific basis regarding the cause and dissemination of infection, were associated with a measurable decline in mortality rates, yet, despite this success, similar legislation was not extended to Ireland.¹⁵¹ The implications of an earlier introduction of centrally coordinated public health measures for the management of the post-Famine fever epidemic therefore remain a matter of historical speculation.

Fever and Institutional care in Belfast

Although outbreaks of fever, accompanied by influenza and the bacterial skin disease erysipelas, had occurred in Belfast during 1836 and 37 their impact was less severe than that of the typhus and relapsing fevers that became increasingly prevalent during the famine years. While much of Ulster was comparatively less affected by famine conditions, owing to its lesser dependence on the potato, Belfast was nonetheless deeply impacted by the crisis.¹⁵² The influx of destitute migrants from across the province in 1847, seeking work, shelter, and sustenance, transformed what had been an endemic presence of fever into a widespread epidemic.¹⁵³ Recalling these events in 1851, Andrew Malcolm wrote: 'We will remember the aspect of the hordes of poor who thronged into

¹⁵⁰ For more on Chadwick's miasmatic leanings see, Hamlin, *Cholera: The Biography*, pp. 158-9; Robins, *The miasma*, p. 207; 'Public Health (Eng.) Act' (1848) (11 and 12 Vict. c.63).

¹⁵¹ For more on social intervention and the decline of mortality rates in Britain see Simon Szreter, 'The importance of social intervention in Britain's mortality decline c.1850-1914: A reinterpretation of the role of public health' in *Social History of Medicine*, Vol. 1 (1998), pp. 1-37; Hamlin, *Public health and social justice*, pp. 99-103.

¹⁵² Brian Walker, *Dancing to history's tune: History myth and politics in Ireland* (Institute of Irish Studies, Queen's University of Belfast, 1996), p. 18.

¹⁵³ Kinealy and MacAtasney, *The hidden famine*, p. 58 and 81.

the town from all parts. Famine depicted in the look, in the hue, in the voice and gait. The food of a nation had been cut off.’¹⁵⁴

Even before the epidemic reached its height, however, Belfast’s medical institutions were already under severe strain. By October 1846, the General Hospital was beyond capacity and was compelled to refuse further admissions including patients requiring medical and surgical treatment.¹⁵⁵ Later that month, a deputation from the hospital committee was forced to call upon the guardians for assistance, urging that fever cases and convalescents be admitted into the Workhouse Fever Hospital.¹⁵⁶ Reacting quickly, after noting that, ‘the alarming increase in typhus fever renders it imperative on this board to prepare without delay for the approaching epidemic,’ the guardians asked the Poor Law Commissioners to sanction the appointment of a physician and apothecary to be employed for an initial period of six months to deal with the increase of patients.¹⁵⁷ By 3 November, Dr Seaton Reid had been appointed physician on a salary of £100 and within a week, surgeon Cunningham Mulholland was appointed as apothecary on a modest salary of £50 supplemented by furnished accommodation and rations equivalent to those of the Workhouse Master.¹⁵⁸ These appointments however, did little to stem the escalating levels of mortality, and as growing numbers of migrants continued to arrive in the town death became both visible and commonplace in Belfast’s streets.¹⁵⁹ In July 1847, the *Belfast Newsletter* reported that conveyances, ‘each laden with three to six coffins daily,’ could be observed travelling between the hospitals and the burying grounds.¹⁶⁰ Many of the afflicted, described as, ‘haggard, sallow and emaciated by fever’ were to be found

¹⁵⁴ Malcolm, *The history of the General Hospital Belfast*, p. 131.

¹⁵⁵ BBOG, 20 Oct. 1846; Kinealy and MacAtasney, *The hidden famine*, p. 83.

¹⁵⁶ BBOG, 20 Oct. 1846.

¹⁵⁷ *Ibid.*

¹⁵⁸ BBOG, 3 and 10 Nov. 1846.

¹⁵⁹ Kinealy and MacAtasney, *The hidden famine*, p. 92.

¹⁶⁰ *B.N.L.*, 20 July 1847.

destitute or lying in the streets, some lying where they had collapsed, ‘utterly helpless and unable to proceed farther than the spot where they have fallen down.’¹⁶¹

Conditions within Belfast’s workhouse reflected and intensified these wider pressures. It had already rapidly become filled beyond capacity. Initially designed to accommodate 1,000 inmates, it was quickly housing over 1100 in conditions that were woefully inadequate.¹⁶² As early as 22 December 1846, the state of the children’s accommodation had become particularly concerning with the master describing the nursery wards as unsuitable for the delicate health of the accommodated children. The floors, he observed, were constantly wet, and there was a notable lack of heating. It would be beneficial, he suggested, to board the floors or to move the children to a more suitable place.¹⁶³ As the fever epidemic worsened during January 1847, the fever hospital was forced to open on Saturdays in order to cope with the rising number of cases.¹⁶⁴ By the late spring, with the numbers of cases continuing to increase, a public meeting was convened to request that a board of health be formed in the town.¹⁶⁵ Duly sanctioned, the board immediately implemented a number of measures aimed at dealing with the issue of fever. These included the removal of small-pox, medical and surgical patients from the General Hospital in order to create more accommodation for fever patients.¹⁶⁶ In addition, the Union Infirmary was enlarged by almost 90 beds, temporary sheds were erected in the

¹⁶¹ Ibid.

¹⁶² Kinealy and MacAtasney, *The hidden famine*, p. 83.

¹⁶³ BBOG, 22 Dec. 1846.

¹⁶⁴ Ibid., 19 Jan. 1847.

¹⁶⁵ The meeting was held of 27 April and the board in place and active by 6 May, *B.N.L.*, 4 May 1847. Also see, Malcolm, *The History of the General Hospital Belfast*, p.130.

¹⁶⁶ Ibid., 11 May 1847. Medical and surgical patients were provided accommodation by the Committee of the Charitable Society in a section of the old Poorhouse. Small-pox and dysentery patients were treated in the Union Hospital. See Kinealy and MacAtasney, *The hidden famine*, p. 91.

grounds of the General Hospital and the former cholera buildings were brought back into use.¹⁶⁷

Amid these conditions, the nature and spread of typhus fever became progressively apparent, spread by body lice it had already been one of the most prolific killers of the poor in Belfast. In 1847, the situation became even more acute after *The Swatara*, an emigrant ship bound for America had put into Belfast due to unfavourable winds. Many of her passengers had contracted fever and were disembarked and taken to Belfast's General Hospital. Subsequently, the disease spread rapidly within the already overcrowded hospital as well as in Belfast's workhouse and in the residential areas of the poor.¹⁶⁸ As elsewhere, the marked increase in mortality caused by fever, and later by cholera, further strained an already overstretched and underfunded system of Irish poor relief. In addition to fever, the incidence of other illnesses, including diarrhoea and dysentery, rose sharply within Belfast's workhouse, prompting Dr Reid's request for the provision of additional infirmary space.

Reflecting his miasmatic assumptions, Reid attributed much of the problem to environmental conditions, observing that offensive smells and the close confinement of patients had rendered 'any attempt to supply the necessary comforts and proper medical treatment utterly fruitless.'¹⁶⁹ Overcrowding within the institution had become increasingly acute, and on 2 February 1847, he raised his concerns in a report to the guardians, noting that, 'the more crowded the sick are, the higher is the rate of mortality,'

¹⁶⁷ Malcolm, *The history of the General Hospital Belfast*, pp. 130-1. The *Belfast Newsletter* reported however, that there could not have been less than 1200 fever patients in the town's various institutions. See *B.N.L.*, 28 May 1847. In 1848 the capacity of the Union Hospital was increased to 600 beds.

¹⁶⁸ Malcolm, *The history of the General Hospital Belfast*, pp. 130-1

¹⁶⁹ Medical Attendant's report BBOG, 2 Feb. 1847. BG/7/A/5.

and that ‘in this infirmary there are 100 in a space that should not admit more than sixty.’¹⁷⁰

Mortality among the children in the workhouse had also risen dramatically and by March twenty-one deaths from a total of thirty-five in the workhouse, attributed to diarrhoea, dropsy and various forms of scrofula, had occurred among children under the age of five.¹⁷¹ Measles had also become epidemic, and Reid feared that it would add significantly to mortality rates.¹⁷² On 2 March 1847, when he reported that twenty-eight further cases of dysentery had occurred among the adult patients, Reid issued a stern warning to the guardians regarding any further admissions of people who were sick. ‘The board,’ he exclaimed, ‘should take into serious consideration the propensity of admitting so contagious and so fatal a disease into the workhouse when so many persons are crowded together.’¹⁷³

Despite these interventions, the epidemic continued to intensify. New facilities were made available with the opening of the College Hospital in Barrack Street, but the epidemic continued to escalate and by 29 May the number of fever cases in the town had reached 1,149.¹⁷⁴ In an attempt to relieve the strain placed on the town’s medical infrastructure, a special meeting in June saw the board of health request that the guardians give over a portion of the workhouse grounds for the erection of tents to accommodate convalescing fever patients.¹⁷⁵ The guardians agreed on the understanding that the Poor Law Commissioners would pay rent for the ground and that communication with inmates of the workhouse would be prevented. But while there were now four hospitals and a

¹⁷⁰ Ibid., 2 and 23 Feb. 1847.

¹⁷¹ BBOG, 2 Mar. 1847.

¹⁷² Ibid., 2 Mar. 1847.

¹⁷³ Medical Attendant’s report BBOG, 2 Mar. 1847.

¹⁷⁴ Malcolm, *The history of the General Hospital Belfast*, p. 131.

¹⁷⁵ BBOG, 3 June 1847.

convalescent establishment in operation in Belfast they all continued to struggle to accommodate the numbers of fever patients requiring treatment.¹⁷⁶ Towards the end of July, the *Newsletter* reported that; ‘The hospitals are crowded, and every new building erected for patients is filled to overflowing as soon as it is completed.’¹⁷⁷ Table 3.1 below, compiled from the patient numbers given in the same report, gives a good indication of the number of patients under treatment in Belfast hospitals during mid-July, by which time, just over 2,100 people had been admitted.¹⁷⁸

Table 3.1: Numbers of patients in Belfast’s Hospitals: Week Ending 17 July 1847

Institution	Numbers accommodated in Hospital
Town Hospital	535
Supplemental Hospital	83
College Hospital	313
Workhouse Hospital	513
Convalescent Establishment	674
TOTAL	2,118

Table compiled from figures published in the *Belfast Newsletter*, 20 July 1847.

Hospitals were not the only institutions that struggled to cope during the fever epidemic in Belfast. Civic authorities and philanthropic organisations also laboured, often with limited success to address the sanitary condition of the town while also attempting to alleviate the rising levels of morbidity and mortality. Although the board of health initiated measures such as street cleansing and the removal of manure heaps, significant areas of central Belfast remained largely untreated.¹⁷⁹ Highlighting these persistent deficiencies, the *Belfast Newsletter* drew attention to one unnamed street near a respectable quarter of the town, observing with alarm that; ‘After all the visitations that

¹⁷⁶ The Union Fever Hospital, the General Hospital (with the old cholera building also being used), the College Hospital in Barrack Street and the Supplementary Hospital in High Street.

¹⁷⁷ *B.N.L.*, 20 July 1847.

¹⁷⁸ *Ibid.*, Malcom observed that weekly admissions at this point had risen to 660. Malcom, *The history of the General Hospital Belfast*, p. 131.

¹⁷⁹ Reports regarding untreated streets are referred to constantly in the corporation minutes throughout the whole period 1847-50, particularly those of the Committee on Police Affairs.

have been made by the officials and others in the lanes and alleys of the town, there yet remain scenes to be described that surpass, in uncleanness and demoralization, anything hitherto narrated.¹⁸⁰

The condition of the town also did not escape wider comment. In a letter to the *Newsletter* an anonymous observer, while attributing Belfast's suffering in part to moral failings, also identified a range of material factors contributing to the poor health of the town. The conditions of mill employment, inadequate lodgings and diet among the poor, deficient sewerage provision as well as day and night asylums and soup kitchens were all cited as exacerbating the spread of fever, 'death,' the author remarked starkly, 'was in their pots.'¹⁸¹ A series of remedial measures were proposed including increasing food provision for the poor, the demolition of narrow streets and the employment of scavengers to cleanse and wash throughfares. Drawing attention to the inadequacy of burial provision, the observer further commented that, 'Belfast is like a charnel-house at this hour, and there is little hope of improvement until it shall appear and be like a Dutch town.'¹⁸² This comparison is striking, though somewhat misplaced, as sanitation in nineteenth-century Dutch towns was often little better than elsewhere in Europe. As Frank Geels has demonstrated, limited financial resources, inadequate understanding, administrative inertia, and general indifference all combined to impede meaningful sanitary reform in the Netherlands during the early nineteenth century.¹⁸³

¹⁸⁰ *B.N.L.*, 11 May 1847.

¹⁸¹ *Ibid.*, 23 July 1847.

¹⁸² *Ibid.* A Charnel-House is defined as: A building, room, or vault in which the bones or bodies of the dead are placed.

¹⁸³ Frank Geels, 'Co-evolution of technology and society: The transition in water supply and personal hygiene in the Netherlands (1850–1930): A case study in multi-level perspective' in *Technology in Society*, Vol. 27(3) (2005), pp. 363-97. See also Johan P Mackenbach, 'Sanitation: Pragmatism works' in *British Medical Journal*, Vol. 334 (Supplement 1: s17) (2007).

The Issue of Interment

As fever continued to escalate during the summer months and with Belfast's various institutions operating beyond capacity, dealing with the dead became another pressing challenge for the town's civic authorities. With recorded deaths averaging from sixty to over ninety per week, between July and August 1847, as Table 3.2 below indicates, space was rapidly running out in town's burying grounds and bodies were arriving faster than the gravediggers could inter them.¹⁸⁴ At the workhouse, the guardians were also unable to cope with the rising numbers of the dead and resorted to interring corpses in communal plots.¹⁸⁵ The closure of the burial ground to the poor at the Charitable Society's new graveyard was also postponed and proposals put forward by the board of health and endorsed by some of the town's most eminent medical practitioners sanctioned the reopening of cholera graves of victims from the 1832 epidemic for the interment of the poor.¹⁸⁶ At the Catholic graveyard, Friar's Bush, pits capable of holding up to forty coffins were dug, but space for burials continued to be scarce and as Table 3.3 below demonstrates, mortality from fever and other infectious diseases during 1847 resulted in over 1,000 burials at the society's graveyard alone.

The severity of the crisis was underscored at a public meeting held on 12 July 1847, where the Charitable Society reported that it had secured ten additional plots of ground, sufficient for no more than a further fortnight.¹⁸⁷ At a subsequent meeting on 23 August, a request made to the Poor Law Commissioners to allow victims other than workhouse inmates to be buried in the Union Graveyard was discussed. In support of this request, the

¹⁸⁴ 'Fever and cholera in Belfast,' <http://www.culturenorthernireland.org/article/741/fever-and-cholera-in-Belfast> (25/5/2012).

¹⁸⁵ Kinealy and MacAtasney, *The hidden famine*, p. 95.

¹⁸⁶ Strain, *Belfast and its Charitable Society*, p. 265.

¹⁸⁷ *B.N.L.*, 16 July 1847.

Catholic bishop, Dr Cornelius Denvir, produced correspondence between the board of health, the Belfast guardians, the Poor Law Commissioners, and Dublin Castle. Despite these efforts, and notwithstanding Denvir's assertion that every possible exertion had been made, the commissioners refused to grant approval, even though the Union ground remained the only site with available space.¹⁸⁸ A letter issued from Dublin Castle on 31 July, had already the government's position clear and issued on a stark warning to anyone who might attempt to take matters into their own hands declaring that, 'any persons burying the corpses of their deceased friends in the workhouse would be prosecuted.'¹⁸⁹ The issue was partially alleviated in 1848 with the extension of the Shankill graveyard.¹⁹⁰ However, the ensuing cholera epidemic would once again expose the persistent inadequacy of burial provision in Belfast, albeit not to the same extreme extent.

Table 3.2: Hospital Deaths in Belfast July/August 1847¹⁹¹

Institution	Deaths Week Ending	24 July	31 July	9 Aug	14 Aug
	16 July				
Frederick Street Hospital	22	25	28	22	33
College Hospital (Barrack Street)	27	23	24	17	23
Supplemental Hospital (High Street) Dysentery and Small- pox Deaths	14	17	7	6	7
Union Hospital	18	9	14	7	8
Camp (<i>Convalescent</i>) Establishment	3	5	5	9	24
TOTAL	84	79	78	61	95

Compiled from Belfast Board of Guardians minutes July/Aug. 1847 and *Belfast Newsletter* reports, July/Aug. 1847

¹⁸⁸ *B.N.L.*, 24 Aug. 1847.

¹⁸⁹ *Ibid.*

¹⁹⁰ Kinealy and MacAtasney, *The hidden famine*, p. 99.

¹⁹¹ Table compiled from BBOG, July/Aug. 1847, PRONI, BG/7/A/6 and *B.N.L.*, July/Aug. 1847.

Table 3.3: Burials of Infectious Cases in the New Burying Ground in 1847¹⁹²

Fever	812
Dysentery	131
Smallpox	42
Sent from various hospitals without any diagnosis	64
Total	1,049

Reproduced from Strain, 'Belfast and its Charitable Society,' p. 271

Philanthropic Relief

As Belfast's civic authorities struggled to respond effectively, local philanthropy assumed an increasingly important role, particularly in light of the guardians' continued resistance to implementing the provisions of the 'Temporary Relief Act,' which permitted the distribution of gratuitous rations across Ireland's 130 unions.¹⁹³ The implementation of the measure was voluntary however, and Belfast was one of three unions which refused to establish government soup kitchens claiming that the scheme would impose unnecessary expense because it was to be funded by local rates.¹⁹⁴ When the 'Poor Relief Extension Act' came into force in August 1847, it brought to an end all special famine relief schemes and placed full responsibility for relief on the guardians of individual unions.¹⁹⁵ Although the act permitted the provision of outdoor relief the Belfast, guardians, opposed in principle, and concerned about the associated costs, refused to provide outdoor aid. With demand for entry to the workhouse remaining high, they instead resolved to refuse admittance to all but the old and infirm while at the same time seeking to enlarge their existing accommodation.¹⁹⁶ By December 1848, at which point

¹⁹² Strain, 'Belfast and its Charitable Society,' p. 271.

¹⁹³ More commonly known as the 'Soup Kitchen Act' (1847) (10 and 11 Vict., c. 7), Burke, *The people and the Poor Law*, p. 130.

¹⁹⁴ The other two unions (also in Ulster) were Antrim and Newtownards. See, Kinealy and MacAtasney, *The hidden famine*, p. 110; Robins, *The miasma*, p. 128.

¹⁹⁵ 'Poor Relief Extension (Ireland) Act' (1847) (10 and 11 Vict., c.31).

¹⁹⁶ *B.N.L.*, 29 June 1847. Extra accommodation was provided when the guardians leased the Day Asylum and acquired the College Hospital in Barrack Street later the old House of Correction was rented as an auxiliary workhouse and plans were made to extend the existing workhouse to accommodate up to 1,000

cholera had already appeared within the workhouse, a report recorded in the minutes of the guardians noted that the institution had the capacity to accommodate approximately 3,320 inmates.¹⁹⁷

In addition to official relief schemes, a number of charitable groups were set up in Ireland from 1846 in order to provide additional philanthropic relief to the destitute. Owing largely to a lack of subscriptions, many of these societies were short lived and able to only offer temporary assistance. Nevertheless, they played a vital role in bringing relief not only to Belfast but throughout the country.¹⁹⁸ In Belfast philanthropic relief was chiefly provided in the form of food distributed from private soup kitchens supported by one of the town's most successful, though short-lived organisations, the Belfast General Relief Fund. Founded in January 1847, with the goal of providing aid on a national scale, the relief fund only survived until early May, by which time it had contributed to relief efforts in almost every county in Ireland.

Although government supported soup kitchens successfully provided food for over three million people during the height of their operation in July 1847, the scheme, as noted above, was not implemented in Belfast.¹⁹⁹ In their absence, private soup kitchens in the town provided necessary and invaluable relief providing soup and bread for up to 15,000 people within a few weeks of their establishment.²⁰⁰ While such measures were arguably instrumental in reducing mortality rates from starvation, they also had unintended

children. BBOG, 15 Dec. 1847; 16 Feb., 26 Apr. and 28 June 1848. See also, Kinealy and MacAtasney, *The hidden famine*, p. 111.

¹⁹⁷ The first case was confirmed in the workhouse on 4 Dec. 1848 see BBOG (25 Nov. 1848-15 Sept. 1849), PRONI BG/7/A/8. See in particular BBOG, 9 Dec. 1848.

¹⁹⁸ Kinealy and MacAtasney, *The hidden famine*, p. 114. For more on philanthropic relief in Belfast see also, Wright, *The 'Natural Leaders,'* Ch. 5, and for a wider overview see R. J. Morris, 'Voluntary societies and British urban elites, 1780-1850: An analysis' in *The Historical Journal*, Vol. 26(1) (1983), pp. 95-118.

¹⁹⁹ Robins, *The miasma*, p. 128.

²⁰⁰ Farrell, *The Poor Law and the workhouse in Belfast*, p. 65.

consequences, as the congregation of large numbers of people in confined spaces likely contributed to the spread of fever among those already vulnerable to contagion.²⁰¹

Soup and bread was however, not the only form of private relief, and other organisations in Belfast, particularly those run by women, supplied additional aid by providing clothing and by encouraging women to undertake paid work in order to inspire a sense of benefiting from industrial endeavour and self-helpfulness.²⁰² Evangelisation was also closely linked to many of Belfast's philanthropic associations. Some Protestant leaders, for example, saw the famine as a judgement from God on a false religion, and as an opportunity to convert Catholics to Protestantism.²⁰³ Rather than generating gratitude for the assistance provided, such efforts at proselytisation ultimately contributed to the deepening legacy of sectarian division in Belfast.²⁰⁴ In contrast to these more contentious forms of intervention, some philanthropic initiatives sought to address the material conditions underpinning disease more directly. One such organisation attempted to provide relief by tackling the problem of poor hygiene among the town's population. After October 1845, the Belfast Society for the Amelioration of the Condition of the Poor, driven by the efforts of Dr Andrew Malcolm, and informed by his belief in the connection between filth and disease, endeavoured to establish a public bath and washhouse in the town.²⁰⁵

²⁰¹ Ó'Gráda, *Black '47 and beyond*, p. 73; Robins, *The miasma*, pp. 128-9.

²⁰² This approach to relief was a cornerstone of the philosophy of the Belfast Ladies Association for the Relief of Irish Destitution. For a detailed account of women and philanthropy in Belfast, see, Kinealy and MacAtasney, *The hidden famine*, pp. 120-4.

²⁰³ For more on this see, Miriam Moffitt, *Soups and jumpers: The Protestant missions in Connemara 1848-1937* (The History Press, Dublin, 2008).

²⁰⁴ Kinealy and MacAtasney, *The hidden famine*, pp. 124-38.

²⁰⁵ H. G. Calwell, *Andrew Malcolm of Belfast 1818-1856: Physician and historian* (Cox and Dunn, Belfast, 1977), p. 79.

Baths and Washhouses

In 1845, Andrew Mulholland was elected as the new mayor for Belfast and made it clear that he wished to see a marked improvement in the condition of the poor. Mulholland's stated objective was, 'generally to promote their health and cleanliness and to give them better habits and higher tastes.'²⁰⁶ In order to achieve his ambitions, Mulholland advanced a number of proposals, including the creation of public parks, the provision of fountains with a constant supply of pure water, and the establishment of public baths connected with washhouses. It was not, however, the corporation that ultimately secured the introduction of such facilities in the town. Instead, this initiative was taken forward by a philanthropic body with a particular interest in the relationship between health and hygiene. From its inception on 13 February 1845, The Belfast Society for the Amelioration of the Condition of the Poor identified the provision of baths and washhouses as the most practical and beneficial project it could pursue.²⁰⁷ Nevertheless, it was not until after the appointment of Andrew Malcolm as secretary on 1 October 1845 that the society began to make sustained efforts to raise funds and find a suitable site.²⁰⁸

In Britain, as Sally Sheard has observed, the erection of baths and washhouses was aided by the 'Public Baths and Washhouses Acts' (1846 and 1847) which allowed parishes and town councils to build public facilities by meeting the construction cost out of the Poor Rate.²⁰⁹ In Belfast, it initially appeared that the town's administrators would follow a similar model to that adopted in Britain. At the quarterly meeting of the corporation in April 1845, it was noted that, under a clause in the 1845 Town Improvement Bill the

²⁰⁶ Council Minutes, 1 Jan. 1845, PRONI LA/7/2/EA/1. See also *B.N.L.*, 3 Jan. 1845.

²⁰⁷ Calwell, *Andrew Malcolm of Belfast*, p. 79.

²⁰⁸ *Ibid.* Malcolm was appointed at a salary of £50 per year.

²⁰⁹ (9 and 10 Vict., c.74) (1846) and (10 and 11 Vict., c.61) (1847); Sally Sheard, 'Profit is a dirty word: The development of public baths and washhouses in Britain 1847-1915' in *Social History of Medicine*, Vol. 13(1) (2000), pp. 63-86. See in particular, p. 67.

corporation had applied to parliament for ‘powers to erect baths and washhouses and to conduct them under their own superintendence.’²¹⁰ The sub-committee appointed by the amelioration society expressed strong support for the measure stating that they considered that their goals would be: ‘Much better accomplished by the Town Council from their ability to collect the requisite funds by a compulsory assessment, as well as their power to enforce a more effective management.’²¹¹

There was, however, widespread objection to the idea of providing a corporation run facility. Samuel Thompson, town councillor of Dock Ward, for example, argued that the bill was being encumbered by the inclusion of extra clauses, and further emphasised his opposition, by stating that, in his opinion, ‘the corporation might as well insert a clause to enable the corporation to rent dairies in order to see that the poor of the town got pure milk.’²¹² Additional objections focused on the issue of local taxation in the town and the perceived duplication of effort, particularly given that subscriptions had already been received by the Amelioration Society. George Dunbar, alderman for Cromac Ward questioned the efficacy of two bodies acting pursuing the same objective, asking, ‘if the people would voluntarily erect these baths and washhouses, would it not be better for the corporation to let them do so, than incur the odium of adding a large amount of taxation to the town.’²¹³

Despite these objections, the Amelioration Society launched a subscription in order to secure funding for a suitable site for a washhouse, with the intention that the corporation

²¹⁰ Section 428 of the Belfast Town Improvement Bill 1845. See also: *B.N.L.*, 4 Apr. 1845. Interestingly this is a point which both Sheard and Andrew Malcolm’s biographer H.G Calwell fail to mention. See, Calwell, *Andrew Malcolm of Belfast*, pp. 79-91. Sheard however, points to similarities between Belfast and Liverpool where philanthropic institutions running the washhouses found it necessary to appeal to their respective corporations for assistance, whereas, in Glasgow, washhouse provision came much later and was driven the city’s municipal authorities from the outset. See, Sheard, ‘Profit is a dirty word’ pp. 63-86.

²¹¹ *B.N.L.*, 4 Apr. 1845.

²¹² *Ibid.*

²¹³ *B.N.L.*, 4 Apr. 1845.

would assume responsibility for its long-term operation once completed.²¹⁴ A site on Townsend Street was chosen and the cost of construction and fitting was agreed at £3,044. By 1846, the funds of the society stood at just £1,200 and by April had only marginally increased to £1,377.²¹⁵ Faced with this shortfall, Malcolm made an impassioned appeal, in an effort to encourage more donations, arguing that:

Do we not know the indissoluble connexion between filth and disease...Are we not alive to the fact that we are literally surrounded by pestilential poison...Let us then aid each other in the good work of sanitary reform.²¹⁶

The establishment opened in May 1847, although, owing the lack of public subscription, it was on a smaller scale from that originally envisaged by Malcolm.²¹⁷ Providing thirteen baths and sixty-eight washing stalls, during its first nine days 1,328 people took baths and 222 people washed clothes. Malcolm described it as a ‘triumphant success.’²¹⁸ However, it quickly became clear that the society could not make the new facility financially independent, and after the first year found it necessary to borrow £1,500 from the Belfast Bank.²¹⁹ The loan had little impact, however, a possible solution emerged under the terms of the ‘Baths and Washhouses Act’ (1846) which gave powers to local councils to purchase private establishments that had failed to meet the demands of the public.²²⁰ In 1848, as fears of the arrival of cholera began to take hold, Malcolm, acting as secretary and treasurer of the Belfast Sanitary Committee, secretary of the Amelioration Society and in his role as the Officer of Health to the corporation, appealed to the corporation to

²¹⁴ Sheard, ‘Profit is a dirty word,’ p. 72.

²¹⁵ Calwell, *Andrew Malcolm of Belfast*, pp. 82-3. Townsend Street (hence the name) had formerly marked the outer boundary of Belfast.

²¹⁶ Malcolm quoted in Calwell, *Andrew Malcolm of Belfast*, p. 85.

²¹⁷ The original plans were to provide twenty-one baths (thirteen for men and eight for women) with some extra superior baths upstairs and sixty washing stalls.

²¹⁸ Calwell, *Andrew Malcolm of Belfast*, p. 83. A Report from the society on 27 Aug. 1847 noted that since its opening 9,000 people had taken baths and a further 11,000 had washed clothes. See, *B.N.L.*, 31 Aug. 1847.

²¹⁹ Calwell, *Andrew Malcolm of Belfast*, p. 83; Johnson, *Middle class culture and civic identity*, p. 205.

²²⁰ (9 and 10 Vict., c.74) (1846).

take over the running of the establishment.²²¹ A protracted debate followed, during which the committee of police observed that the representations made to the corporation by a deputation from the sanitary committee underscored the importance of ‘providing for the poor in the event of cholera reaching Belfast by the means of securing cleanliness in their clothing.’²²² Initially, it was recommended that the corporation take, ‘at a reasonable rate for the term of one year’ the part of the baths exclusively appropriated for washing the clothes of the poor and that arrangements be made to permit the destitute to use the facility free of charge for this purpose.²²³ The corporation, however, raised objections on the grounds of the anticipated annual expenditure required for maintenance, as well as the ‘inconvenient locality.’²²⁴ The proposal was ultimately rejected on 19 December 1848, following an inspection of the building, its facilities, and associated running costs. The corporation stated bluntly that it could not assume responsibility, judging that the premises were ‘not as such as the corporation should provide in the event of their considering it desirable to establish washhouses for the destitute poor.’²²⁵ Therefore, it was not until 1879, with the opening of an establishment at Peter's Hill, that the corporation finally provided public washing facilities in Belfast.²²⁶

Conclusion

This chapter has shown that while there were some advances in the development of public health provision in Belfast during the 1840s, the town's local authorities continued to struggle to respond effectively when confronted with sanitary and epidemiological crises,

²²¹ As part of the Baths and Washhouses Committee Malcolm was accompanied by Dr Seaton Reid, John Mulholland and John Charters. Report of the Committee on Police Affairs in, Council Minutes, 1 Jan. 1849.

²²² Council Minutes, 27 Oct. 1848.

²²³ *Ibid.*

²²⁴ Council Minutes, 1 Oct. 1848.

²²⁵ *Ibid.*, 19 Dec. 1848 and 1 Jan. 1849. By this time, the establishment had amassed a debt of over £2,700. See also Minute Book of the Police Committee, 13 June 1848-26 Jan. 1853 PRONI LA7/10/AB/1/3.

²²⁶ Sheard, ‘Profit is a dirty word’, p. 80.

particularly in the management of epidemic disease. This was attributable to a range of factors: the influx of impoverished migrants into the town, for example, and the resulting overcrowding and accumulation of filth placed considerable pressure on the Belfast Corporation and existing relief structures.

The implementation of the Town Improvement Acts in the 1840s demonstrate that the corporation was, as other historians have argued, considerably more advanced than some of its contemporaries.²²⁷ However, it is suggested here that this progress was largely confined to the sphere of the civic improvement. While new works undertaken under the Acts may have incorporated an awareness of sanitary considerations in Belfast's principal thoroughfares, a development noted approvingly by the public health campaigner Andrew Malcolm, in terms of broader public health provision, the corporation remained markedly ineffective.²²⁸ In particular, it failed to address the most acute sanitary deficiencies in the town's poorest districts, where intervention was most urgently required. Reflecting on these shortcomings in 1852, Malcolm argued that the corporation had been more concerned with the improvement of the 'larger and finer streets' of the town than with conditions in its most deprived areas where they were most required.²²⁹ Nonetheless, the corporation's sanitary failures cannot, as Alice Johnston has argued, be attributed solely to its own actions, and in its defence it must be acknowledged that its capacity to intervene was frequently constrained by Liberal opposition, financial limitations, and bureaucratic infighting.²³⁰

These structural and institutional constraints are further reflected in the wider relief framework operating in the town during this period. While the establishment of the Poor

²²⁷ Budge and O'Leary, *Approach to crisis*, p. 56; Maguire, *Belfast*, p. 47.

²²⁸ Malcolm, *The sanitary state of Belfast*, p. 16.

²²⁹ *Ibid.*, p. 21.

²³⁰ Johnson, *Middle class culture and civic identity*, p. 220.

Law can also be seen as an embryonic public health exercise, it too largely failed to provide adequate relief. In Belfast, as elsewhere in Ireland, workhouses were designed and constructed with insufficient accommodation for the thousands of destitute people who flocked to their doors during the 1840s. With considerable foresight, however, Belfast's guardians did provide accommodation for the sick within their institution, setting an important precedent for subsequent changes in the provision of medical care for the poor during this period and beyond. Had this not been the case, mortality rates from fever and other illnesses would undoubtedly have been significantly higher. Similarly, private philanthropy can also be said to have made a vital contribution in this period. Not only did philanthropic societies supply essential clothing and food they also helped to stimulate broader concerns with public hygiene. However, due to limited public and private support, the majority of these initiatives were short-lived and unable to provide sustained relief. As Belfast's sanitary problems persisted, fever was rapidly followed by cholera, contributing further to the elevated mortality experienced during the famine years.

Chapter Four

Belfast and the cholera epidemic of 1848/49

Introduction

A dreadful calamity is impending and that we have every reason to expect it among us at no distant period. 'If we remain with our arms folded, it will embrace us with a deadly grasp.'¹

This warning to Belfast's townspeople was issued by Dr Andrew Malcolm at the end of 1847 and while the beginning of the cholera epidemic was almost a year away Malcolm's concern shows that, for some at least, there was a heightened sense of anxiety in the town regarding the correlation between filth and the spread of disease. Ultimately, cholera, which Malcolm observed, 'is always most virulent where sanitary measures are most neglected,' would, as it did everywhere during 1848/49, exact a more devastating death toll than it had during 1832.² As historians of this epidemic have argued, this was largely attributable to the absence of adequate sanitary measures, poor standards of public hygiene, and a limited understanding of the relationship between contaminated water and the transmission of cholera.³ While these deficiencies also contributed to Ireland's comparatively high mortality rates, the impact of the disease was further intensified by its arrival among a population already weakened by starvation and recurrent outbreaks of

¹ *Belfast Peoples Magazine*, Vol. 1(12) (1847), p. 280; *N.W.*, 25 Dec. 1847; Calwell, *Andrew Malcolm of Belfast*, p. 103.

² *Ibid.* For Malcolm's maps of overcrowded localities in Belfast and of cholera locations in 1832 and 1849, see, Appendix 3 of this thesis.

³ This is a common stance connected to all cholera histories of this period. For Ireland, the main authority is Robins, *The miasma*, Ch. 5. Kinealy, and McAtasney, have also examined cholera in Belfast in 1848/49 but not in depth and with no analysis of morbidity and mortality statistics, see, *The hidden famine*, pp. 168-71. For more on cholera in England in this period see, McLean, *Public health and politics in the age of reform*; Mary Wilson Carpenter, *Health, medicine and society in Victorian Britain* (Greenwood Publishing, California, 2010); Michelle Allen, *Cleansing the city: Sanitary geographies in Victorian London* (Ohio University Press, Ohio, 2008) and Gilbert, *Cholera and nation*. For statistical information, see, Creighton, *History of Epidemics* and Underwood, 'The history of cholera in Great Britain.'

fever. Belfast, like many towns of similar size, experienced significantly higher mortality from cholera than it had in 1832. However, despite continuing sanitary challenges associated with rapid expansion and industrialisation, mortality rates in the town remained notably lower when compared with many other Irish towns and cities.⁴

The following chapter will examine the preparations for and the impact of the 1848/49 cholera epidemic in Belfast an area of research hitherto neglected by historians.⁵ It will begin by assessing the impact of the amended Poor Law and the repatriation of paupers in relation to the introduction of cholera into Ireland. From there it will consider the preparatory measures undertaken by Belfast's municipal authorities prior to the outbreak. The remainder of the chapter will concentrate on the course and impact of the epidemic and will assess the effectiveness of the measures put in place to combat cholera in mid-nineteenth-century Belfast. Drawing upon morbidity and mortality statistics for cholera, which have not previously been used in this comparative manner, this section will situate Belfast alongside other towns and cities in Britain and Ireland. It will argue that, while embryonic and hampered by significant difficulties of implementation, the response of key stakeholders to cholera in Belfast during 1848/49 helped to prevent a considerably more devastating death toll in the town.

⁴ Cholera mortality including comparisons to other British and Irish towns and cities will be discussed in depth below.

⁵ Though the study of public health in Belfast is a recently emerging subject among social historians, to date none have undertaken a comprehensive study based on the impact of cholera or indeed the fever epidemics of the nineteenth century. To date only Kinealy, and McAtasney, *The hidden famine*, pp.168-71, have examined cholera in Belfast but not in depth. Chapter Four of Johnson's, *Middle class culture and civic identity*, also briefly examines the link between sanitation and fever. In terms of Belfast's public health history, it is notable that staff at Queen's University Belfast, headed by Professor Peter Gray have recently begun research on an AHRC-funded project entitled 'Welfare and public health in Belfast and its region, 1800-1973.' For more information see <http://www.belfastpovhist.com>. Aspects of public health development are also to be found in, among others: Bew, *The glory of being Britons*; Budge and O'Leary, *Approach to crisis*; Connolly (ed.), *Belfast 400*; Griffin, *The Bulkies*; Jordan, *Who cared?*; Purdue (ed.), *Belfast: The emerging city*; Royle, 'Clanging Belfast'; Wright, *The 'Natural Leaders*.'

Repatriation of Paupers

As has been demonstrated in the previous chapter, amendments were made to the existing Poor Law in August 1847 which had significant repercussions in Belfast both during and after the end of the fever epidemic in 1848.⁶ The new measures ensured that responsibility for all relief provision in Belfast was placed firmly in the hands of its Poor Law Guardians, resulting in the dissolution of the town's board of health on 30 November 1847.⁷ With cholera spreading rapidly in Europe, this move raised concerns among sanitary reformers, and Dr Andrew Malcolm, writing in the *People's Magazine* and the *Northern Whig*, argued that the disbandment of the board was a huge misjudgement, particularly as cholera was spreading towards Europe by five different routes and urged that a permanent sanitary authority quickly be established.⁸

Adding to the concerns in Belfast regarding the spread of diseases including cholera, was the controversial Laws of Settlement which permitted the repatriation of Irish paupers from English and Scottish Poor Law Unions. Similar anxiety had been expressed in 1832 when it had been observed that quarantine measures at ports in Scotland and Ireland had been avoided, enabling the return of paupers from cholera affected areas in Britain to Belfast and other nearby ports.⁹ Although Hugh Calwell has argued that how or where the epidemic began in Belfast is of little importance now, it is nevertheless highly probable that repatriation played a direct role in the reintroduction of cholera into the town during 1848.¹⁰

⁶ 'Poor Relief Extension (Ireland) Act' (1847) (10 and 11 Vict., c.31).

⁷ *B.N.L.*, 19 Nov. 1847.

⁸ *Belfast People's Magazine*, p. 280; *N.W.*, 25 Dec. 1847; Calwell, *Andrew Malcolm of Belfast*, p. 103.

⁹ See Chapter Two of this thesis, pp. 70-1.

¹⁰ Calwell, *Andrew Malcolm of Belfast*, p. 107.

It has been widely documented that during the late 1840s and beyond, Irish emigration presented significant problems for the authorities of countries where migrants relocated.¹¹ Over the course of eleven years during and after the Famine, more than two million people left Ireland, with emigration accounting for a greater proportion of population loss than mortality from disease and other causes combined.¹² For many, the United States of America was the preferred destination; however, substantial numbers, unable to afford transatlantic passage, instead made their way to the ports of industrial towns in Britain and Scotland. Throughout Britain, the Irish were seen as a considerable social and sanitary problem for local authorities.¹³ Many settled in overcrowded urban slums and were widely perceived as carriers of epidemic disease. Concerns were not without merit and some of the most severe epidemics in Britain, as Robins has argued, had Irish origins.¹⁴ In Scotland for example, an 1848 report by John Charles Steele, Surgeon Superintendent of the Royal Infirmary Glasgow in the *Edinburgh Medical Journal*, reported that in 1847 the number of Irish patients treated for fever exceeded that of any previous period and significantly outnumbered Scottish admissions.¹⁵ Similarly, in Liverpool, where approximately 8,400 people died from fever and diarrhoea in 1847, the substantial influx of Irish migrants was widely held responsible for introducing typhus and contributing to the deaths of local residents, officials, and relief workers.¹⁶

¹¹ For histories of Irish emigration see in particular; David Fitzpatrick, *Irish emigration 1801-1921* (3rd edition, Economic and Social History Society of Ireland, Dundalk, 1990); Arthur Gribben (ed.), *The great famine and the Irish diaspora in America* (University of Massachusetts Press, Massachusetts, 1999); MacRaid, *The Irish diaspora in Britain*; Idem., *The great famine and beyond*; Miller, *Emigrants and exiles*; Swift (ed.), *Irish migrants in Britain*; Swift and Gilley (eds), *The Irish in Britain*.

¹² Bardon, *A history of Ulster*, p. 308.

¹³ Kinealy and MacAtasney, *The hidden famine*, p. 142. For more see, Miller, *Emigrants and exiles*; Robins, *The miasma*, pp. 150-91 and p. 193.

¹⁴ Robins, *The miasma*, p. 193-202.

¹⁵ Admissions to the infirmary in 1847 were 3,106 Irish and 2,094 Scottish see John Charles Steele, 'View of the sickness and mortality in the Royal Infirmary of Glasgow during the year 1847' in *Edinburgh Medical Journal*, Vol. 70 (1848), p. 169.

¹⁶ Robins, *The miasma*, p. 194 and 196.

Unable to deal with the burden, English and Scottish authorities, aided by changes in the English Settlement Laws in 1846 and '47, which made removal of paupers easier, quickly began to repatriate Irish paupers in large numbers to the port most convenient to Britain where responsibility for their relief fell upon the local authority, in most cases it was Belfast.¹⁷ In the absence of a comparable law of removal in Ireland, the Belfast guardians were consequently obliged to provide relief to significant numbers of people who had never been residents of the town. The issue became a major source of contention for the guardians, and in December 1848 they complained to the Lord Lieutenant that the numbers of paupers arriving at the workhouse had increased to such a degree as to be oppressive. With some foresight they also warned that they will probably be 'the means of introducing disease into the neighbourhood.'¹⁸

Municipal Preparations: The Belfast Sanitary Committee

Faced with the intensifying fear surrounding the possibility of the arrival of cholera in Belfast during 1848, Andrew Malcolm rose to the fore in an attempt to persuade the municipal authority to reform its sanitary procedures. At a town meeting on 2 March, Malcolm presented a scathing report on the sanitary condition of the town and few who attended, as the *Newsletter* reported, were prepared for the details which it contained.¹⁹ Beyond highlighting Belfast's sanitary condition, he also drew attention to previous outbreaks of cholera and fever, arguing that both could be attributed to persistent deficiencies in drainage, cleanliness, ventilation and the provision of adequate housing.

¹⁷ The change in the laws meant that famine emigrants had no right to poor relief, 'Poor removal Act' (1846 and 47) (9 and 10 Vict., c.66); (10 and 11 Vict., c.90). See also, Robins, *The miasma*, p. 197; Kinealy and MacAtasney, *The hidden famine*, p. 145.

¹⁸ BBOG, 8 Dec. 1848. The guardian's debates with the Poor Law Commissioners regarding removal will be discussed below.

¹⁹ *B.N.L.*, 3 Mar. 1848. The report was an initial draft of Malcolm's, *The Sanitary state of Belfast*.

In response to these conditions Malcolm put forward a series of proposals, most notably the appointment of a committee drawn from the town's inhabitants to oversee and put his proposals into practice.²⁰ A subscription fund was initiated and shortly afterwards an elected body, 'The Belfast Sanitary Committee' came into being.²¹ Appointed as its secretary Malcolm, worked alongside other prominent members of the local community including the Protestant and Catholic bishops, and members of the town's medical profession such as Dr Henry MacCormac and Dr Samuel Browne. Although initially conceived as a response to the threat of cholera, and ultimately short-lived, being dissolved soon after the epidemic subsided, the committee played a crucial role.²² Its interventions and recommendations were instrumental in ensuring that mortality from cholera in Belfast during 1848/49 as Table 4.4 below demonstrates, remained comparatively lower than in most other large Irish towns.²³

Immediately setting to work the sanitary committee established a sub-committee to inspect the town's six medical districts.²⁴ Weekly returns regarding the occurrence of infectious disease were requested from the town's dispensary doctors and the committee also proposed to publish reports on local sanitary conditions throughout the borough. In July 1848, it issued a general notice emphasising the importance of cleanliness and ventilation, and from September began to conduct district meetings aimed at advocating the cause of sanitary reform.²⁵ These meetings were open to all classes, particularly the

²⁰ Ibid., 3 Mar. 1848.

²¹ Ibid., Malcolm, *The sanitary state of Belfast*, p. 17; Samuel Browne, 'On the progress of sanitary inquiry in Belfast' in *Transactions of the National Association for the Promotion of Social Science* (Longmans, Green, Reader and Dyer, London, 1868), p. 478. Browne noted that 'this was the rise of sanitary reform in this town.'

²² Malcolm 'The sanitary state of Belfast,' p. 17; Calwell, *Andrew Malcolm of Belfast*, p. 105. In 1868 Browne stated that it had 'died of apathetic neglect.' See, Browne, 'On the progress of sanitary inquiry,' p. 479.

²³ See, Table 4.4 below. As is the case with every cholera epidemic exact rate of morbidity and mortality are unknown due to inconsistencies within the recording and reporting of cholera statistics. This will be discussed in more detail below.

²⁴ Hospital, Dock, Smithfield, Shankill, Cromac, and College.

²⁵ *B.N.L.*, 29 Sept. 1848.

poor, although it remains unclear whether they attended in significant numbers, at one meeting in the College district, Dr Browne stressed that the ‘working classes were the most deeply interested in the promotion of sanitary reform.’²⁶

Alongside these measures, the committee also sought to revive and utilise existing legislative mechanisms. Another notable initiative was the revival of the ‘Contagious Diseases Act’ (1819) which had been in abeyance since 1822.²⁷ Under this legislation Officers of Health for the Parish could be appointed with the limited finances of the Parish-Rate placed at their disposal.²⁸ In practice however, their powers were extremely limited and were restricted to cleansing open ditches or drains, removing accumulations of manure, and to the prevention of vagrancy. In short, as Malcolm noted, they could ‘only touch the surface of sanitary evils’ in the town.²⁹

Recognising these limitations, the committee supplemented statutory action with more direct forms of local intervention. In October, the appointment of health visitors, a practice which echoed preparatory approaches employed during the 1832 epidemic was reintroduced. Between eight and thirteen ‘constables’ were assigned to Belfast’s municipal districts to facilitate the implementation of preventative measures and to promote better hygienic practices. Overseen by Medical Officer for Health, Dr Samuel Browne, none of the appointed constables were medical professionals, but instead, were comprised of a number of ‘ordinary, untrained, public-minded citizens’ they nonetheless, proved to be an effective addition to the fight against cholera particularly in overseeing most of the house cleansing operations enforced both before and during the epidemic.³⁰

²⁶ Ibid.

²⁷ An Act to Establish Regulations for Preventing Contagious Diseases in Ireland (1819) (59 Geo. III c.41); Malcolm, *The sanitary state of Belfast*, p. 16.

²⁸ Ibid.

²⁹ Malcolm, *The sanitary state of Belfast*, p. 16.

³⁰ Browne, ‘On the progress of sanitary inquiry,’ p. 478. Calwell, *Andrew Malcolm of Belfast*, p. 106.

Public instruction formed another central element of the committee's strategy. Anxious to educate those most at risk from disease, large numbers of printed directions regarding cholera prevention were distributed among the residences of the poor.³¹ This enabled, the committee as Malcolm observed, to materially improve the condition of the town and simultaneously educate inhabitants about the nature of the approaching epidemic.³² [Further efforts in this regard included the publication of a pamphlet by Dr Henry McCormac, *Directions for the Management of Cholera in the Absence of Medical Advice*, with proceeds from its sale to be directed to the funds of the committee.³³ The treatise is also notable for revealing McCormac's firm belief in the contagious nature of cholera, an opinion that ran counter to the views of the Irish Central Board of Health.³⁴ Defining his position he stated; 'I have witnessed so many instances of the apparent transmission of cholera from person to person, that I cannot entertain a doubt as to its communicability.'³⁵ Noting in particular, that the disease presented a significant danger to the poor he also warned that:

I have known it again and again, to ensue after contact...whole families among the poor, one taking it after another would sicken and perhaps perish. A multitude of cases would proceed from a very few poor houses, a single lane or alley, while in habitations of persons in easy circumstances, few contracted the disease, and still more did it rarely spread.³⁶

Beyond these immediate humanitarian and preventative measures, the sanitary committee also engaged more directly with broader questions of public health governance in Belfast. Typically, this predominantly involved making recommendations to the corporation, but

³¹ Ibid. See also, Malcolm, *The history of the General Hospital Belfast*, p. 135.

³² Ibid.

³³ *B.N.L.*, 2 Jan. 1849; Henry McCormac, *Directions for the management of cholera in the absence of medical advice* (Belfast, 1849). Copies of this document are rare. However, one can be viewed in the Linen Hall Library Belfast BPB1849.32.

³⁴ The position of the board which was highly influenced by the eminent physician Dr Dominic Corrigan will be discussed in more detail below.

³⁵ *B.N.L.*, 2 Jan. 1849.

³⁶ McCormac, *Directions for the management of cholera*, pp. 1-12.

the committee also petitioned for legislation in regard to the registration of births, deaths and marriages and campaigned for the introduction of an Irish Public Health Act.³⁷ Such initiatives were welcomed by institutions including the General Hospital, which saw in them potential solutions to practical problems such as the provision of burial space.³⁸ The committee's remit also extended to the inspection of public schools and the submission of regular reports to the corporation regarding nuisances throughout the town. Under its direction, magistrates issued orders for nuisance removal; poor families were supplied with straw bedding; houses were whitewashed; beggars were removed beyond the town boundaries; and, in some areas, the police committee undertook the construction of sewers.³⁹ The initial success of these interventions was such that it prompted the establishment of similar sanitary committees in Larne, Lisburn, Armagh, Ballymacarrett, and later Hillsborough.⁴⁰ Elsewhere in Ireland, local authorities in Dublin, Wexford and other towns were similarly inspired to take up Belfast's sanitary example.⁴¹ Despite these achievements, the efforts of the committee were not without limitation. Persistent issues including the long-running dispute of the Blackstaff nuisance, as noted in the previous chapter, remained unresolved long after the committee's dissolution. Nevertheless, it may be argued that the combined efforts of Malcolm, particularly his role of sanitary reformer, and the sanitary committee were instrumental in preparing Belfast for the onset of cholera. To fully appreciate the significance of these local initiatives, however, it is necessary to

³⁷ *B.N.L.*, 2, 6 and 9 Mar. 1849.

³⁸ Annual report of the Belfast General Hospital (1848/49) Office of Archives, Royal Victoria Hospital Belfast, p. 10. The committee noted that interment had been a serious issue after the Charitable Society had stopped permitting burials in their grounds due to lack of space. Negotiations with the corporation and guardians also broke down after they claimed not to possess the requisite powers. A temporary solution to the problem was made available however after Rev. T. F. Miller gave over a portion of the Shankill burying ground for the hospital's use.

³⁹ Between October and January straw bedding was provided to 1,176 poor families and 550 houses had been whitewashed. *B.N.L.*, 12 Jan. 1849. For examples of sewer construction see also Committee on Police Affairs, 13 June 1848 - 25 Jan. 1853.

⁴⁰ *B.N.L.*, 12 Jan. and 2 Feb. 1849.

⁴¹ Browne, 'On the progress of sanitary inquiry,' p. 478.

situate them within the wider context of cholera's advance towards Britain and Ireland in the late 1840s.

The Arrival of Cholera in Britain and Early Preparations in Ireland

As had been the case in 1832, the Irish administration by late 1848 had considerable advance warning of cholera's progression across Europe. Beginning in Lower Bengal around 1837, cholera spread to Afghanistan, with an outbreak reported in Kabul during 1839. In 1840 the disease became epidemic once more in Lower Bengal, and spread to China, most likely facilitated by British troops who were embarking on active service in the region.⁴² Following the landing of troops on the island of Chushan outside Shanghai in July 1840 cholera rapidly became epidemic and quickly spread to the mainland. Contemporaries were keen to absolve the British authorities of knowingly transmitting the disease. For example, the British surgeon, Nottidge Charles MacNamara, in his account of the epidemic, later observed that, 'the English Government unknowingly inflicted on the Celestial Empire one of the most frightful visitations of disease to which any nation was ever subjected.'⁴³ After 1845, cholera continued its westward advance with renewed intensity, a new wave of the disease spread from Afghanistan throughout the Middle East and continued to attack the region during the course of the following summer, with reports observing that some 15,000 pilgrims to Mecca had fallen victim after November 1846.⁴⁴ Although the disease's progress diminished during the winter months, it re-emerged during the spring of 1847 with increased virulence. Appearing in Derbent, Russia, in April, cholera spread throughout the Russian Empire reaching Moscow by September. As the epidemic moved rapidly towards Western Europe

⁴² R. Pollitzer, *Cholera*, p. 26.

⁴³ MacNamara, *A history of Asiatic cholera*, p. 143.

⁴⁴ *Ibid.*, p. 155.

outbreaks were reported near the Austrian Border and at the Baltic port of Riga by the winter of 1847/48 and within a relatively short period sporadic cases had also begun to appear in both France and Britain.⁴⁵

The first cases of cholera in England appeared at Southwark in London and later at Hull and Sunderland where two medical inspectors, John Sutherland and Richard Grainger were dispatched to examine suspected cases of the disease on board vessels in the two ports on 26 September 1848.⁴⁶ These developments suggest the continued importance of maritime network in the transmission of cholera and that, as during the earlier epidemic sea trade played a central role in carrying the disease to Europe to Britain. This interpretation was reinforced in the influential 1854 report produced for the Cholera Committee of the Royal College of Physicians by William Baly and Sir William Withey Gull, two of the most eminent medical authorities of mid-nineteenth-century Britain. Drawing on extensive clinical observation, they noted that the regions which suffered most severely from cholera were those characterised by particular environmental and demographic features, including close proximity to the coast, high population density, low-lying topography, and situation near river systems. These factors, they observed, distinguished individual towns from others that escaped the epidemic almost entirely.⁴⁷ It is notable, however, that the onset of the 1848 epidemic in Britain differed significantly from that of 1832, in that cholera appeared to strike several geographically dispersed areas almost simultaneously. Moreover, the disease spread with considerably greater speed than during the earlier outbreak. For example, within a period of just four months, between October 1848 and January 1849, twenty-one counties had been affected, the majority of

⁴⁵ MacNamara, *A history of Asiatic cholera*, p. 160.

⁴⁶ *Report of the General Board of Health on the 1848-49 Cholera Epidemic*, Appendix A, p.1, HC, 1850, [1273] [1274] [1275], xxi.3, 185, 365. Hereafter, *Report of GBH* (Eng.) 1850.

⁴⁷ Sir William Baly and William Withey Gull, *Reports on epidemic cholera* (J. Churchill, London, 1854), p. 9. Towns close to mines were also noted to be particularly at risk.

which were situated along the eastern coast of Britain. It is also apparent that the disease spread more rapidly than it had in 1832 and in a period of four months, between October 1848 and January 1849, twenty-one counties had been affected, the majority of which were located on the eastern coast of Britain.⁴⁸

On 1 September 1848, a circular setting out the measures to be followed in the event of cholera's arrival was published and circulated throughout Ireland by the Central Board of Health.⁴⁹ It bore, as Robins has noted, the distinct influence of the eminent Dublin physician Dr Dominic Corrigan, a noted anti-contagionist who would later publish *The Cholera Map of Ireland*, based largely on the 1848/49 epidemic.⁵⁰ In the context of the high number of fever cases which had continued to prevail in Ireland the board was particularly keen to distinguish between the modes of propagation associated with fever and cholera. Fever, it noted, was highly contagious and readily spread from person to person. Cholera, by contrast, was described as 'rarely, if ever contagious; consequently, the separation of the sick from the healthy - a measure so essential in checking the spread of fever - is not required.'⁵¹

On this basis, the Board advised that relatives need not fear contracting the disease and suggested that the sick could be cared for within their own homes.⁵² In a marked departure from the policy advocated prior to the 1832 epidemic, it further argued against the necessity for an extensive system of dedicated cholera hospitals. Citing the presumed

⁴⁸ Baly and Gull, *Reports on epidemic cholera*, p. 54; Underwood, 'The history of cholera in Great Britain,' p. 169.

⁴⁹ *Report of the Commissioners of Health Ireland on the epidemics 1846-50*, p. 28, H.C. 1852 (1562) lxi, 239. Hereafter, *Report of COH* (1846-50).

⁵⁰ Dominic Corrigan, *The cholera map of Ireland with observations* (Browne and Nolan, Dublin, 1866). Even when this was published in 1866, a time when idea that cholera was contagious was gaining increasing acceptance among medical professionals, Corrigan continued to promote his belief that contagion was an element of comparatively little power in the propagation of the disease. See p. 11. The contagion vs miasma debate in the latter part of the nineteenth century will be discussed further in Chapters Seven and Eight of this thesis.

⁵¹ *Report of COH* (1846-50) (Appendix B, No.1), p. 70.

⁵² Robins, *The miasma*, p. 70.

non-contagious nature of cholera, the rapidity and short duration of its attack, the simplicity of the administration of cholera treatments, and the fact that recovering patients did not require extended hospital attendance the board maintained that home based care given by families could be as effective as that offered by hospital nurses.⁵³ It nevertheless stopped short of rejecting institutional provision entirely. In urban centres, where there existed ‘a large class of destitute persons who have neither friends nor the means of support,’ the Board accepted that hospital care remained necessary. It therefore concluded that, given the non-contagious nature of cholera, there were no objections to the reception of patients in the ordinary hospitals of the country and recommended that county infirmaries and fever hospitals should remain open and in readiness for the admission of cholera cases.⁵⁴ Such advice, issued at a time when the mechanisms of cholera transmission were still poorly understood constituted a serious oversight on behalf of Ireland’s central administrative body for public health. However, it was not unique in this regard. Broadly comparable guidance endorsing home-based treatment in many cases was issued by its English counterpart and contemporaries even noted comparatively lower mortality rates recorded in cities such as Glasgow and Liverpool among patients treated within their own homes.⁵⁵

While it must be acknowledged that direct contact between patients and carers did not inevitably result in infection, this was still a period when good hygienic practices, particularly among the poor were frequently inadequate. In this context, permitting cholera victims to be housed or treated in close proximity to the healthy clearly carried meaningful risks to health. Moreover, these and other recommendations reflect the continued dominance of miasmatic theory and lack of understanding regarding cholera

⁵³ Ibid.

⁵⁴ Robins, *The miasma*, p. 70.

⁵⁵ *Report of GBH* (Eng.) 1850, pp. 27-9.

transmission within the Irish Board's thinking. Its guidance placed considerable emphasis on the quality and circulation of air, as well as the ventilation of domestic spaces, which were regarded as being of comparable importance to diet and general living conditions. Although the Board did advise that drinking water should be of good quality, this appears not to have been of as vital importance within the board's general public health guidance. Instead, its advice to the public largely centred on environmental management, stating that they should:

Shun damp places, particularly for sleeping; breathe pure air; observe cleanliness; keep the surface of the body warm; avoid fatigues, and excesses of all kinds; use wholesome plain food; live temperately; preserve, as much as possible, a state of general good health, and you will have adopted the best safeguards against cholera.⁵⁶

Unlike the board of health, Ireland's central administration responded somewhat more slowly to the threat of cholera, only initiating formal preventative measures on 4 October 1848, when the Lord Lieutenant directed that the provisions of the Nuisances Removal and Diseases Prevention Acts (1848–49) be enforced throughout the country.⁵⁷ The legislation empowered boards of guardians to require that residents removed sanitary nuisances, and, where such orders were ignored, authorised the use of local rates to pay for their removal. As the previous chapter has demonstrated, however, many local authorities did not consistently or rigorously apply these provisions. But where apathy may have been the mark of some local administrations, Belfast appears not to have exhibited the same level of indifference. Nonetheless, even in this context, those responsible for implementing the legislation initially approached it less as a framework for epidemic prevention than as a mechanism for improving the town's civic

⁵⁶ *Report of COH* (1846-50), p. 73.

⁵⁷ (11 and 12 Vict., c.123) and (12 and 13 Vict., c.111); *Report of COH* (1846-50), p. 28.

appearance.⁵⁸ Ultimately, Belfast's reactive public health measures were tested by the re-emergence of cholera in late 1848, revealing a system that was increasingly organised yet still fundamentally constrained by socio-economic conditions in the city's poorest districts.

The Arrival of Cholera in Belfast

On 1 November 1848 a case of cholera was reported to have occurred in the Belfast Lunatic Asylum on the Grosvenor Road.⁵⁹ It remains unclear whether this was an isolated case or a misreported occurrence, and while it was mentioned by Malcolm in his *History of the General Hospital*, it is interesting to note that Henry McCormac, physician to the Lunatic Asylum, a practitioner with considerable experience and interest in cholera, made no mention of its occurrence.⁶⁰ On 27 November, a further case was reported when a sailor, John Keenan, who had returned to Belfast from Liverpool the previous day, fell ill in his lodgings. He exhibited symptoms typical of cholera and was removed from Rea's Court, Millfield, a notoriously unsanitary area in the centre of the town, to the workhouse where he died within a few hours. Although the rapid progression and death was characteristic of cholera, the workhouse physician, Dr Seaton Reid, denied that Keenan had been suffering from the disease and later attributed his death to 'inflammation of the bowels.'⁶¹ Reid's denial clearly echoed similar circumstances experienced in 1832, when there had been a marked reluctance to acknowledge the appearance of cholera for fear of arousing public alarm. As neither case was formally recognised they were also not recorded in the official reports of the Commissioners of Health.⁶² More broadly, like the

⁵⁸ For more on civic pride and the civic improvements conducted in Belfast in this period see Connolly, 'Imagining Belfast' and Johnson, *Middle class culture and civic identity*. This point will also be discussed in the following chapter of this thesis.

⁵⁹ Malcolm, *The history of the General Hospital Belfast*, p. 133. See also, Census of Ireland (1851), p. 313.

⁶⁰ Calwell, *Andrew Malcolm of Belfast*, p. 106.

⁶¹ BBOG, 25-27 Nov. and 2 Dec. 1848.

⁶² *Report of COH (1846-50)*, pp. 29-30.

previous epidemic, this reluctance to acknowledge the disease appears to have shaped the early public handling of the outbreak in Belfast. Official notification of cholera's presence was not issued until a report appeared in the *Belfast Newsletter* in mid-December, more than a week after the first confirmed fatality had occurred, indicating the continued influence of concerns over public anxiety.⁶³

The first confirmed case and subsequent fatality from cholera in Belfast occurred on 4 December 1848, originating from a repatriated pauper family, the very source that the town's authorities had previously identified as a potential vector of concern, and which had also been highlighted in 1832. The victim was an Irish pauper, Thomas Tiernan, who, along with his wife and children had recently been removed from the Edinburgh Union and returned to Belfast.⁶⁴ Tiernan and his family had been moved on Tuesday 28 November, from a part of Edinburgh where no cholera cases had been reported, to a residence in the city where the disease had prevailed for some weeks. In fact, a case of cholera had occurred in the very room to which they were admitted three days prior to their arrival, and two further cases were reported in the house on the 29 and 30 November.⁶⁵ Clearly fearing for their health, Tiernan and his family vacated the room and entered the Edinburgh Poor House on the morning of 30 November, after which he began to exhibit the premonitory symptoms of cholera. Although urged by his wife to seek medical assistance he refused, and it appears he hid his illness from the authorities. On Friday 1 December the family received a 'pass-order' for railway and steamer passage to Belfast where they arrived on Saturday morning. Still suffering from diarrhoea, Tiernan was admitted into the probationary ward of the workhouse but continued to hide his

⁶³ *B.N.L.*, 12 Dec. 1848.

⁶⁴ *BBOG*, 4 Dec. 1848.

⁶⁵ *B.N.L.*, 15 Dec. 1848. In all four deaths had occurred in the house in which the Tiernan family had been staying.

illness. Dr Reid later, reported that on his admission to the fever hospital at 9 a.m. on Monday morning ‘he hesitated to give an accurate account of himself.’⁶⁶ Tiernan died at half past seven that evening, afterwards. As a precautionary measure, Dr Reid subsequently ordered the removal of his wife and children to a ward in the fever hospital, later reporting that they remained in good health. However, while not explicit in its detail, a report in the *Newsletter* on 5 Jan 1849, discussing repatriated paupers, appears to suggest that they too may have become ill and subsequently died.⁶⁷

Following Tiernan’s death, the guardians promptly informed the central authorities of the arrival of cholera within the union. Dr Reid’s report was forwarded to the Poor Law Commissioners, and the guardians further communicated their intention to make immediate provision for the treatment of individuals presenting at the workhouse with the premonitory symptoms of cholera. However, in an effort to avoid the financial implications of funding treatment directly through the local rates, they proposed that medical relief might instead be administered through the Belfast Dispensary Committee, provided that the commissioners sanctioned payment for both medicines and medical attendance.⁶⁸ They also argued that many lives might be saved if the town’s three dispensary stations were to have medical officers in twenty-four hour attendance.⁶⁹

A further proposal, prompted by their concern that Tiernan had been ill when he arrived at the workhouse, suggested that a medical officer should be appointed to examine and provide medical aid to repatriated paupers who had disembarked in Belfast.⁷⁰ In response, the commissioners commended the guardians for their speedy communication and

⁶⁶ Dr Reid’s report on Thomas Tiernan, BBOG, 6 Dec. 1848. See also, *Report of COH* (1846-50), p. 39.

⁶⁷ A report in the *Newsletter* regarding the Belfast Relief Fund and discussing the transportation of paupers to Belfast on 5 Jan sees Mr. Jonh Holden suggest that a woman (possibly Mrs. Tiernan, although he does not name her specifically) and three children had also died of cholera. See *B.N.L.*, 5 Jan 1849.

⁶⁸ BBOG, 2 Dec. 1848.

⁶⁹ *Ibid.*

⁷⁰ BBOG, 6 Dec. 1848.

confirmed that their letter had been duly forwarded to the Central Board of Health. However, they cautioned that in the absence of official guidelines from the Commissioners of Health there was no legal authority to charge their proposed payments to the Belfast Dispensary Committee via the poor rate. Consequently, responsibility for all associated costs, including treatment in both the dispensaries and the General Hospital, remained with the guardians.⁷¹

The guardians financial and administrative responsibility therefore, necessitated closer coordination between and existing medical institutions within the town. In late December, a special meeting was held between a deputation of the guardians and the dispensary committee to consider the supply of medicine and medical attendance to cholera patients. At this meeting, a number of proposals were submitted by the guardian's representatives, Drs William McGee and John Kidley, and subsequently adopted.⁷² These included an agreement to open the dispensing station nearest to where the first incidence of cholera appeared in the town. On the disease becoming more prevalent, a second station was to be established, with a messenger appointed to each, and a car made available for the day and night duties of each station's medical attendants. Medicines were procured from the guardians appointed druggist and were to be kept separately from the stock of the dispensary. While the dispensary committee accepted these arrangements, it maintained that treatment could be delivered more economically by adopting a system similar to that employed by the Belfast Board of Health during the 1832 epidemic, when the town had been divided into a series of medical, rather than dispensary, districts.⁷³

⁷¹ Ibid., 7 Dec. 1848.

⁷² BBOG, 22 Dec. 1848.

⁷³ See Chapter Two of this thesis, p. 65; *B.N.L.*, 3 Feb. 1832.

On 23 December, the guardians entered into a further agreement with the General Hospital Committee, which consented to admit cholera patients at a rate of 1s. 3d. per case, to be paid from the poor rates.⁷⁴ However, this arrangement was not implemented until 19 January 1849.⁷⁵ Once its introduction had been confirmed, the guardians turned to the more systematic organisation of medical provision within the town. In order to manage the anticipated spread of the disease, Belfast was divided into two principal medical districts, marked by an imaginary line drawn from the head of North Street to the River Lagan. Cholera patients residing to the north-east of this boundary were to be sent to the General Hospital, while those to the south-west were to be directed to the Union Hospital.⁷⁶

As the threat of cholera intensified, the case of the Tiernan family also brought renewed attention to the contentious issue of the repatriation of paupers to Belfast under the Laws of Settlement. What had initially been a matter of administrative concern now assumed greater urgency in light of its potential role in the transmission of disease. In January 1849, the corporation entered the debate in support of the guardians. The General Purposes Committee, apprehensive that the financial burden of providing relief to repatriated paupers might escalate significantly, called for amendments to the existing legislation. Specifically, the committee advocated that the laws governing the removal of Irish paupers from England and Scotland be aligned with those regulating the transfer of paupers within England, under which individuals were returned to the union nearest to their place of previous residence.⁷⁷ There can be no sound reason, the committee asserted

For giving the authorities of Edinburgh, Glasgow or Liverpool power to transfer an Irish pauper who may have been residing and giving his labour for

⁷⁴ BBOG, 23 Dec. 1848.

⁷⁵ Annual report of the Belfast General Hospital (1848/49), p. 6.

⁷⁶ BBOG, 23 Dec. 1848 and 3 Jan. 1849.

⁷⁷ Council Minutes 1847-50, 1 Feb. 1849

a considerable time to Belfast where he may never have been previously. It is quite enough that we should bear the support of our own poor without bearing the so large a share of Irish poverty to which this town has not contributed and for which it ought not to be held responsible.⁷⁸

Given that the cost of providing relief and medical treatment within the union was met through local rates, the corporation's concerns were by no means unfounded. Between 17 July 1847 and 29 January 1849, it was estimated that approximately 12,100 paupers had landed at Belfast. The General Purposes Committee observed that, had all of these individuals sought relief, as they were entitled to do, their maintenance would have imposed an annual burden of £47,190 on the union, calculated at the modest rate of 1s. 6d. per week.⁷⁹

Ever hopeful of a potential change to the existing legislation, the committee requested permission to present a petition to parliament, urging English and Scottish authorities to return paupers to their former places of residence instead of abandoning them at the most convenient Irish seaport. In the interim, the Belfast Union agreed to accept all destitute poor who made application for relief through the warden or relieving officer. It also agreed that anyone attacked with cholera, fever or other diseases would be conveyed at the expense of the guardians to hospital in suitable transport procured by the relieving officer.⁸⁰ In March 1849, a deputation from the General Purposes Committee travelled to London to meet with the Home Secretary, Sir George Grey, in order to appeal for amendments to the Laws of Settlement. Assisted by the parliamentary agent William Bryden, they presented a detailed statement outlining the basis of their case. Grey acknowledged the hardships imposed by the existing legislation and promised to give

⁷⁸ Ibid.

⁷⁹ Council Minutes 1847-50, 1 Feb. 1849.

⁸⁰ Ibid.

consideration to the deputation's request.⁸¹ However, this initial receptiveness did not translate into action. On 23 May, Bryden informed the council that, 'it would be useless to propose any amendment to the English Laws of Settlement for an Irish purpose.'⁸² He did, nevertheless, suggest that alterations to English and Scottish legislation might, at a later stage, facilitate amendments to the Irish Poor Law, enabling boards of guardians to return paupers to their place of birth.⁸³ In practice, no such reforms were implemented, and the issue remained a constant source of grievance between the Irish Poor Law authorities and the British government.⁸⁴

The Laws of Settlement also carried a further and highly significant implication for both the guardians and the corporation: the effective importation of disease into Belfast. In the absence of any quarantine provisions governing the return of paupers, large numbers of sick repatriates arrived at the workhouse, making the lack of available space an increasingly urgent concern. As Table 4.1 demonstrates, by the beginning of December 1848 the workhouse, originally designed to accommodate 1,000 inmates, was housing in excess of 2,500 individuals. Of these, as indicated in Table 4.2, almost 300 were confined to the fever hospital.⁸⁵

Table 4.1: Numbers of Inmates in the Belfast Union Workhouse 2 December 1848⁸⁶

Aged and Infirm		Able Bodied		Boy	Girl	Under 2	Births		Total
M	F	M	F				M	F	
186	293	221	593	669	600	95	1	0	2658

Table sourced from the minutes of the Belfast Board of Guardians 2 Dec. 1848

⁸¹ Council Minutes 1847-50, 9 Mar. 1849.

⁸² Copy of letter from William Bryden in Council Minutes 1847-50, 23 May 1849.

⁸³ Ibid.

⁸⁴ Kinealy and MacAtasney, *The hidden famine*, p. 147 and 186.

⁸⁵ BBOG, 2 Dec 1848.

⁸⁶ Ibid., 2 Dec. 1848.

Table 4.2: Return of sick inmates in Belfast's Workhouse Hospital 2 December 1848

No in Workhouse Hospital	190
No in Fever Hospital	104
Total	294

Table sourced from the minutes of the Belfast Board of Guardians 2 Dec. 1848

The Spread of Cholera and the Actions of Belfast's Authorities 1848-49

Against this backdrop of severe overcrowding and its association with the repatriation of paupers under the Laws of Settlement, cholera began to emerge as a distinct threat. By early December 1848, all recorded cases of cholera in Belfast had been limited to the confines of the Union Workhouse and although there had been as few as eight instances of the disease by the middle of the month, all had proven fatal. They included six children from the nursery ward, and Margaret Sherry, who had been resident in the workhouse for around a month. Her case however, had been particularly notable for the rapidity of its progress as she had died less than ten hours after becoming ill.⁸⁷ On 19 December the *Newsletter* reported that the guardians had 'determined to associate themselves into a board of health and to rent a cholera hospital in some central part of the town should the pestilence spread further.' But added that they had not yet been informed of the specific measures the guardians intended to adopt.

By the end of December, cholera had also begun to take hold outside the confines of the workhouse subsequently spreading rapidly throughout Belfast. Doctors warned that it was a particularly virulent strain started that their returns had recorded thirty-six cases, more than half of whom (nineteen) had died.⁸⁸ At the workhouse, further issues were also highlighted. Dr Reid reported that victims had been suffering from the disease for some hours before the Medical Officer or the master of the workhouse had been notified. In

⁸⁷ BBOG, 9 and 16 Dec. 1848. *B.N.L.* 19 Dec. 1848.

⁸⁸ Kinealy and MacAtasney, *The hidden famine*, p. 169. *B.N.L.*, 29 Dec. 1848. 16 Jan 1848. Death of James Moreland (17 years) (Great George's Street) in 12 hours, *B.N.L.*, 19 Jan. 1848.

response, the guardians proposed that a person be appointed in each ward to remain on duty throughout the night, tasked with observing inmates and reporting any onset of illness among inmates at the earliest opportunity.⁸⁹

Concerns soon extended beyond the workhouse walls and by the middle of January, the guardians had become increasingly worried about the state of the health of the labouring population in the town. In a letter, addressed to the owners of mills and factories to be inserted in the local newspapers the guardians argued that it was imperative that employers immediately release from work any employees suffering from diarrhoea or other premonitory symptoms of cholera. Their concern was borne out in early February when thirty-three cases and nine deaths occurred among workers at Ewart's Mill on the Crumlin Road. Dr Samuel Thomson, was however, at a loss as to explain the cause of the outbreak, and after inspecting the premises, stated that the mill worker's houses were in a most comfortable position and the workers, 'were the most comfortable he knew about Belfast.'⁹⁰

Elsewhere in the town, the Central Board of Health has expressed concern at reports from the workhouse indicating that many patients had been ill for several hours before their admission into hospital, while others who had shown symptoms of cholera had waited hours, and in some cases days, before applying for assistance at the dispensary. The board requested clarification as to whether the dispensaries were open day and night to all applicants and recommended that copies of the precautions against cholera be distributed widely throughout the town to ensure that the poor were made aware of the urgent necessity of seeking medical advice if suffering from diarrhoea. It was also recommended that Dr Kidley and Dr McGee be authorised to provide additional medical aid should

⁸⁹ BBOG, 7 Feb. 1849.

⁹⁰ Ibid.

cholera become more prevalent, that the casual poor be washed on their admission to the night wards, and, somewhat curiously, that all male inmates, have their long hair cut off.⁹¹

While these measures sought to improve cholera response within the existing system, practical difficulties and public behaviour continued to hinder their effectiveness. In early February for example, Belfast's District Medical Attendants informed the guardians that there had been a number of false alarms regarding cases of cholera in the town. Alongside the escalation of the outbreak, this, they reported, had rendered it impossible to pay proper attention to genuine cases, 'so as to prevent the inevitable loss of life.'⁹² At the same time, the guardians observed that large numbers of people continued to refuse to be admitted to the Union Hospital. In the face of this resistance, the guardians decided that an alternative course of action was necessary. They petitioned the local clergy to induce their congregations to apply for admission to the hospital upon the appearance of symptoms of cholera, telling them that that, 'they will thereby greatly increase their chance of recovery and diminish the danger of alarm and infection.'⁹³ Nevertheless, reluctance to enter institutional care continued to be widespread. In the suburb of Ballymacarrett for instance, Dr James Murray reported a 'great objection among the people to attend hospital,' and lacking the authority to compel admission, he called for a temporary hospital to be founded. His request was subsequently approved by the guardians with two nurses appointed to take charge.⁹⁴

Existing medical institutions also adapted to meet the demands of the epidemic, though not always effectively. In addition to the Union Hospital, the committee of the General Hospital refitted the old cholera hospital at the rear of its premises. However, likely due

⁹¹ BBOG, 7 Feb. 1849.

⁹² Ibid.

⁹³ BBOG, 7 Feb. 1849.

⁹⁴ Ibid., 18 Apr. 1849.

both to the guardians' desire to limit expenditure outside the Union Hospital, and to the continued reluctance of patients to seek institutional care, the committee's annual report showed that relatively few cases were treated there. By 31 March, only sixty-three cases of cholera had been treated at the General Hospital, twenty-four of which had resulted in fatalities.⁹⁵ The mortality ratio, about one in every three admissions, appeared to be unusually high, but the hospital committee maintained that it should not be considered as such because their admissions largely consisted of severe cases many of whom had arrived when already in an advanced stage of the disease.⁹⁶ Remarking on the unwillingness of victims to attend hospital, the committee attributed public aversion to 'prejudices or perhaps the state of apathy and hopelessness which accompanies this severe malady,' 'it was a matter of regret,' they continued, that the advantages of the hospital were 'not more generally or duly appreciated by the poor.'⁹⁷

By mid-February, with fever still prevalent and cholera escalating the guardians, petitioned the corporation for more assistance. Bringing attention to houses of multiple occupation, long recognised as critical sites of overcrowding and potential disease transmission, the guardian's representatives, Dr McGee and Dr Kidley, requested the immediate implementation of clauses 207, 8 and 9 of the 'Belfast Town Improvement Act' (1845), which specifically related to the inspection of lodging houses and actions to be taken in regard to infection and illness in densely occupied dwellings.⁹⁸ Urging the town authorities 'not to leave dormant the very speedy effective and beneficial powers contained in the above act,' McGee criticised the inefficiency of previous measures,

⁹⁵ Annual report of the Belfast General Hospital (1848/49), pp. 10-11.

⁹⁶ *Ibid.*, p. 12.

⁹⁷ Annual report of the Belfast General Hospital (1848/49), pp. 12-13.

⁹⁸ (8 and 9 Vict., c.142). For the clauses in full see, transcript of; The Belfast Improvement Act, (1845).

arguing that, ‘all other Acts bearing on Sanitary Improvements,’ were, ‘tedious cumbrous and uncertain in their operation.’⁹⁹

In contrast to previous delays in sanitary enforcement, the corporation responded promptly. Conscious of the risks posed by both cholera and the continued arrival of repatriated paupers, it implemented the requested clauses and quickly initiated the regulation and improvement of conditions in local lodging houses.¹⁰⁰ In order to address the issues of disease, hygiene and sanitation in overcrowded areas Samuel Browne, attending surgeon to the Belfast General Hospital was put forward for the post of Inspecting Officer.¹⁰¹ Browne brought relevant experience to the role, having previously served as a medical officer to the board of guardians, who had commended his efforts to improve the town’s sanitary conditions over the preceding four years. Reflecting the slow pace of bureaucratic procedure, his role was, however, not officially sanctioned until 1 March 1849, some four months after the first case of cholera had been confirmed.¹⁰²

Acting under clauses 207 and 208 of the act Browne was tasked with establishing a licencing system for lodging houses and subsequently arranged for their inspection, registration, and approval by medical officers.¹⁰³ Lodging house keepers were required to display regulations regarding health, cleanliness and ventilation in each room and permit inspection at all times.¹⁰⁴ They were also obliged to report any cases of fever or other

⁹⁹ Council Minutes 1847-50, 13 Feb. 1849.

¹⁰⁰ *Ibid.*, 1 Mar. 1849.

¹⁰¹ Browne was also recognised as the father of ophthalmic surgery in Belfast. See Richard Clarke, ‘Ulster connections with Nelson and Trafalgar’ in *Ulster Medical Journal*, Vol. 75(1) (2008), pp. 80-4. R.S., Allison, *A short history of the development of ophthalmological and otorhinolaryngological services in Belfast (1801-1964)* (Baird, Belfast, 1969). Browne was also highly commended for his involvement in various other roles including General Practitioner, Town Councillor, Mayor of Belfast, Justice of the Peace, and Consulting Sanitary Officer. See Robert Esler, ‘Sketch of the Ulster Medical Society and its presidents’ in *Transactions of The Ulster Medical Society. Session 1885-86* (1886), pp. 75-84.

¹⁰² Browne was appointed Officer to the Council for the regulation and inspection of lodging houses, receiving notices of fever and other diseases and preventing the spread of infectious or contagious disease in the borough. See Council Minutes 1847-50, 13 Feb. and 1 Mar. 1849.

¹⁰³ (8 and 9 Vict., c.142). Transcript of; The Belfast Improvement Act, (1845).

¹⁰⁴ Any breach of the provisions was to incur a fine not exceeding forty shillings.

infectious illness to officers within forty-eight hours of occurrence and where infection was confirmed, corporation appointed officers were empowered to remove the sick, as well as any remaining lodgers, to ensure that the affected premises were was cleansed, and to oversee the washing and disinfection of individuals and their clothing. These powers were extended to communal tenements and other ‘densely inhabited or ill-ventilated structures,’ as well as anywhere where officers suspected there was a threat of disease transmission.¹⁰⁵

While these measures reflected both municipal concerns and a significant expansion of intervention, their implementation came at a relatively advanced stage of the epidemic. By the time the process of inspection had commenced, 670 cases and 214 deaths from cholera had already been reported in the town.¹⁰⁶ Still, Browne had acted quickly to organise and conduct inspections. By 3 March he had submitted a report which contained further suggestions including the enforcement of section 178 of the act under which owners or occupiers of any dwelling house within the limits of Belfast could be ordered to ‘whitewash, cleanse and purify’ their properties.¹⁰⁷ Under these provisions lodging house rooms were to be thoroughly ventilated by means of perforated zinc panes in the upper parts of windows, floors were to be washed at least twice a week and walls whitewashed quarterly, specifically in the first week of July, September, January and April each year. Blankets and coverlets were to be washed and scoured once every three months in May, August and February, while bedding was to be cleansed and purified and chaff or straw bedding replaced. In houses where fever had occurred however, bedding

¹⁰⁵ (8 and 9 Vict., c.142). Transcript of; The Belfast Improvement Act, (1845).

¹⁰⁶ *B.N.L.*, 2 Mar. 1849.

¹⁰⁷ Browne and Inspecting Constable Campbell had compiled their report from ‘minutely inspected’ lodging houses in Prince’s Street, Prince’s Court, Great Edward Street, Mark Cromac and Gloucester Streets, Lennon’s Lane, Caddell’s Entry, Durham Street, Barack Street, Kennedy’s Entry, Divis, Mill, Marquis Streets and Millfield. See, Council Minutes 1847-1850, 3 Mar. 1849. By the end of March all the lodging house owners contained in Browne’s list had been given two days’ notice to clean their lodgings.

was to be thoroughly cleansed or destroyed.¹⁰⁸ Responsibility for enforcing these measures was conferred to a new sub-committee consisting of five Aldermen and seven Councillors, 'The Committee on Police Affairs.'¹⁰⁹ Shortly afterwards, 121 property owners were given notice to cleanse their houses.¹¹⁰

These increasingly systematic interventions initially appeared to have had a significant impact. By late March, there had been no cholera cases in Belfast's workhouse for almost three weeks and the disease was also said to be subsiding rapidly in the town.¹¹¹ In April, night patrols in the workhouse ceased, and in Ligoneil, on the outskirts of the town, where the disease had been particularly severe, Dr Thomas Thompson stepped down from his post as District Medical Attendant. The committee of the Belfast Dispensary also announced their intention to reduce its cholera staff by one medical attendant and one apothecary by the following week.¹¹² These actions, were, however, soon proved premature.

By early May, the epidemic intensified rapidly and by the end of the month there had been 1,820 cases and 539 deaths.¹¹³ Dr Browne's regime of inspections however, continued to expand. By June, the owners of 267 properties had been instructed to whitewash and cleanse their houses, and orders for an additional fifty homes were awaited approval from the Committee on Police Affairs. Browne also reported that between May and June some eighty lodging houses and tenements had been affected by contagious

¹⁰⁸ Council Minutes 1847-50, 1 Mar. 1849.

¹⁰⁹ The new Committee on Police Affairs consisted of Aldermen John Potts, George Suffern, James Stirling, Samuel Nelson, William Hamilton and Councillors John Black, Thomas Major, John Young, Adam Hill, William Carson, Robert Lepper and Robert Lindsay.

¹¹⁰ If orders were ignored the corporation could enforce a fine of up to 5 shillings for every day of non-compliance after which they could clean the property and recover any expense from the owner or occupier.

¹¹¹ BBOG, 7 and 28 Mar. 1849.

¹¹² *Ibid.*, 7 and 25 Apr. 1849.

¹¹³ *B.N.L.*, 29 May 1849.

disease, all of which had been subsequently cleaned, noting that, in his opinion, these actions had served to ‘materially prevent the spread of cholera and fever.’¹¹⁴

Yet the continued spread of the epidemic revealed the limited impact of these measures once transmission was already widespread. By early July, cholera was rampant in Belfast, with 2,301 cases and 673 deaths recorded by the beginning of the second week of the month.¹¹⁵ Browne, nonetheless maintained the system of inspections, and by this stage, 613 houses under section 178 of the act and a further 206 individuals under section 209, had been notified to improve the condition of their dwellings.¹¹⁶ As the epidemic continued to spread, a more coordinated sanitary response began to emerge between the guardians, corporation and local physicians. Browne, for example collaborated with Drs Kidley and McGee to issue lists of preventative measures ‘to be observed during the prevalence of cholera,’ which they circulated throughout the town.¹¹⁷ He also requested, that the Town Clerk, John Bates, issue orders for the weekly cleansing of back premises. Thousands of these orders were subsequently served upon the occupiers of second- and third-class tenements, while posters detailing the instructions were distributed throughout Belfast’s principal thoroughfares.¹¹⁸

Despite these intensified sanitary measures, the epidemic continued to escalate and quickly reached its peak. Between 13 and 16 July, 152 new cases and fifty-four deaths were recorded in the hospital and dispensary returns. The guardians also observed that cholera was no longer confined to the poorer classes but was increasingly affecting more affluent sections of society.¹¹⁹ This shift was reflected in the *Newsletter*, where the death

¹¹⁴ Council Minutes 1847-50, 1 June 1849.

¹¹⁵ *B.N.L.*, 10 July 1849.

¹¹⁶ Council Minutes 1847-1850, 2 July 1849.

¹¹⁷ Council Minutes 1847-1850, 2 July 1849.

¹¹⁸ *Ibid.*

¹¹⁹ *BBOG*, 18 July 1849.

notices of several middle-class residents appeared in the days that followed. Among them was the Rev. Matthew Langtree, an eminent Wesleyan minister, who died at his residence in Cromac Street on 14 July.¹²⁰ Tragically, Langtree's wife Catherine fell ill as his remains were being taken for interment and she died shortly after her children had returned from the funeral.¹²¹ The Cromac district was one of the most notorious seats of cholera during this epidemic due to its proximity to the River Blackstaff and the adjoining Paper Mill Dam. Notably, the *Belfast Newsletter* attributed the danger of disease to the filthy air emanating from the river and the weir at the dam.

With the outbreak having intensified, local medical and administrative responses were expanded. At the Union Hospital, Dr Reid appointed three additional cholera nurses and an assistant to the house surgeon and in the town, Dr Kidley increased the number of medical attendants to eight and the number of apothecaries to two.¹²² In an effort to curb the customary practice of wakes, the guardians also appealed to the Poor Law Commissioners for compulsory powers to permit the speedy interment of the dead.¹²³ The shortage of nursing staff presented a further challenge, and workhouse inmates were invited to volunteer as nurses in the town. Male inmates were similarly asked to volunteer to assist in coffining and transporting the bodies of deceased victims to and from the cholera carts for burial. Those who undertook these positions were to be rewarded with separate ward accommodation and additional rations equivalent to those of workhouse porters.¹²⁴ While these incentives may have appeared generous, they carried obvious

¹²⁰ *B.N.L.* 20, July 1849.

¹²¹ *B.N.L.*, 17 and 20 July 1849.

¹²² Eliza McCluskey, Ellen Palmer and Gemima Patterson, William Evans appointed to assist surgeon Black, BBOG, 18 July 1849.

¹²³ The commissioners replied on 25 July stating that they did not find themselves authorised to require compulsory burials. See, BBOG, 25 July 1849.

¹²⁴ BBOG, 18 July 1849. The master was also asked to dispense with the requirement of three hours' notice to leave for volunteers.

risks, and it remains unclear whether any inmates accepted, as no record of participation survives in the guardians' minutes.

By the end of July, although cholera morbidity and mortality remained relatively high, Browne optimistically reported in a letter to the guardians that he believed the epidemic was drawing to a close.¹²⁵ The guardians attributed this apparent decline to the increased willingness of patients to enter hospital and, in part, to a change in the weather. Such reasoning, however, appears questionable. Meteorological evidence suggests that conditions at the end of July were in fact warm and wet, and therefore potentially more conducive to the spread of cholera. Records from the Armagh Observatory in July 1849, for example, indicate a mean monthly high temperature of 19.35°C and rainfall of 110.7 mm compared with lower temperatures (17.75°C) and significantly reduced rainfall (27.7 mm) in June. Although August was somewhat drier, with 88.2 mm of rainfall recorded, it was during this period that cholera cases began to decline more markedly. Observations taken at the Linen Hall described the weather at the end of July as predominantly gloomy, while, as Table 4.3 demonstrates, official statistics show that the number of cases continued to rise steadily throughout July, in contrast to June when conditions had been largely fair and clear.¹²⁶ Taken together, this evidence, to a degree, calls into question the extent to which contemporaries understood the environmental factors associated with the spread of the disease.¹²⁷ Nevertheless, clearly confident that the epidemic was receding, Browne tendered his resignation from the post of medical officer stating that he believed it appropriate to relieve the board from the expense of his services.¹²⁸ Arrangements were

¹²⁵ By 30 July there had been 2972 cases and 948 deaths. *B.N.L.*, 31 July 1849; BBOG, 25 July 1849.

¹²⁶ Statistics compiled from cholera report in *B.N.L.*, 8 June - 31 July 1849.

¹²⁷ Meteorological data collated from Armagh Observatory Archive of Meteorological Records, [www.http://climate.arm.ac.uk](http://climate.arm.ac.uk) (25 Apr. 2012). Readings taken at the Linen Hall also show the weather at the end of July as mostly gloomy see *B.N.L.*, 27 July 1849.

¹²⁸ Browne's resignation was accepted on 1 Aug.

also made to terminate the agreement between the guardians medical committee and the board, thereby transferring responsibility for overseeing the duties of the towns district medical attendants to the guardians.¹²⁹

Table 4.3: Comparison of New Cases of Cholera Recorded in Belfast June/July 1849

June 1849		July 1849	
Date	New cases recorded	Date	New cases recorded
5-7	35	3-9	84
8-11	40	13-16	152
12-14	37	17-19	134
15-19	54	20-23	107
21-25	36	24-26	64
26-28	30	27-30	63

Statistics compiled from cholera report in *B.N.L.*, 8 June - 31 July 1849.¹³⁰

Browne's confidence that the epidemic was receding was borne out by subsequent events, and following its July peak the outbreak entered a phase of rapid decline in August. By mid-month, daily cases averaged around ten and deaths fewer than four; by the end of August, this had fallen further to just over five cases per day and fewer than two deaths.¹³¹ Despite this significant decline and the *Newsletter* declaring the epidemic all but extinct, isolated high-profile cases continued to occur at the same time. On 17 August, the local press reported the sudden death of former mayor George Suffern. Suffern had been part of a corporation delegation that had travelled to Dublin to present an address to the Queen. After falling ill in the Throne Room of Dublin Castle, he was returned to Belfast where he died at home.¹³² His sister Mary, who had nursed him also fell ill the day following his death and died within nine hours of becoming ill.¹³³

¹²⁹ BBOG, 25 July 1849.

¹³⁰ N.B., No report between 10 and 12 July.

¹³¹ *B.N.L.*, 17 August 1849, average daily cases 10.14, deaths, 3.57 and recoveries 11.29. (Totals 3,269 cases, 1,054 deaths, 2,128 recoveries); *B.N.L.*, 31 August 1849, average daily cases 5.43, deaths 1.57, recoveries 7.14. (Totals 3,376 cases, 1,097 deaths, 2232 recoveries).

¹³² *B.N.L.*, 17 Aug. 1849. Suffern died on 14 August 1849 at age 58.

¹³³ *The Times*, 20 Aug. 1849.

From September, morbidity and mortality rates continued to diminish and by the nineteenth, Dr Reid reported that there were only twenty-five cases of cholera in the union, the lowest weekly total since the commencement of the epidemic.¹³⁴ By mid-October the epidemic in Belfast was largely over. The register kept at the dispensary cholera station recorded that they had treated 2,232 cases, of which 430 had died.¹³⁵ Of the remainder, 1,135 were said to have recovered and a further 647 were removed to hospital. Their fate and that of the twenty outstanding cases however remains unclear.¹³⁶ In all, Belfast had suffered approximately 3,538 cases of cholera and 1,163 deaths representing a mortality rate of thirty-three per cent which was more than double that of the previous epidemic.¹³⁷ While these figures provide a useful indication of the scale of the outbreak, they cannot, however, be regarded as wholly comprehensive. Cases and deaths treated in private practice, for instance, were not included in official returns, and it is likely too, that, owing to reluctance to acknowledge infection, significant numbers of people fell ill without seeking treatment and went unrecorded in official returns. Sporadic outbreaks of cholera continued to occur throughout the town until 12 December 1849, when the final case was registered, with the epidemic officially declared at an end by the committee of the Belfast General Dispensary in early January 1850.¹³⁸ In comparison with 1832, Belfast had experienced a markedly more severe outbreak, though one that remained less severe than that of comparable towns and cities in Britain and Ireland.

¹³⁴ BBOG, 19 Sept. 1849.

¹³⁵ Medical report of the Belfast General Dispensary in *B.N.L.*, 11 Jan. 1850. Andrew Malcolm however, documented a much higher figure of 762. See, Malcolm, *The sanitary state of Belfast*, pp. 28-9.

¹³⁶ *B.N.L.*, 11 Jan. 1850.

¹³⁷ *B.N.L.*, 12 Oct. 1849; *Report of COH* (1846-50), pp. 34-8. The commissioners recorded a further 37 cases and 18 deaths between October and December.

¹³⁸ *B.N.L.*, 11 Jan. 1850.

Comparisons: Assessment of the mortality statistics for Britain, Ireland and Belfast 1848/49

Britain

In England and Wales, cholera was responsible for 53,293 deaths during 1849 alone.¹³⁹ Mortality in Scotland was also severe, but accurate figures for the whole country are difficult to accurately determine.¹⁴⁰ An estimate of 6,857 deaths for Scotland was published by the *Sheffield and Rotherham Independent* in December 1849, but as the paper itself admitted, the figures were probably defective as the statistics had only been recorded up to 20 October.¹⁴¹ More reliable data does exist for major urban centres, with 4,248 deaths recorded in Glasgow and Edinburgh between 2 October 1848 and March 8 1849.¹⁴² There can be little doubt, however, that the epidemic was more severe than it had been between 1831 and 1833, and, as Robins has estimated, mortality for the whole of Britain was likely in the region of 100,000 people. Nevertheless, in terms of their relative populations, Ireland's experience of cholera in 1848/49 can be considered to be much more severe.¹⁴³

With few exceptions, the more densely-populated regions lying around great rivers, or on the sea-coast, were, as the contemporary account of Baly and Gull shows, the areas of England where the rate of mortality was highest, both during 1832, and in 1849.¹⁴⁴ In such regions, particularly those comprising of large populations of the poor, and characterised by 'ill-constructed and ill-ventilated houses...imperfect sewerage, deficient

¹³⁹ See Baly and Gull, *Reports on epidemic cholera*, p.10; Underwood, 'The history of cholera in Great Britain,' p.169. (Underwood's figure is 53,292). Later statistics report a total of 55,181. See, *Eighteenth annual report of the Registrar-General of births, deaths, and marriages in England*, pp. 156-157 H.C. 1855, [2260], xxii. 279. Female deaths 1848 - 866; 1849 - 27179; Male deaths 1848 - 1042; 1849 - 26094.

¹⁴⁰ Some regional statistics are however available in Creighton, *History of epidemics*, pp. 836-39 and in Underwood, 'The history of cholera in Great Britain,' pp. 168-9.

¹⁴¹ *The Sheffield and Rotherham Independent*, 1 Dec. 1849.

¹⁴² Creighton, *History of epidemics*, pp. 836-7; Underwood, 'The history of cholera in Great Britain,' p. 168.

¹⁴³ Robins, *The miasma*, p. 137.

¹⁴⁴ Baly and Gull, *Reports on epidemic cholera*, p. 9.

supply of water, and the consequent accumulation of filth of all kinds,' Baly and Gull further observed that: 'The preference of cholera for such localities as these is shown by the fact of its having been three times more fatal in the registration districts on the coast than it was in the interior of the country.'¹⁴⁵ However, they also noted important exceptions to this general pattern. Inland towns and cities, including Salisbury, Manchester, Durham, Wolverhampton, and Newcastle-under-Lyne, likewise suffered high rates of mortality from cholera. Many of these centres maintained commercial links with British seaports and shared characteristics with the worst-affected coastal towns, including large populations and inadequate sanitary provision.¹⁴⁶ According to Charles Creighton, a further factor common across England, Scotland, and Ireland was that 'the localities that suffered most from the typhus fever of 1847–48 also suffered most from cholera,' indicating that he too believed that cholera mortality was strongly conditioned by pre-existing patterns of deprivation and disease.¹⁴⁷

Assessing Irish statistics for Provincial Towns and Cities

Conditions in Ireland, particularly, but not exclusively, in the largest towns with the highest cholera mortality, broadly echoed the contemporary accounts for England.¹⁴⁸ As had been the case in 1832, cholera prevailed most in urban areas, and as Dominic Corrigan observed, few towns with a population over 2,000 people escaped the ravages of the

¹⁴⁵ *Ibid.*, pp 9-11. Examples of these regions included areas bordering the Thames, Humber, and the coastal ports of Southampton and Portsmouth.

¹⁴⁶ *Ibid.*, p. 11.

¹⁴⁷ Creighton, *History of epidemics*, p. 842. For more on cholera in England in this period see also, McLean, *Public health and politics*; Carpenter, *Health, medicine and society*; Allen, *Cleansing the city* and Gilbert, *Cholera and nation*.

¹⁴⁸ It is worth noting in this instance that small towns suffered equally high and, in some cases, higher mortality rates. However, these figures while not ignored entirely have not been used in order to keep a correlation between the mortality figures for Belfast and other large Irish towns where the disease was said to be worst. See Table 11, Compiled from *Report of COH* (1846-50), pp. 34-8. See also Census of Ireland (1851), p. 313.

disease, none of which were in Ulster.¹⁴⁹ The worst affected towns were recorded as Belfast, Cork, Drogheda, Galway, Kilkenny, Limerick and Waterford.¹⁵⁰ Many of which had already suffered severely from both famine and fever.¹⁵¹ Dublin was also significantly affected with 3,813 cases and 1,664 deaths recorded in the city. A detailed comparison of mortality rates across these towns further highlights the distinctive position of Belfast within the Irish context. Table 4.4, compiled from the statistics registered by the Commissioners of Health indicates that Belfast had a notably lower mortality rate from cholera than every other major Irish provincial town or city.¹⁵² Although the table suggests that Drogheda, at over thirty-three per cent, had a slightly lower rate of mortality, adjustments based on the more complete returns of the Belfast Board of Health indicate that Belfast's mortality rate was in fact marginally lower than Drogheda, by over one per cent.¹⁵³

It must be noted however, that the wider statistical picture for Ireland as a whole is beset with limitations. Considerable disparity exists, between the statistics that were produced by the main national agencies, the Census Commissioners and the Commissioners of Health. It is therefore highly unlikely that fully reliable morbidity and mortality rates for cholera in Ireland will ever emerge. This reflects a range of factors, including difficulties in the accurate classification of disease, diagnostic uncertainty medical practitioners, and the scarcity of reliable records in some regions.¹⁵⁴ It is notable for example that the 1851 report of the Census Commissioners explicitly states that the board of health returns for

¹⁴⁹ See Corrigan, *The cholera map of Ireland*, p.5. Figures compiled from *Report of COH* (1846-50), pp. 34-8. The Commissioners of Health reported that of the towns containing upwards of 2,000 inhabitants only one in Connaught escaped, in Munster the figure was six, in Leinster nine out of forty-one towns escaped and in Ulster seventeen towns of over 2,000 people were affected.

¹⁵⁰ Census of Ireland (1851), p. 251; *Report of COH* (1846-50), pp. 34-8.

¹⁵¹ Robins, *The miasma*, p. 148.

¹⁵² See Table 4.4 below and *Report of COH* (1846-50), pp. 34-8. The 1851 Census does not document similar statistics in relation to individual towns.

¹⁵³ 3,538 cases and 1,163 deaths (32.8% mortality). See, *B.N.L.*, 12 Oct. 1849.

¹⁵⁴ Robins, *The miasma*, p. 149.

1849/50, which recorded 19,325 deaths, excluded data from Counties Wicklow, Cavan, Donegal and Fermanagh.¹⁵⁵

Table 4.4: Cholera Cases Deaths and Percentage Mortality in the Worst Affected Large Towns in Ireland 1848/49

Location	Population	Start Date of Epidemic	End Date of Epidemic	Total Cases	Total Deaths	Mortality Rate %
Tralee	11,363	6 Apr 1849	24 June 1849	395	249	63
Waterford	29,288	15 Apr 1849	7 Sept 1849	522	294	56.3
Kilkenny	23,625	6 Feb 1849	28 Oct 1849	1,046	529	50.5
Limerick	65,296	26 Feb 1849	7 Sept 1849	1500	746	49.7
Galway	32,511	10 Apr 1849	29 May 1849	897	426	47.4
Dublin	238,531	30 Jan 1849	17 Nov 1849	3,813	1,664	43.6
Cork	106,055	2 Mar 1849	17 Sept 1849	3,176	1,329	41.8
Belfast	63,625	4 Dec 1848	12 Dec 1849	2,705	969	35.8 ¹⁵⁶
Drogheda	19,260	2 Mar 1849	27 May 1849	214	72	33.6

Statistics taken from Report of the Commissioners of Health (1846-50), pp. 34-8.

What is known is that the epidemic lasted some eighteen months from December 1848 and was particularly notable for the large number of cases involving children and for the occurrence of cases without preceding diarrhoeal symptoms.¹⁵⁷ A breakdown of deaths by season, as Table 4.5 below demonstrates, indicates that the outbreak began slowly at first. This is also borne out by the data compiled by the Census Commissioners who recorded 3,292 cases by March 1849 but observed that morbidity figures had more than trebled to 11,129 by May.¹⁵⁸ However, this pattern of rapid escalation was not exceptional, and mirrored a similar pace of intensifying cholera cases in the spring and

¹⁵⁵ Census of Ireland (1851), p. 432.

¹⁵⁶ These figures compiled from the Commissioners of Health report are not as accurate as those published by Belfast's Board of Health which show a mortality rate of thirty-three per cent. See, *B.N.L.*, 12 Oct. 1849.

¹⁵⁷ See *Report of COH* (1846-50), p. 30. The figures are discussed in more detail below.

¹⁵⁸ Census of Ireland (1851), p. 252.

summer of 1832. In June, the epidemic abated slightly only to return with increased virulence during July and August when climatic conditions were arguably more conducive to its dissemination.¹⁵⁹ The progress of the epidemic slowed considerably by the autumn, and had significantly weakened by winter, with only 179 cases reported throughout Ireland in December.¹⁶⁰ Although the epidemic was largely over by the end of 1849, outbreaks continued to occur during 1850 with 1,768 deaths recorded by the Census Commissioners.¹⁶¹ However, it is likely that this figure has been distorted by the inclusion of deaths from cases of endemic cholera (essentially gastroenteritis), making it difficult to isolate mortality from the Asiatic strain with any precision. Overall, the commissioners report records that there had been 35,989 deaths during the epidemic but as case numbers were not included in their returns, the true mortality rate cannot be calculated. Their statistical record, therefore, must be regarded as incomplete.

Table 4.5: Cholera Deaths (Ireland) by Season 1848/49

Season	Cholera Deaths
Winter	1861
Spring	6208
Summer	10487
Autumn	17433
Total	35989

Compiled from Census of Ireland (1851), p. 252.

While the official returns of the Central Board of Health in Dublin also have been seen by Robins to be incomplete and unreliable, they do provide an indication of the scale of mortality experienced throughout the country. 45,698 cases of cholera and 19,325 deaths

¹⁵⁹ According to the meteorological records of Armagh Observatory the period between June and July was warm and wet, conditions which were ideally suited to the cholera vibrio. See monthly high temperature and rainfall for June and July 1849 in Armagh Observatory Archive of Meteorological Records, [www.http://climate.arm.ac.uk](http://climate.arm.ac.uk) (25 Apr. 2012).

¹⁶⁰ Census of Ireland (1851), p. 252.

¹⁶¹ Ibid.

were notified to the board, representing a mortality rate of just over forty-two per cent, although, as noted above, these figures excluded four significantly large counties.¹⁶² A separate return of victims who received relief under the Poor Law also recorded a much higher number of cases 55,141, than the returns of the central board.¹⁶³ Whatever the true figures are, it is indisputable, as Robins has noted, that the epidemic ‘added significantly to the death toll and aggravated the fear and desolation of those terrible years of the great famine.’¹⁶⁴

Beyond its statistical returns, the report of the Central Board of Health also offers a number of observations on the character of the 1848–49 outbreak. Most notably, it records a marked difference from the earlier epidemic in 1832, particularly the reduced incidence of premonitory diarrhoeal symptoms. Some 14,536 cases, approximately one third of the totals received by the board, were said to have shown no early warning signs.¹⁶⁵ Equally striking, was the large numbers of children attacked by cholera. From the total number of cases reported, the board observed that 4,506, just under ten per cent, involved children under the age of seven.¹⁶⁶ This pattern was also observed in Belfast. At the beginning of the epidemic, Dr Reid of the Union Fever Hospital reported six cases of cholera among the children in the workhouse nursery wards between 15 and 17 December 1848, all of which proved fatal.¹⁶⁷ This prompted the Central Board of Health to order an immediate inspection of the affected wards.¹⁶⁸ Noting that the disease was particularly prevalent among children aged between two and nine years, Reid’s principal recommendation was dietary, proposing a change from oatmeal stirabout to boiled bread and sweet milk.¹⁶⁹

¹⁶² Robins, *The miasma*, p. 148; *Report of COH (1846-50)*, pp. 29-30.

¹⁶³ Robbins, *The miasma*, p. 149.

¹⁶⁴ *Ibid.*

¹⁶⁵ *Report of COH (1846-50)*, p. 30.

¹⁶⁶ *Ibid.*

¹⁶⁷ BBOG, 16 Dec. 1848.

¹⁶⁸ *Ibid.*, 30 Dec. 1848.

¹⁶⁹ BBOG, 3 Jan. 1849.

However, he otherwise identified no obvious deficiencies, noting that the children were well clothed, the nursery wards were well ventilated, a large exercise yard was provided, and a supply of clean water was available.¹⁷⁰

Locally recorded statistics for Belfast also suffer from some of the same limitations evident in the central returns. However, careful interpretation of the available data reported in the local press, and figures drawn from the returns of the guardians, dispensary, and hospital authorities, offer a reasonably, if marginally incomplete picture of the course and impact of the epidemic in the town.

Assessing Belfast's statistics.

Overall, almost 1,200 people in Belfast died during the 1848/49 epidemic.¹⁷¹ However, as had been the case in 1832, the town's mortality rate (thirty-three per cent) was considerably lower than all but one of Ireland's large towns which had suffered comparably sized outbreaks of cholera.¹⁷² As Table 4.4 above shows, Belfast's rate was considerably lower than either of Ireland's two largest cities, Dublin and Cork, where mortality reached 43.6 and 41.8 per cent respectively. It was also significantly below that of the worst affected large towns of Waterford and Kilkenny where mortality rates of 56.3 and 50.5 per cent were recorded.¹⁷³ In comparison with industrial towns of a comparable size in England, however, Belfast's rate of mortality was considerably higher. Bristol for example had 591 deaths in a population of just over 64,000, while Wigan had 563 deaths in a population of 66,000 and Manchester with a population approaching 200,000

¹⁷⁰ Ibid.

¹⁷¹ 1,163, See *B.N.L.*, 12 Oct. 1849.

¹⁷² Only Ballina in County Mayo (population 7012) which returned 728 cases and 232 deaths had a lower mortality rate (31.8 per cent) than Belfast. See, *Report of COH* (1846-50), p. 38.

¹⁷³ See Table 4.4 above.

experienced only 878 deaths.¹⁷⁴ The lower mortality observed in these areas can be attributed to a combination of factors, including sanitary improvements, the influence of the English Public Health Act (1848) and to the often irregular nature of cholera, which meant that some of England's largest towns escaped relatively lightly, while others suffered more severely than in 1832.¹⁷⁵

As with Ireland's national figures, however, the accuracy of Belfast's mortality rate must be treated with caution. Underreporting, misdiagnosis, and the considerable number of individuals who died at home without medical attendance mean that the true scale of mortality was almost certainly higher than the recorded figures suggest.¹⁷⁶ Considerable disparity also exists in the statistics which are available for the 1848/49 epidemic in Belfast. As noted above, the final printed reports, published in the press on 12 October 1849 record 3,538 cases and 1,163 deaths.¹⁷⁷ By contrast, the report of the Central Board of Health, supposedly based on the returns of local boards, catalogues a total of just 2,705 cases and 969 deaths.¹⁷⁸

The figures presented by Dr Andrew Malcolm are similarly inconsistent. In April 1850, when giving evidence before a government commission on the Town Improvement Bill, Malcolm stated that there had been 3,952 cases and 1,092 deaths in the Belfast district.¹⁷⁹ However, in his 1852 study of the sanitary condition of the town, he published statistics derived from the returns of the town's dispensary districts. In this account, he recorded

¹⁷⁴ Figures taken from William Farr, *Report on the mortality of cholera in England, 1848-49* (W. Clowes, London, 1852), Part II - Tables, pp. 7-19.

¹⁷⁵ (11 and 12 Vict., c.63); For the most comprehensive statistics of mortality in England see Farr, *Report on the mortality of cholera in England, 1848-49*.

¹⁷⁶ Kinealy and MacAtasney add that reluctance in admitting to having cholera was a factor which affected mortality statistics. See, *The hidden famine*, p. 171.

¹⁷⁷ *B.N.L.*, 12 Oct. 1849.

¹⁷⁸ *Report of COH* (1846-50), pp. 34-8.

¹⁷⁹ *B.N.L.*, 5 Apr. 1850. The General Dispensary's report from January 1850 lists just 430 deaths from the same number of cases. See *B.N.L.*, 11 Jan. 1850.

2,232 cases and 702 deaths across all districts, representing a mortality rate of thirty-three per cent. He then listed the Cromac district separately, likely due to the severity of its returns, recording 445 cases and 191 deaths (a mortality rate of forty-three per cent). Combined, these figures produce totals of 2,677 cases and 893 deaths, maintaining the same overall mortality rate but differing significantly from his earlier evidence.¹⁸⁰ Further inconsistency appears in his tabulated dispensary returns (reproduced in Table 4.6 below), where Malcolm records a total of 2,057 cases, 620 fewer than his previously combined figures and 1,481 fewer than those reported in the local press. While it is possible that Malcolm excluded cases treated in the Union Hospital, he offers no explanation for these discrepancies.

Table 4.6: General Dispensary Returns of Asiatic Cholera in 1849.

District	Cholera Cases
DOCK	182
SHANKHILL	425
CROMAC	357
HOSPITAL	225
SMITHFIELD	458
COLLEGE	410
TOTAL	2057

Table reproduced from Malcolm, *The sanitary state of Belfast*, p. 28

It is unlikely however that either Malcolm's figures or those published in the press fully capture the true impact of cholera in Belfast during 1848/49. Many patients were attended in private practice and thus were never reported in official returns. In other cases, as the dispensary committee acknowledged, medical aid was often delayed, or avoided altogether, 'on account of vulgar prejudice, on the part of the patient or friends.'¹⁸¹ The

¹⁸⁰ Malcolm records that this represented a mortality rate of 33 per cent. However, the correct percentage is 31.45 per cent or 35.5 per cent if combined with his statistics for Cromac district. See Malcolm, *The sanitary state of Belfast*, p. 28.

¹⁸¹ *B.N.L.*, 11 Jan. 1850.

committee was nevertheless keen to defend its record of care, noting that their arrangements with the board of guardians ensured that at least one member of the medical staff was always in attendance at the dispensary. Its report also reveals that medical opinion in Belfast with regard to the contagious nature of cholera did not entirely align with that of the Central Board of Health.¹⁸² For example, all six of the medical attendants in the town maintained that, ‘irrespective of its epidemic character, the disease is, also assuredly contagious, numerous cases having occurred in which direct communication could be traced.’¹⁸³ With the epidemic at an end the committee concluded that the town could be considered to be in a generally healthy condition. The condition of poor however, continued to be a significant concern. The majority of diseases treated at the dispensary, it observed, could be attributed to destitution. ‘Was this cause removed,’ it stated, ‘our lanes and courts instead of being nurseries of crime, would, when put in a proper sanitary condition, become abodes of industry and sobriety.’¹⁸⁴

The disparities and inconsistencies evident in the available statistics also raise a broader question. Why, despite the arguable improvement of public health measures, was mortality from cholera higher in 1848/49 than it had been in 1832/33? The timing of the epidemic is central to this. Its arrival on the coattails of the famine, and amid widespread disease meant that cholera encountered a population already weakened by hunger and fever with reduced resistance to infection. In such conditions, it was often able to exact a significantly more severe toll.

¹⁸² The board felt bound to state that while the contagious nature of cholera was a subject ‘enveloped in great obscurity,’ the weight of evidence was decidedly in favour of the opinion that contagion had little, if any influence on cholera’s propagation. See, *Report of COH* (1846-50), p. 30.

¹⁸³ *B.N.L.*, 11 Jan. 1850.

¹⁸⁴ *Ibid.*

After the outbreak

Following the end of the epidemic the ensuing decade saw some improvement in aspects of Irish health care. Under the 'Medical Charities (Ireland) Act' (1851) the country's dispensary system was brought under the control of the Poor Law Commission, which itself was restructured to include a medical commissioner and medical inspectors. The commission was also granted the authority to enforce the 'Nuisance Removal' and 'Disease Prevention' Acts during periods of crisis, particularly in the event of outbreaks of epidemic disease.¹⁸⁵ In effect, as Ronald Cassell has observed, the commission evolved into something resembling a national board of health. This provided Ireland with a system of medical and public health care unmatched in England until the establishment of the English Local Government Board in 1871.¹⁸⁶ This was both an important and unquestionably necessary requirement. Although the impact of cholera diminished in comparison to the epidemics of 1848/49, other acute diseases would become increasingly prominent in Ireland during the latter half of the nineteenth century. Tuberculosis (TB), for example, emerged as one of the greatest threats to health, particularly among young adults.¹⁸⁷ While its prevalence had been considerable earlier in the century, its effects had been overshadowed by the more dramatic epidemics of cholera and fever.¹⁸⁸ Increasingly however, TB and other diseases, along with industrial accidents would supersede cholera to further reflect the wider consequences of rapid industrialisation, urban development and evolving public health responses. While cholera would also visit Belfast twice more in 1855 and again in 1866, but on both occasions the outbreaks were much less virulent than in 1848/49. This was largely due to the continuing development of public health

¹⁸⁵ Cassell, *Medical charities, medical politics*, p. 78.

¹⁸⁶ *Ibid.*

¹⁸⁷ Jones, *Captain of all these men of death*, p. 19.

¹⁸⁸ Jones, 'The campaign against tuberculosis,' p. 158.

provision and sanitary reform. Although significant, the ongoing response to cholera was nevertheless, by no means unproblematic.

Conclusion

Across Ireland's towns and cities, the toll inflicted by cholera during 1848/49 was disproportionately high when compared to the rest of the United Kingdom. As this chapter has shown, this can be attributed in large part to the appalling social conditions endured by the labouring population. This was particularly evident in Belfast where significant numbers of destitute people, either through choice or repatriation, sought solace following the onset of the famine in 1845. Other factors also contributed to the spread of the disease. A persistent mistrust of the medical profession meant that many among the poor refused treatment or delayed seeking assistance. At the same time, long-established insanitary practices, such as the use of communal privies, middens, and dung heaps in close proximity to dwellings, continued to facilitate the transmission of disease.

At a central level, responses to epidemic disease showed limited development by the mid-nineteenth century. Preventative measures and recommended treatments largely replicated those employed during earlier outbreaks of cholera and fever. Indeed, by 1848, central policy, particularly the General Board of Health's continued insistence on the non-contagious nature of cholera, had arguably regressed. Crucially, this position led to the dissemination of advice which, in practice, may have contributed to the further spread of the disease, especially within the poorest and most densely populated urban districts.

Local responses in Belfast were, in many respects, much more effective than those employed elsewhere, and the town experienced lower rates of mortality in 1848/49 than many similar Irish towns. Nevertheless, improved preparation did not prevent cholera from taking hold in Belfast. This was closely linked to the effects of famine era inward

migration which increased levels of poverty and exacerbated existing sanitary deficiencies. While Belfast's civic authorities were often overwhelmed by the enormity of the scale of the issues that they faced, they should also be credited with introducing important legislative measures during the 1840s. The sanitary provisions of the Town Improvement Acts, in particular, demonstrate a growing recognition of the importance of public health among both the corporation and the board of guardians. However, it is evident that this legislation was often uneven in its application, and while it did have a significant impact on the most visible parts of Belfast, often, the poorest districts remained neglected. The high mortality rates recorded in these areas, where sanitation and living conditions were at their worst, therefore serve as evidence of the broader consequences of rapid industrialisation, urban expansion, and an underdeveloped public health system in mid-nineteenth-century Belfast that would continue into the latter half of the period.

Chapter Five

The lead up to the cholera epidemic of 1853-55

Introduction

The following chapter examines developments in medical and public health following the end of the famine and in anticipation of a further outbreak of cholera during the 1850s. Particular attention is given to the sanitary condition of industrial Belfast, the individuals who campaigned for improvements in public health, and the factors which delayed more extensive sanitary reform. The chapter also considers popular attitudes towards disease and the changing nature of illness in post-famine Ireland, alongside continuing debates within medical circles concerning the causes and transmission of epidemic disease. Finally, it assesses the impact of the Medical Charities Act upon medical relief and public health administration and examines the impact that the legislation had upon medical provision and public health in Belfast.

Following famine, fever and the cholera outbreak of the late 1840s incidences of epidemic disease in Ireland began to diminish from the 1850s onwards.¹ However, a similar shift in mortality rates was common throughout Europe and formed part of the wider 'epidemiological transition' in which deaths from infectious disease were gradually overtaken by those caused by degenerative illnesses, including cancer and pulmonary and respiratory illnesses.² One of the central questions in the historical study of disease and public health has been whether declining death rates came from sanitary reform or

¹ Kinealy and McAtasney, *The hidden famine*, p. 187; Robins, *The miasma*, p. 203.

² Deborah Brunton, 'Dealing with disease in populations' in Brunton (ed.), *Medicine transformed: Health disease and society in Europe 1800-1930* (The Open University, 2004). p. 206.

changes to public attitudes towards health and hygiene.³ But, as improvements to sanitary practices, particularly among the poor, occurred slowly, it is arguable, as Thomas McKeown has suggested, that the decline in mortality during the latter half of the nineteenth century resulted from a combination of sanitary improvement together with broader economic and social reforms.⁴ In line with McKeown's thesis, it may be argued that improvements in diet, sanitation, living conditions, and hygienic practices did as much to improve public health as advances in medical knowledge and treatment. However, McKeown's interpretation remains controversial, and it is equally important to recognise that significant changes also occurred in the administration of public health. In Ireland, where the provisions of the Public Health Act (1848) were not extended, local administrative bodies continued to play a central role in the delivery and enforcement of public health measures.

The realisation of the need to reform the structure of medical provision largely came about after 1847 when the 'Irish Poor Law Extension Act' changed the nature of the delivery of relief by making the Poor Law Commission the main agency for the provision of assistance.⁵ As famine, fever, and cholera gradually receded, the Irish Central Board of Health was dissolved in August 1850.⁶ In 1851, after the introduction of the 'Medical Charities Act,' the fight against infectious disease also became the responsibility of the

³ Brunton 'Dealing with disease,' pp. 192-5; Porter, *Health, civilisation and the state*, pp. 1-6.

⁴ See Thomas McKeown, *The modern rise of population* (Academic Press, London, 1976). McKeown's thesis continues to court controversy and debate to the present. For some modern interpretations and challenges of his theory see James Colgrove, 'The McKeown thesis: A historical controversy and its enduring influence' in *American Journal of Public Health*, Vol. 92(5) (2002), pp. 725-9. Bernard Harris, 'Public health, nutrition, and the decline of mortality: The McKeown thesis revisited' in *Social History of Medicine*, Vol. 17(3) (2004), pp. 379-407; Szreter, 'The importance of social intervention in Britain's mortality decline, pp. 1-37; Idem., 'Rethinking McKeown: The relationship between public health and social change' in *American Journal of Public Health*, Vol. 92(5) (2002), pp. 722-5; Anne Hardy, *The epidemic streets: Infectious disease and the rise of preventative medicine, 1856-1906* (Clarendon Press, Oxford, 1993).

⁵ 10 and 11 Vict., c. 31; Kinealy and McAtasney, *The hidden famine*, p. 139.

⁶ *Report of COH* (1846-50), p. 2.

Poor Law authorities.⁷ The legislation centralised and regulated Ireland's dispensary system by dividing the country into dispensary districts, each served by a qualified medical officer. One of its most important achievements, however, was the provision of a medical service outside the workhouse, significantly changing the nature of medical care for the poor.⁸ Nevertheless, much of the drive to improve public health continued to be influenced by the needs of boards of guardians and local municipal bodies, something that became particularly apparent when cholera returned to Ireland once more in 1853.

Expanding Belfast: Urbanisation, Accommodation and Prevailing Sanitary Issues

Throughout Ireland, the years after the Famine brought about, as Tony Farmar argues, a revolution at the lower and upper ends of the country's social scale.⁹ Cormac Ó'Gráda, for example, has observed that the immediate impact of the famine saw over 200,000 smallholdings obliterated, while Peter Gray notes that the very poorest cottier class had been largely eradicated as a consequence of a quarter-acre clause inserted into the amended Poor Law Bill.¹⁰ Yet, one of the most significant outcomes of these social changes was the increasing urbanisation of the Irish population as growing numbers of rural residents moved into towns in search of employment. Nowhere was this more evident than in Belfast where industrial progression presented an attractive proposition to thousands of Ulster's labouring population.

⁷ 'Medical Charities Act' (1851) (14 and 15 Vict., c.68).

⁸ Burke, *The people and the Poor Law*, pp. 153-5.

⁹ Farmar, *Patients potions and physicians*, p. 80. See also, Gray, *Famine land and politics*, p. 278. This 'perfect social revolution' had previously been predicted by George Poulett Scrope, in a House of Commons debate on 29 Mar. 1847; *Hansard*, xci, 575-613 (29 Mar. 1847), pp. 588-9; also quoted in Gray, *Famine land and politics*, p. 278. For more on the impact of the famine in Ireland see, Daly, *The famine in Ireland*, pp. 113-24; Kinealy, *A death-dealing famine*; Eadem, *The great Irish famine*; Cormac Ó'Gráda, *The great Irish famine* (Cambridge University Press, Cambridge, 1995); Idem, *Black '47 and beyond*. Much less has been written on Ulster, however, see, James Grant, *The great famine in the province of Ulster: The mechanisms of relief* (Unpublished PhD Thesis, Queen's University Belfast, 1986); Kinealy and Parkhill (eds), *The famine in Ulster*; Kinealy and MacAtasney, *The hidden famine* and for a more recent though less academic assessment Michael Sheane, *Famine in the land of Ulster* (Stockwell, Ilfracombe, 2008).

¹⁰ Ó'Gráda, *The great Irish famine*, p. 62; Gray, *Famine land and politics*, pp. 278-9.

This process of social restructuring was not confined to the lower classes, significant changes also occurred among the landed and professional elites following the transfer of bankrupt ascendancy estates to solvent and mostly Irish purchasers through the Encumbered Estates Court.¹¹ The resultant social vacuum was filled by the professional and business classes contributing further to Belfast's rapid expansion.¹² Although its official designation remained that of a town, Belfast was also increasingly assuming the character of a modern industrial British city rather than developing along the lines of its Irish contemporaries.¹³ Alongside its population growth and industrial progression, came closer links to the ideals of mid and late-nineteenth-century British urbanisation, which emphasised the development of civic pride and a stronger commitment to urban improvement.¹⁴ This had been evident even from the earlier part of the period and Sean Connolly has attributed this evolution to the transfer of civic power from an aristocratic proprietor to an elected corporation.¹⁵ By the mid and latter decades of the nineteenth century, Belfast's increasing commercial and civic importance encouraged attempts to emulate Britain's leading industrial centres through the construction of new civic buildings, with a new urban environment, including wider streets, and an increasingly non-residential commercial centre.¹⁶ Even contemporaries who remained deeply critical of Belfast's sanitary failings acknowledged aspects of this transformation. In his 1852 report to the British Association, for example, Dr Andrew Malcolm, while condemning the sanitary conditions that prevailed across much of the town, nevertheless praised the

¹¹ Transfers of land equated to a quarter of the land of Ireland, see Farmar, *Patients potions and physicians*, p. 80.

¹² *Ibid.*, Bardon, *Belfast an illustrated history*, p. 89.

¹³ For more on this see, Beckett and Glasscock (eds), *Belfast: The origin and growth of an industrial city*, p.189; Froggatt, 'Industrialisation and health in Belfast,' p. 171; Kennedy and Ollerenshaw (eds), *An economic history of Ulster*, p. i, 62 and 101; Johnson, *Middle class culture and civic identity*, pp. 260-1. See also, Bew, *The glory of being Britons*; Connolly, 'Belfast: The rise and fall of a civic culture.'

¹⁴ Connolly, 'Belfast: The rise and fall of a civic culture,' p. 26.

¹⁵ *Ibid.*, p. 28.

¹⁶ Connolly, 'Imagining Belfast,' pp. 1-4.

success of several of the recent improvements that had been introduced by the municipal authorities. Referring, in particular to the redevelopment of Great Victoria Street, formerly one of the towns worst districts, where ‘nought but vice, death, and poverty held their fearful orgies,’¹⁷ Malcolm approvingly observed that: ‘New lungs and new life have been created in the very heart of this locality’ producing a ‘splendid array of marts and emporia of trade and commerce.’¹⁸

Yet, civic improvement and commercial expansion did not necessarily translate into healthier living conditions for much of Belfast’s population. Accompanying this growing sense of civic pride, was an increasing awareness of, and an ongoing desire to improve the town’s severe public health problems. This was reinforced, at least in part, by Malcolm’s calculations in 1850 which suggested that life expectancy in Belfast was an astonishingly low nine years of age.¹⁹ Belfast therefore appears to have possessed not only one of the highest mortality rates in Ireland, but possibly one of the worst in the United Kingdom.²⁰ Reflecting on these conditions, Malcolm argued that while the mortality rate throughout the United Kingdom could be reduced to 1:50 through effective sanitary reform, Belfast’s stood at 1:35, significantly worse than the 1:57 recorded for Ireland as a whole, resulting, he claimed, in the loss of between eight and nine hundred lives annually.²¹ Nevertheless, although public health improvements in Belfast were strongly advocated by a small group of medical reformers, including Malcolm himself, progress

¹⁷ Malcolm, *The sanitary state of Belfast*, p. 6.

¹⁸ *Ibid.*

¹⁹ This figure Malcolm attributed to the fact that almost half of Belfast’s living population were under the age of twenty, stating, ‘hence we have a preponderating young population, which alone necessarily accounts for a large infantile mortality. See Belfast Town Improvement Bill - Government Commission, in *B.N.L.*, 5 Apr. 1850 and Malcolm, *The sanitary state of Belfast*, p. 10.

²⁰ Maguire, *Belfast*, p. 40; Bardon, *Belfast*, p. 104.

²¹ Malcolm, *The sanitary state of Belfast*, p. 10.

remained slow and uneven, with only piecemeal advances achieved before the twentieth century.

Driven by industrial progress, the two decades following 1851 marked a period of unexampled expansion and urban development in Belfast.²² Its success was such that it attracted ever greater numbers of labourers to the town. As Table 5.1 demonstrates, Belfast's population increased by almost forty per cent between 1851 and 1861, creating an ever-growing demand for accommodation among its labouring population.

Table 5.1: Comparison of Belfast's Population in Each of the Seven Censuses Between 1821 and 1881.

Census Periods	Population		Total Population	Increase of Population between census periods	
	Male	Female		People	%
1821	17,370	19,907	37,277		
1831	24,548	28,739	53,287	16,010	42.95
1841	32,635	37,812	70,447	17,160	32.20
1851	40,966	46,096	87,062	16,165	23.58
1861	55,842	65,760	121,602	34,540	39.67
1871	79,815	94,594	174,412	52,810	43.42
1881	94,844	113,278	208,122	33,710	19.33

Statistical data from: Census of Ireland, 1881, Part I, Area, population and number of houses; occupations, religion and education. Vol. III. Province of Ulster, BPP 1882 lxxviii [C.3204]141.

Reflecting the broader pressures of population increase and industrial expansion the housing stock in the town had also increased markedly, rising from 9,501 houses in 1831 to 17,156 by 1852.²³ In 1853, following the recommendations of Captain Yarde Gilbert, the commissioner appointed to investigate extending the municipal boundary, the geographical area of Belfast was further enlarged. Under the 'Belfast Borough Extension

²² Owen, *A history of Belfast*, p. 277.

²³ *Report of Captain Gilbert on the proposed extension of the boundaries of the borough of Belfast as set out in the proposed bill; together with copies of all documents and memorials laid before him, approving or objecting to such extension by parties owner*, pp.1-22, H.C. 1852-3 (958) xciv. Hereafter, *Report of Captain Gilbert*.

Act,' the town boundary was extended from one and a half to ten square miles.²⁴ Justifying the enlargement, Gilbert observed that:

The increase of building and population is concurrent with and chiefly consequent upon, the thriving state of the linen manufactures in the town and neighbourhood, and the favourable position of Belfast as a seaport, and an outlet for the trade and produce of Ulster.²⁵

The new boundary extended as far north as the Mineral Water Works, near the terminus of the Northern Counties Railway, and as far south as a line just beyond the modern site of Adelaide Park, off the Malone Road. To the east it reached the Connswater River, where the Belfast Ropeworks would be established, and on the west to the junction of the Ardoyne and Crumlin Roads.²⁶ The Borough extension also provided the corporation with a short lived financial advantage as the town's Poor Law valuation was raised from £156,645 to £250,000 largely as a result of the corporation's new ability to draw rates from and apply its regulations to the town's expanding suburbs.²⁷ However, the same period also saw a decline in the momentum of earlier improvement schemes, and sanitary progress was significantly hindered after 1855 by the Court of Chancery's investigation into the corporation's political and financial conduct.²⁸

²⁴ 'Belfast Borough Extension Act' (1853) (16 and 17 Vict., c.114). *Report of Captain Gilbert*, pp. 1-22.

²⁵ *Report of Captain Gilbert*, pp. 1-22. In terms of sea trade, Belfast had become the largest port in Ireland by 1852. As a result of the completion of the deep-water Victoria Channel in 1849 and the Clarendon Dock in 1851 tonnage had increased 110 per cent from 1836 to 1853 from 309,256 to 684,156 tonnes. See, *Report of Captain Gilbert*, pp.1-22. For more on the growth of the port see Robin Glasscock, 'The growth of the Port' in Beckett and Glasscock (eds), *Belfast: The origin and growth of an industrial city*, pp. 98-108 and for industrial growth see, Maguire, *Belfast*, Chapters 2 and 3; Owen, *A history of Belfast*, p. 277; Stephen A Royle, *Workshop of the Empire 1820-1914* in Connolly (ed.), p. 203; Royle., 'Clanging Belfast,' Chapter 2.

²⁶ Owen, *A history of Belfast*, p. 278. See also: Great Britain, The Statutes of the United Kingdom of Great Britain and Ireland [1807–1868/69] (London: His Majesty's Statute and Law Printers, 1807–1869), 63 vols. Continues The Statutes at Large from Magna Charta, by Danby Pickering. Vols. 98–109 edited by George K. Rickards. pp. 962-969.

²⁷ Bardon, *Belfast*, p. 105.

²⁸ For the details of the Chancery Suit see, Budge and O'Leary, *Belfast: Approach to crisis*, pp. 60-1; Slater, *Belfast politics*, pp. 280-7.

Housing and Sanitation

The expansion of linen manufacturing together with the construction of new factories and accommodation for their workers, was one of the most significant forces behind Belfast's development in this period. However, industrial progress also carried substantial sanitary consequences. Dependant on access to reliable water supplies in order to facilitate steam production, most of these new ventures were established in areas close to the various watercourses that flowed into the town, several of which also supplied water to local residents. In October 1832 there had been twelve linen mills in Belfast; by 1860 however, this had increased to thirty-two.²⁹ Their expansion created increased levels of wastewater which accumulated in highly unhygienic cesspools or was discharged directly back into the surrounding rivers and streams, further contaminating sources of fresh water. Although it is improbable that the cholera vibrio entered the water supply as a direct result of industrial pollution, these conditions nevertheless further restricted access to sufficient supplies of clean water both before and during the subsequent cholera epidemic.

The sanitary pressures created by industrialisation also extended well beyond contamination of the water supply. Rapid industrial growth also produced an increasing demand for housing in Belfast and while the municipal authorities exercised much stricter controls over dwelling construction, owing to new building regulations introduced under the 1845 'Town Improvement Act,' much of the accommodation occupied by the labouring classes continued to be small cramped and overcrowded.³⁰ Conditions that were undoubtably important factors in the spread of infectious disease. Houses commonly consisted of two-story buildings containing four rooms ranging from seven to ten feet

²⁹ In 1829 there had been only one mill with 15,000 spindles but by the beginning of 1853 this had increased to 506,000 spindles 100,000 of which had been added during the previous year. See, *Report of Captain Gilbert*, pp.1-22. See also, Owen, *A history of Belfast*, p. 277.

³⁰ (8 and 9 Vict., c.142). Transcript of; The Belfast Improvement Act, (1845).

square, usually housing two families. Typically, as many as ten people shared the available space, although houses accommodating eighteen to twenty occupants were not uncommon.³¹ Nevertheless, the 1845 act did introduce some improvements. By stipulating that that new houses erected in any court or alley were not to be narrower than twenty feet and were required to have an open passage at each end at least twenty feet wide, the legislation ensured that new buildings were somewhat larger and benefited from better ventilation than had previously been possible.³² These developments certainly pleased Andrew Malcolm who had been severely critical of the earlier construction of working class tenements, remarking that: ‘the tendency to crowd them into the smallest space is so great, that it would seem to be an understood law of nature that the indigent do not actually require as much fresh air as the wealthy.’³³ Malcolm was therefore gratified by the improvements afforded to poorer residents, which he attributed partly to a gradual change in attitudes towards the responsibilities of landlords and partly to the stricter oversight exercised by municipal officers over the construction and management of tenements and lodging houses.³⁴

By January 1853, the corporation had invested extensively in making improvements to Belfast. It had purchased and pulled down several streets in the old part of the town and erected new wide streets in their place, while several market and manorial rights had also been acquired. In total, corporation expenditure on improvements to the town between 1845 and 1853 amounted to £245,243.³⁵ As a result, the commissioners tasked with enquiring into the state of the labouring poor in Ireland confidently expressed the view

³¹ Malcolm, *The sanitary state of Belfast*, p. 6.

³² 8 and 9 Vict., c.142.

³³ *Ibid.*

³⁴ Malcolm, *The sanitary state of Belfast*, p. 8

³⁵ Owen, *A history of Belfast*, p. 278. By 1854, corporation borrowing to facilitate the Improvement Acts had risen to over £273,000. See, *Report of the Commissioners into the state of Municipal Affairs of the Borough of Belfast, in Ireland, with appendices and minutes of evidence*, p. 9. H.C. 1859 (2470), xii, 305. Hereafter, *Report on Municipal Affairs* (1859).

that the accommodation which housed Belfast's labouring poor was superior to that afforded to those of similar stature in other towns.³⁶ Yet, in the poorest districts, particularly those hidden from view by the handsome facades of Victoria Street and High Street, conditions in many courts and alleys remained bleak and insanitary.

Following the boundary extension, Reverend William O'Hanlon, described Belfast as a 'monster town,' though the description could equally have applied to many of the streets he encountered in the course of his work.³⁷ From 1853 onwards, O'Hanlon wrote a series of letters in the *Northern Whig*, later transcribed into book form.³⁸ Within his highly significant social commentary O'Hanlon commented extensively on the dire sanitary conditions of Belfast's inner streets and regularly appealed for sanitary and other improvements to be made. O'Hanlon's *Walks Among the Poor of Belfast*, together with the diary of his contemporary, the Unitarian Domestic Missionary, Rev. Anthony McIntyre, and Dr Andrew Malcolm's earlier paper to the British Association for the Advancement of Science, *The Sanitary State of Belfast and Suggestions for its Improvement*, provide, despite their differing perspectives, a stark picture of the conditions endured by Belfast's labouring population and of the continuing shortcomings of public health provision in the town.³⁹ These contemporary observations not only illuminate conditions in the early 1850s, but also introduce many of the sanitary and social

³⁶ See: *Third report of the Commissioners enquiring into the condition of the poorer classes in Ireland*, p. 38. H.C. 1836 (43), xxx. Hereafter, *Third report PLC* (1836). See also Malcolm, *The sanitary state of Belfast*, p. 6.

³⁷ Bardon, *Belfast*, p. 89.

³⁸ William Murphy O'Hanlon, *Walks among the poor of Belfast and suggestions for their improvement* (Henry Greer, Belfast, 1853). O'Hanlon's writing is, as historian Andrew Boyd states in the forward to the reprint of O'Hanlon's book (1971 see, p. v), an important social document as it paints a first-hand picture of the social conditions endured by people whose lives would have otherwise remained unrecorded. There are few modern works on the town which do not include reference to this important social commentary. See for example, Connolly (ed.), *Belfast 400*; Sean Farrell, *Rituals and riot: Sectarian violence and political culture in Ulster 1784-1886* (University Press of Kentucky, Kentucky, 2000); Kinealy and McAtasney, *The hidden famine*; Maguire, *Belfast*.

³⁹ Diary of Rev. Anthony McIntyre of visits to the poor in central Belfast, PRONI, D1558/2/3.

problems that continued to shape public health debates in Belfast throughout the following chapters.

In his assessment of the town's sanitary condition, Malcolm identified a number of areas requiring urgent improvement and argued that existing local legislation remained, 'defective for the purpose of instituting any fundamental or leading and permanent sanitary improvement.'⁴⁰ O'Hanlon likewise believed that responsibility for sanitary reform extended beyond the municipal authorities alone and that the townspeople themselves had failed to take sufficient interest in the issue. 'A terrible responsibility lies somewhere,' he remarked, adding:

It is to be greatly feared, that the rate-payers and general community have not continued to take sufficient interest in the affair, and that many who should have taken the lead have tacitly acquiesced in the notion that it was none of their business to interfere in such matters:- and so neglect has aggravated the evil tenfold.⁴¹

The diary entries of Anthony McIntyre meanwhile present a more anthropological, but no less harsh, account of conditions among the poor of central Belfast during the early to mid-1850s. His experiences among the town's destitute inhabitants reveal an equally bleak picture of the extent of deprivation endured by the labouring population who occupied the town's back streets. In one entry, describing the conditions of the home of John Burns in Bells Lane, Smithfield, he observed that: 'They (he and the wife) have one child. They are living in the greatest filth. One would suppose that their persons had never been washed. No furniture in the house, the little boy not at school.'⁴² Of the surrounding district, McIntyre further recorded: 'I visited here for five hours and witnessed such

⁴⁰ Malcolm, *The sanitary state of Belfast*, p. 18.

⁴¹ O'Hanlon, *Walks among the poor*, p. 54.

⁴² Diary of Rev. Anthony McIntyre, 14 Oct. 1853.

scenes of filth, ignorance and depravity as produced a general nausea, so that I returned home both sick and sorrowful on account of the sights I had beheld.⁴³

Appeals for assistance were also a regular feature of McIntyre's journal. A few days later, while visiting the Millfield district in central Belfast, he encountered Rose McKeown, 25 Millfield, who together with other lodgers in the same house had complained to their landlady regarding its condition. The tenants alleged that the landlady kept the house in an extremely poor sanitary state, especially with regard to sewerage. Distressed by the terrible conditions, McKeown asked McIntyre both to speak to the landlady (who lived next door) and to request an inspection by the sanitary inspectors explaining that the conditions were so suffocating, that they dare not open the windows.⁴⁴ Later, during a visit to Hudson's Entry, which he noted was, 'a filthy place in every sense,' McIntyre learned that the sewers had not been opened for more than three years.⁴⁵ Similar scenes of social distress in the poorest streets of Belfast permeate the remainder of McIntyre's journal. His evidence suggests that the consumption of alcohol was common and that wholesome food was scarce. Ultimately, he concluded that; 'The greater part of the evils of society are not physical but moral. Nine tenths are perhaps traceable to the drinking habit of society.'⁴⁶

Despite the bleak description of circumstances in of many of these accounts as well as the numerous requests for relief, the writings of both McIntyre and O'Hanlon also suggest that in some areas, working-class living conditions were beginning to improve. In

⁴³ Ibid.

⁴⁴ Diary of Rev. Anthony McIntyre 17 Oct. 1853.

⁴⁵ Ibid., 21 Oct. 1853.

⁴⁶ Diary of Rev. Anthony McIntyre, 14 Oct. and 28 Nov. 1853. One family he discovered: 'had by some means got a head of cabbage, had boiled it in water and were eating it as the first meat they had had that day (it was about twelve o'clock.)' In one house in Talbot Court he, 'caught the parties drinking whisky, though it was only about half past nine a.m. One neighbour woman appeared to be nearly drunk.'

Anderson's Row, Millfield, for example, reasonably well designed housing, regulated through agreements between both landlords and tenants was said to provide comparatively tolerable living conditions.⁴⁷ Similarly, in Davidson's Court off Durham Street in South Belfast, one landlord was praised for providing, 'little palaces for cleanliness and beauty,' while the Falls Mill of John Charters and Company was commended for supplying workers' housing which was regularly whitewashed, provided with running water, and were no less expensive than other mill workers housing.⁴⁸ Nevertheless, reasonably comfortable accommodation tended to be the exception rather than the norm, and O'Hanlon remained anxious to see continued improvement. Comparing the conditions of Belfast's labouring classes to those elsewhere in the United Kingdom he observed:

I will not venture to assert, that the condition of the lowest poor of Belfast exhibits a picture of greater actual destitution and neglect than may be found in other parts of the empire...but I must say that the contrasts which glare out upon the eyes as it descends from the summit to the base of the social fabric here is stronger than I ever remember to have seen it in any other locality.⁴⁹

'Is it, indeed true' he continued:

That in this Northern Athens of ours with its seats of learning, its collegiate and academic halls...its public edifices of various kinds not wanting in architectural ornament and beauty...we have in our back lanes and alleys, an amount of wretchedness...which, if not absolutely, is at least relatively larger and more appalling, than may probably be found beside, throughout the length and breadth of the land.⁵⁰

Although O'Hanlon acknowledged that some sanitary improvement had been achieved, he nevertheless believed that little had yet been done to effect any fundamental

⁴⁷ Royle, *'Clanging Belfast,'* p. 18.

⁴⁸ O'Hanlon, *Walks among the poor,* p. 28 -31 and p. 59; Royle, *'Clanging Belfast,'* pp. 18-19.

⁴⁹ O'Hanlon, *Walks among the poor,* p. 49.

⁵⁰ *Ibid.,* pp. 49-50.

transformation in Belfast's condition.⁵¹ Noting that there were diseases at work, 'at the very core of the social body' he argued that some areas, and persistent issues, particularly the unresolved matter of Blackstaff River were even worse than when he had first encountered them. While observing that public concern regarding sanitary matters had increased he reasoned that, 'a measure of exertion would be required to atone for past indifference.'⁵² O'Hanlon therefore advocated a far more coordinated response proposing that the establishment of a sanitary committee with a general committee divided to oversee the town's wards be formed, operating in cooperation with both the corporation and the board of health.⁵³ Pointing towards similar arrangements in Manchester, he believed that an organised system of cooperation and delegated responsibility could bring about, 'a satisfactory change in the entire sanitary economy of the town and neighbourhood.'⁵⁴

Many of O'Hanlon's concerns echoed those already expressed by Andrew Malcolm in his 1852 paper delivered before the British Association meeting in Belfast. Malcolm warned of the likely return of cholera and highlighted the town's unfavourable geographical position for drainage, the continued overcrowding and poor construction of working-class housing, and the deterioration of sanitary precautions following the subsidence of the previous epidemic.⁵⁵ 'Are we prepared?' Malcolm asked. 'We fear not,' he argued, adding:

Almost all our sanitary associations in England and Ireland have ceased operations since the subsidence of the last epidemic....and we have no reason for supposing that the sudden burst of enthusiastic exertions then everywhere made has materially altered our sanitary position since.⁵⁶

⁵¹ O'Hanlon, *Walks among the poor* p. 51.

⁵² *Ibid.*, p. 54.

⁵³ O'Hanlon, *Walks among the poor* pp. 55-6.

⁵⁴ *Ibid.*

⁵⁵ Malcolm, *The sanitary state of Belfast*, p. 7.

⁵⁶ Malcolm, *The sanitary state of Belfast*, p. 7.

In Malcolm's opinion, the cleanliness of Belfast's streets and the efficiency of sewerage were matters of utmost importance. Although he acknowledged that the town's main thoroughfares were well maintained he observed a 'lamentable deficiency' in the poorer districts.⁵⁷ One of the most persistent issues was the accumulation of household waste, much of which continued to be deposited in communal middens or in the streets outside residences. While responsibility for the removal of this waste fell to the corporation's scavengers, Malcolm believed that the service remained inadequate in many areas, leading to what he described as, 'an accumulation of offensive remains.'⁵⁸ Waste from outhouses, much of it accumulated in communal privies, owing to the absence of as private facilities in poorer districts, created an even greater hygienic issue.⁵⁹ During the course of his investigations, Malcolm identified; 'upwards of 3,000 houses which were without back yards' while many more, he noted, were 'deficient in still more necessary accommodation.'⁶⁰

The Supply of Water

The regular supply of clean, fresh and uncontaminated water, a matter of particular importance in terms of cholera prevention, also had remained unresolved by mid-century. In 1852, Malcolm observed that only 3,000 out of 10,000 houses in Belfast were supplied with piped water, most of which had no cisterns.⁶¹ The remaining 7,000 houses were supplied from twenty-four public fountains, by water carts, or from pumps sunk by landlords.⁶² Malcolm was additionally concerned by the practice of watering the streets

⁵⁷ Ibid.

⁵⁸ Malcolm, *The sanitary state of Belfast*, p. 7.

⁵⁹ Ibid.

⁶⁰ Malcolm, *The sanitary state of Belfast*, p. 8.

⁶¹ Ibid., p. 7.

⁶² Malcolm, *The sanitary state of Belfast*, p. 8.

in dry weather using supplies drawn from the docks and nearby streams, sources whose questionable purity, he believed, could only further damage the atmosphere of the town.⁶³

Although some efforts to improve supply had been taken by the Belfast Spring Water Commissioners from the 1840s, little substantial progress in the provision of water was achieved before the beginning of the twentieth century when water was supplied to Belfast from the Silent Valley reservoir in County Down.⁶⁴ Prior to this, most of the towns' supply came from the Middle and Clear water basins on the Antrim Road which were fed by a reservoir at Carr's Glen. Additional improvements included the laying of cast iron pipes connected to a newly constructed reservoir at Oldpark, which for the first time allowed water to be forced under pressure into domestic and commercial premises.⁶⁵ Yet, despite these developments, the supply remained inadequate for the needs of the expanding town and alternative solutions to augment the existing supply needed to be s.

In 1851, as the demand for water increased markedly, a consultant water engineer John Frederick Bateman began an enquiry into how additional supplies could be obtained for the town.⁶⁶ Referring to the towns circumstances in his report, Bateman stressed the urgency and necessity of securing full and ample supply, observing that; 'There is scarcely any town in the kingdom where the population is increasing at so rapid a rate in proportion to its size: nor where an inefficient supply of water for the various increasing mercantile establishments would be more severely felt.'⁶⁷

⁶³ Ibid.

⁶⁴ For more on Belfast's water supply see Jack Loudan, *In search of water: Being a history of the Belfast water supply* (W.M. Mullan and Son, Belfast, 1940) and Strain *Belfast and its Charitable Society*.

⁶⁵ Loudan, *In search of water*, p. 46.

⁶⁶ The inadequacies of Belfast's water supply in this period are graphically illustrated by Loudan. The average consumption of water at this time was 20 gallons per head per day meaning that 2,000,000 gallons was necessary for 100,000 people. The total amount available from all sources was however just 1,044,000 gallons a deficiency of 956,000 gallons. See, Loudan, *In search of water*, p. 47.

⁶⁷ John F. Bateman, *Belfast Waterworks: Report on the supply of water to the town of Belfast* (Cave and Server, Manchester, 1856).

After four years of investigation Bateman proposed a scheme to draw water from rivers and streams at Woodburn in the Carrickfergus district.⁶⁸ The project was, however, delayed owing to disagreements between the water commissioners and local mill owners regarding leasing rights.⁶⁹ Meanwhile the demand for water rose sharply. By 1854, the commissioners faced a three-fold increase in demand from householders, mills and other businesses. The pressure upon the existing supply had become so severe that temporary relief had to be obtained by pumping water from a spring at the old Stranmillis waterworks and from the River Lagan.⁷⁰ As the Lagan acted as a receptacle for much of the town's sewage this measure represented a potentially dangerous source of cholera bacteria and was therefore only essentially undertaken as a last resort.

Although the Woodburn scheme eventually received official approval, the water commissioners borrowing capability was exhausted, thus they lacked the financial resources necessary for the purchase of several of the river and water rights authorised under the plan.⁷¹ Consequently, the report of the Commissioners on the Municipal Affairs of Belfast recommended abolishing the water commissioners altogether and transferring their responsibilities to the corporation.⁷² However, this proposal was not implemented, and the commissioners continued to operate independently. It was not until the passage of the Belfast Water Act (1865), and the subsequent construction of new reservoirs by William Dargan, that the Woodburn scheme was finally realised.⁷³ In the intervening years, the minutes of the Water Commissioners reveal comparatively little progress

⁶⁸ Bateman, *Belfast Waterworks*; Loudan, *In search of water*, p. 48.

⁶⁹ *Ibid.*, p. 49.

⁷⁰ Loudan, *In search of water* p. 49.

⁷¹ See, *Report on Municipal Affairs* (1859), p. 18.

⁷² *Ibid.*

⁷³ Belfast Water Acts 1840-1920. Available from PRONI, WAT1/3H/1/3. See also, Connolly (ed.), *Belfast 400*, p. 217. After this there followed a series of Parliamentary Acts (1865, 1874, 1879 and 1889), which expanded the system to include reservoirs as far out as Woodburn as well as increasing storage within Belfast.

beyond negotiations with mill owners and other public bodies.⁷⁴ Public concern regarding Belfast's water supply nevertheless continued to grow, yet, there was little redress, and as Jack Loudan has observed, the commissioners' meetings during this period amounted to little more than records of applications from prospective new customers.⁷⁵

The provision of sewerage was similarly hindered by financial limitations and administrative delay. In 1847, the corporation had, unusually, received praise from the *Northern Whig* after agreeing to commission a report into Belfast's sewerage problems. While the paper acknowledged that 'not a little has been paid for special reports on this subject,' it nevertheless criticised the absence of practical action, observing that 'much verbiage has been expended, indicating what should be done; but, as yet, the sewerage remains as usual.' By 1852, the situation had barely improved, and Malcolm observed that the efficient drainage of streets other than the main thoroughfares was, 'wholly wanting.'⁷⁶ His opinion was perhaps unsurprising, considering that the corporation had only spent a total of £3,000 on sewerage works.⁷⁷ The figure was negligible in comparison to the £273,172, 7s 6d expended on wider town improvements between 1847 and 1854. Indeed, it would be a further forty years before Belfast experienced comprehensive improvements in sewerage provision.⁷⁸

⁷⁴ The records of the Water Commissioners and of the preceding body the Belfast Spring Water Commissioners can be accessed in PRONI. See WAT/1/1/A and WAT/1/2 /A. For the period 1854 – 1865 see WAT/1/2/A/D/5-10.

⁷⁵ Loudan, *In search of water*, p. 51.

⁷⁶ Malcolm, *The sanitary state of Belfast*, p. 5.

⁷⁷ *N.W.*, 4 Oct. 1852.

⁷⁸ Jones, 'Late Victorian Belfast,' p. 116.

The Blackstaff Nuisance

Inextricably linked to the disposal of sewage was the ongoing issue of the notoriously unsanitary Blackstaff River that, for some time, had been little more than an open sewer. Following the corporation's unsuccessful attempts to address the problem in 1848, it again sought to exercise the powers granted by a further borough improvement Act in 1850.⁷⁹ The legislation allowed the corporation to borrow up to £15,000 to purchase nearby land and up to two years to divert and culvert both the Blackstaff. However, its efforts to address the issue were once more thwarted by neighbouring property owners, who either failed to respond to correspondence, refused sell their land, or demanded prices which the corporation considered excessive.⁸⁰ This issue reemerged in 1854, during a town meeting to discuss the problem, when Councillor John Lindsay had to remind those present that when the corporation sought the permission of over fifty parties who owned nearby property in 1850. Only one, The Belfast Water Commissioners, had subsequently given consent to the corporation to deal with the Blackstaff.⁸¹ Noting that the matter 'was like a chain of broken links, useful for nothing,' Lindsay concluded that it had been, 'morally impossible' to proceed with the scheme.⁸²

Even as public frustration at the continued delay steadily increased, and despite the renewed threat of cholera, it appears that the financial difficulties associated with dealing with the Blackstaff frequently overrode any sustained sanitary obligation to address the issue comprehensively. This was despite the fact that many residents and local councillors

⁷⁹ 'An Act for the Better Improving of the Borough of Belfast' (1850) (13 and 14 Vict., c.108). For maps of Belfast showing the Blackstaff see Appendix 3 of this thesis.

⁸⁰ *B.N.L.*, 4 Oct. 1852 and 2 Nov. 1853.

⁸¹ This was a point also explained in detail at a previous meeting in November. See: *B.N.L* 2 Nov. 1853. In all the corporation received seven replies to their correspondence.

⁸² *B.N.L.*, 21 Apr. 1854.

believed that the nuisance should be removed regardless of the expense involved.⁸³ In September 1852, even the *Northern Whig*, renowned for its opposition to the corporation, nevertheless came out in support of decisive action. Describing the Blackstaff as a ‘black, foul and filthy stream,’ the paper condemned it as a disgrace and concluded that:

Some speedy effort must be made the very backward sanitary state of the town...There is scarcely a town in England where the population have not taken counsel with one another at this crisis. It would be a sad thing if we were behind the rest of the nation.⁸⁴

By mid-April 1854, with cholera progressing, albeit slowly, in Belfast and the surrounding districts, no accommodation regarding either the Blackstaff or its equally notorious tributary, the Pound Burn, had been reached. John Rea, who would later instigate the Chancery Suit that effectively halted sanitary progress in Belfast for much of the following decade, called upon the corporation to ‘abate this grievous nuisance’ without the need for further improvement legislation.⁸⁵ In reality, however, Rea’s proposal amounted largely to an attack on the Town Clerk and, although seconded, it progressed no further. Political manoeuvring of the kind evident in the numerous meetings concerning the Blackstaff clearly demonstrates why sanitary and public health reform advanced only slowly in Belfast. The corporation faced a combination of bureaucratic, financial and political obstacles and, although repeated attempts were made to resolve the matter, proposal after proposal was delayed or defeated. Consequently, the issue remained unresolved for almost another thirty years until the Blackstaff was finally mostly culverted in stages after 1882.⁸⁶

⁸³ In 1852 Councillor Issac Murphy for example, had called for the immediate remedy of the problem, sparing no expense. See, *N.W.*, 11 Sept. 1852.

⁸⁴ *N.W.*, 14 Sept. 1852.

⁸⁵ *B.N.L.*, 21 Apr. 1854.

⁸⁶ Most of the remainder of the Blackstaff was diverted underground in a major drainage scheme that commenced in 2006. The open section of the river at Broadway was culverted in 2007 when a new underpass was added to the Westlink. Ironically, the underpass was submerged under twenty feet of water

Continuing Concerns: Infectious Disease and Changes to Medical Provision after 1850

Despite the sanitary shortcomings outlined above, the years after 1850 witnessed important developments in both medical administration and the wider understanding of infectious disease. Yet, taking the relative lack of sanitary progress by the middle of the nineteenth-century into account, it is equally clear that the fear of disease and the possibility of epidemic outbreaks remained a constant feature of social concern in Belfast. Still, the town's administrators and indeed the population must have taken at least some comfort from the fact that the scale of fever epidemics and other infectious diseases had diminished considerably in comparison to the earlier decades of the century.⁸⁷ The decrease in morbidity and mortality however, had less to do with direct medical intervention and medical practitioners, despite their best efforts, continued to have no homogenous agreement regarding either the causes of or the reasons for the dissemination of infectious diseases.⁸⁸ Instead it may be argued that the decline in mortality rates arose from a combination of socio-political changes including population reduction, and medical and public health developments, involving, improvements to sanitary practice during periods of crisis, the increasing centralisation of policy and treatment, and the gradual acceptance of the relationship between polluted water and cholera. Medical practitioners nevertheless played a more direct role in Belfast than was often the case elsewhere. In both central government and in England, public health reform was frequently pursued with only limited direct involvement from medical men.⁸⁹ In Belfast, however, much of the drive towards improved sanitary and public health provision was

the following year. One of the reasons for the flooding was suspected to be restriction of flow by a valve at the entrance to the Blackstaff culvert.

⁸⁷ Robins, *The miasma*, p. 203.

⁸⁸ *Ibid.*

⁸⁹ Brunton, *Medicine transformed*, p. 196.

shaped by the influence exerted upon local government by physicians including Henry McCormac, Andrew Malcolm and Samuel Browne.

McCormac continually championed the necessity of sanitary improvement, preventative medical precautions and treatment in the local press. Occasionally he resorted to extreme measures and on one notable occasion famously broke panes of glass in the hospital wards in order to improve ventilation, an offence which saw him brought before the Belfast Police Court.⁹⁰ Andrew Malcolm until his premature death from rheumatic valvular heart disease in September 1856, was the pre-eminent driving force behind public health reform in Belfast and in the 1850s wrote and presented the most significant study of the towns sanitary condition, a work which has become central to the historiography of Belfast's sanitary development and which provides an important contemporary source for this thesis.⁹¹ Samuel Browne, described as a model surgeon, a dignified mayor, a respected citizen and a perfect gentleman, alongside Malcolm, had established the first Belfast Sanitary Committee. His system of house-to-house inspections during the cholera epidemics of the 1840s and 1850s proved instrumental in preventing much more excessive mortality.⁹²

As discussed earlier, Belfast's mortality rates by the middle of the nineteenth century compared unfavourably both with Ireland as a whole and with much of the United Kingdom, despite the sanitary reforms introduced during the previous decade. Malcolm's 1852 study additionally calculated that mortality from zymotic (infectious) diseases was

⁹⁰ Clarke, *The Royal Victoria Hospital*, p. 18; Strain, 'The foundations of Belfast medicine,' p. 38. See also, Anonymous, 'Irish masters of medicine' *Ulster Medical Journal*, Vol. 2(1) (1933), pp. 56-9.

⁹¹ Malcolm, *The sanitary state of Belfast*. See also, Calwell, *Andrew Malcolm of Belfast*; Anonymous, 'Irish masters of medicine,' pp. 130-3 and John S. Logan, 'Andrew George Malcolm 1818-1856: The working man of the profession' *Ulster Medical Journal*, Vol. 43 (1974), p. 22.

⁹² Much less has been written about Browne and he deserves a much more extensive epithet than is permitted here. However, for more see Robert Esler, M.D., 'Sketch of the Ulster Medical Society and its presidents,' p. 76 and Gillian McIntosh, 'Symbolising the civic ideal: The civic portraits in Belfast Town Hall' *Urban History*, Vol. 35(3) (2008), pp. 363-81.

significantly higher in Belfast than elsewhere in Ireland, accounting for forty-seven per cent of deaths in comparison to thirty-eight per cent nationally.⁹³ ‘So much for our general condition,’ he acerbically remarked. Malcolm attributed this disparity to the increase in fever mortality and to the comparatively short intervals between epidemic outbreaks during the previous decade.⁹⁴ The rise in the number of cholera cases that had occurred during 1848/49 were ascribed by Malcolm and others to several factors common throughout each of the town’s five municipal districts. In Dock District, the medical attendant Dr Black, listed the lack of sewerage, overcrowding, poor ventilation, the accumulation of filth, and the neglect of personal cleanliness as just some of the reasons responsible for the prevalence of disease.⁹⁵ The medical attendant for the Smithfield District added destitution, the influx of strangers, insufficient scavenging, and lack of water to the list. In the Shankill District, which, owing to its elevated position and suburban character, was thought to be less susceptible to disease, it was observed that there had been an almost fourfold increase in fever in certain streets. Unsurprisingly, many of these later became among the district’s principal seats of cholera.⁹⁶ College and Cromac Districts, closest to the Blackstaff River, were described as having insufficient drainage and were generally filthy. It was little wonder, as Malcolm concluded, that, ‘cholera did not neglect to sojourn’ in the low and marshy College District in particular.⁹⁷ Malcolm was adamant that the rise in disease mortality associated with fever and cholera in the surrounding areas was, ‘indissolubly associated with defective drainage, defective ventilation, defective cleansing, defective supply of water’ and to a deficient or adulterated diet. It was also, he believed, considerably worsened by open ditches, ill

⁹³ Malcolm, *The sanitary state of Belfast*, pp. 10-11.

⁹⁴ *Ibid.*

⁹⁵ Malcolm, *The sanitary state of Belfast*, p. 25.

⁹⁶ *Ibid.*, p. 26.

⁹⁷ Malcolm, *The sanitary state of Belfast*, p. 26.

conditioned tenements and the unhygienic condition of the Blackstaff.⁹⁸ Making an impassioned argument, Malcolm declared that: ‘Any permanent improvement of any part of this extensive locality cannot be attempted with propriety until this monster grievance be removed,’ adding that; ‘the cost of remedial measures deters from action; and the difficulties of a mutual settlement as to the amount of claims prevents anything being consummated.’⁹⁹

Medical Debate, Disease Theory and the Changing Nature of Illness

Throughout this period, the all-encompassing category of ‘fever’ continued to represent one of Ireland’s biggest killers, accounting for nearly one in five of all deaths.¹⁰⁰ In Belfast, for example, fever was so prevalent that Malcolm considered it to be virtually endemic.¹⁰¹ Uncertainty regarding what precisely constituted fever, how it was caused and how it should be treated formed one of the central tenets of medical discourse during the mid-nineteenth century.¹⁰² The continuing lack of scientific understanding regarding the aetiology of fever, coupled with increased public debate and anxiety following earlier outbreaks of fever and cholera, ensured that arguments concerning miasmatic and contagious theories of disease continued unabated within medical circles.¹⁰³ Little, it seemed, offered any satisfactory compromise between the opposing interpretations.¹⁰⁴

In Dublin, the eminent physician Robert Graves was a strong advocate of contagion theory, but somewhat ironically, refused to accept that water played any significant role

⁹⁸ *Ibid.*, p. 14 and 28.

⁹⁹ Malcolm, *The sanitary state of Belfast*, p. 18.

¹⁰⁰ Farmar, *Patients, potions and physicians*, p. 94.

¹⁰¹ Malcolm, *The sanitary state of Belfast*, p. 11.

¹⁰² Farmar, *Patients, potions and physicians*, p. 94.

¹⁰³ For more see, Crawford, ‘Typhus in nineteenth century Ireland,’ pp. 131-2.

¹⁰⁴ For more see, Robins, *The miasma*, pp. 208-14.

in the spread of cholera.¹⁰⁵ Yet even contagionist interpretations struggled to explain the behaviour of epidemic disease and appeared incapable of satisfactorily accounting for cholera's irregular pattern of appearance and disappearance. Cholera's tendency to affect some areas severely while sparing others caused particular confusion, especially in overcrowded urban districts where it did not always spread rapidly from street-to-street, many of which housed a seemingly ready supply of potential victims.¹⁰⁶

The idea that cholera was a waterborne disease, something that later investigations would conclusively demonstrate, was also given little immediate acceptance in Ireland.¹⁰⁷ The *Dublin Quarterly Journal of Medical Science*, for example, dismissed the association between cholera and contaminated water as little more than coincidence.¹⁰⁸ Although the journal conceded that cholera frequently travelled among populations close to rivers or other watercourses, it also claimed that the disease could still spread throughout towns without any apparent connection to contaminated water.¹⁰⁹ The miasmatic mode of transmission, therefore, continued to represent the most plausible explanation for the propagation of cholera in most medical circles. In Baltiboys, County Wicklow, for instance, the diary of Elizabeth Smith, wife of a local aristocrat, records the attempts of the physician Dr George Robinson to explain his theory of the disease following the discovery of four nearby cases. Robinson argued that cholera's symptoms resembled those produced by the ingestion of some sort of poison and assured Smith that he believed the disease arose from 'poisonous properties in the air acting on the nervous system

¹⁰⁵ Robert James Graves, 'On the Progress of Asiatic cholera' *Dublin Quarterly Journal of Medical Science (DQMS)*, Vol. vi (1848), pp. 289-316; Vol. vii (1849), pp. 1-38. For Graves' opinion on water and the spread of cholera see, pp. 12-13.

¹⁰⁶ Briggs, 'Cholera and society in the nineteenth century,' pp. 76-96; Hamlin, *Cholera: The biography*, p. 152 and for a contemporary opinion on the propagation and spread of cholera its pathology and treatment see 'Cholera, reviews and bibliographical notices' in *DQJMS*, Vol. 19 (1855), pp. 127-72.

¹⁰⁷ Norman Howard-Jones, *The scientific background of the International Sanitary Conferences, 1851-1938* (World Health Organization, Geneva 1975), p. 10, 19, and 23.

¹⁰⁸ *DQJMS*, Vol. 19 (1855), p. 153.

¹⁰⁹ *Ibid.*, p. 151.

affecting those otherwise prepared by accident or neglect to receive them.’¹¹⁰ He was far from alone in this misunderstanding of the disease.

For others, the comprehension and recognition of the relevance of miasma theory also had another effect which subsequently changed the social make up of Ireland’s major towns, flight, which was in some places a traditional and somewhat understandable response to epidemics. Where, as Christopher Hamlin suggests, cholera was regarded as a matter of place rather than person, then many believed that safety depended simply upon not remaining where the disease had appeared.¹¹¹ Throughout Ireland, those that could afford it moved to the outskirts of affected towns and cities. In Dublin, Pembroke and Rathmines became favoured destinations.¹¹² In Belfast, many wealthier residents similarly abandoned the congested town centre for suburban districts. While such movement had negligible impact upon the health of the poorer population, it did contribute significantly to the changing character of Belfast’s principal streets, which increasingly developed into commercial rather than residential thoroughfares marked by cleaner streets and new civic and mercantile buildings.¹¹³

In Dublin, senior doctors including Sir Philip Crampton, Dominic Corrigan and Sir Henry Marsh also publicly rejected the idea that cholera was contagious, declaring that, ‘the weight of evidence is decidedly in favour of the opinion that contagion has little if any influence in its propagation.’¹¹⁴ Similar views were also expressed by many of the country’s medical officers who had been canvassed by the Commissioners of Health following the epidemic of 1848/49. Of the thirty-seven replies received, twenty-three

¹¹⁰ Diary of Elizabeth Smith, 9 Sept. 1849.

¹¹¹ Hamlin, *Cholera: The biography*, p. 117.

¹¹² O’Brien, *Dear Dirty Dublin*, pp. 12-14.

¹¹³ For more on urban development in Belfast in the mid-nineteenth century see, Johnson, *Middle class culture and civic identity*, pp. 177-224.

¹¹⁴ *Report of COH (1846-50)*, p. 28. For Corrigan’s opinion see, Corrigan, *The cholera map of Ireland*, p. 11.

stated that the attack could not be traced to importation or contagion, eight were doubtful and only six considered the disease to be contagious.¹¹⁵ One of these was Dr Seaton Reid of the Belfast Union Fever Hospital who attributed the spread of cholera in the workhouse and in the town in 1848/9 to the case of repatriated pauper Thomas Tiernan.¹¹⁶ Reid's conclusions, however, were dismissed by Dr Phelan of the Commissioners of Health who argued that, 'on close enquiry this [Reid's] opinion of contagion appears to be scarcely well founded.'¹¹⁷ Referring to subsequent cases, Phelan added that they had, 'not the slightest communication to others sick, or with parties attending them.'¹¹⁸

During the 1853/55 epidemic however, the official position regarding contagion would alter once more after the Poor Law Commissioners assumed sole responsibility for the control of epidemic disease. Although they acknowledged that the issue remained contentious, the commissioners reacted strongly when they discovered that Dr Corrigan and physicians at the Hardwick and Whitworth Hospitals in Dublin were admitting cholera patients into shared wards, and immediately ordered the practice to cease.¹¹⁹ A protracted dispute followed culminating in threats from the commissioners that they would instruct the governor of the Hardwick Fever Hospital to refuse admission to cholera patients altogether should their orders continue to be ignored.¹²⁰

While cholera continued to dominate public concerns, combatting the disease predominantly only attracted medical attention during epidemic outbreaks, when there was a continuous supply of patients who required almost constant care. By the middle decades of the nineteenth century Ireland's disease environment was also beginning to

¹¹⁵ Corrigan, *The cholera map of Ireland*, pp. 6-7; *Report of COH (1846-50)*, p. 39.

¹¹⁶ *Ibid.* See also Chapter Four of this thesis on the epidemic of 1848/49.

¹¹⁷ *Report of COH (1846-50)*, pp. 39-40.

¹¹⁸ *Ibid.*, p. 40

¹¹⁹ *Abstract reports to PLCs in Ireland (1854)*, pp. 3-18; Robins, *The miasma*, p. 209.

¹²⁰ *Abstract reports to PLCs in Ireland (1854)*, p. 18.

change in more fundamental ways, and this was particularly evident in Belfast.¹²¹ The continuing industrialisation of the town, for example, produced rising levels of atmospheric pollution similar to those experienced in the industrial towns of England.¹²² Much of this resulted from the substantial increase in coal-burning mills together with the growing domestic use of coal in large urban homes. The resulting ‘smoke nuisance’ contributed significantly to the increase in pulmonary disorders which would continue well into the twentieth century.¹²³ Waterborne infections other than cholera, many associated with the marshy districts surrounding the Farset and other rivers, also persisted. Diseases including typhus, typhoid, influenza and trench fever continued to break out sporadically into minor epidemics, their spread intensified by overcrowding and prevailing sanitary deficiencies in Belfast’s lanes, courts and alleys.¹²⁴ Smallpox likewise remained a significant public health problem owing to the absence of compulsory vaccination in Ireland. Although its mortality rate of approximately fourteen per cent remained relatively high, far greater numbers of sufferers recovered in comparison to earlier decades of the century.¹²⁵ Tuberculosis also contributed significantly to the mortality rate in Belfast. patients were frequently treated in open rather than isolation wards encouraging further transmission of the disease.¹²⁶ Family concealment, spitting

¹²¹ Clarke, *The Royal Victoria Hospital*, p. 32.

¹²² For atmospheric pollution in English industrial towns see, Stephen Mosley, ‘The ‘Smoke nuisance’ and environmental reformers in late-Victorian Manchester’ *Manchester Region History Review*, Vol. 10 (1996), pp. 40-7.

¹²³ Clarke, *The Royal Victoria Hospital*, p. 32. An 1894 survey put Belfast in competition with Manchester for the dubious honour as the city with ‘the foulest air in Britain.’ See, Mosley, ‘The ‘smoke Nuisance,’ pp. 40-7.

¹²⁴ Clarke, *The Royal Victoria Hospital*, p. 32.

¹²⁵ Clarke, *The Royal Victoria Hospital*, p. 32. Smallpox vaccination only became compulsory in Ireland in 1863; for more see, Brunton, ‘The problems of implementation, p. 149.

¹²⁶ Clarke, *The Royal Victoria Hospital*, p. 32. For the most comprehensive study of Tuberculosis in Ireland see, Jones, *Captain of all these men of death*.

and the absence of any organised public health campaign similarly increased the likelihood of infection.¹²⁷

As with cholera and fever, tuberculosis remained closely associated with poverty, inadequate diets and poor housing conditions.¹²⁸ Yet its infectious nature was not fully understood until Robert Koch identified the bacterium *Mycobacterium tuberculosis* in 1882.¹²⁹ Nevertheless, public health manuals instructing Medical Officers of Health to encourage cleanliness, ventilation and the reduction of overcrowding in public institutions demonstrate at least some growing recognition of the relationship between insanitary conditions and disease transmission.¹³⁰ Though Patricia Marsh and Timothy Guinnane both maintain that onward mortality from tuberculosis rose only slightly between the 1860s and 1900, its mortality rate was constantly high and it claimed more lives annually in Ireland than cholera or any other periodic epidemic including fever.¹³¹ As Greta Jones points out, however, statistically, the progression and spread of tuberculosis in Ireland was slower and less dramatic than other recorded infectious diseases. Consequently, it generated far less public alarm and attracted considerably less attention as an indicator of Ireland's wider sanitary and public health condition than the more dramatic but short-lived epidemics of cholera, typhus, typhoid and smallpox.¹³²

¹²⁷ Barrington, *Health medicine and politics*, p. 13. A concerted public health campaign against Tuberculosis only commenced in 1899 after the foundation of the National Association for the Prevention of Tuberculosis in Dublin. See, Jones, *Captain of all these men of death*, p. 47; Marsh, *The effect of the 1918-19 influenza pandemic*, p. 29.

¹²⁸ Marsh, *The effect of the 1918-19 influenza pandemic*, p. 29.

¹²⁹ Jones, *Captain of all these men of death*, p. 15.

¹³⁰ *Ibid.*, p. 47.

¹³¹ Marsh *The effect of the 1918-19 influenza pandemic*, p. 29. Timothy W. Guinnane, *The vanishing Irish: Households, migration and the rural economy in Ireland, 1850-1914* (Princeton University Press, New Jersey, 1997), p. 113.

¹³² Jones, *Captain of all these men of death*, p. 33.

Changes to Medical Relief after 1850

Aside from the ongoing debate regarding infectious disease, important changes did take place to medical and public health practice and provision in Ireland in the period after the famine.¹³³ These developments had particular consequences for the organisation of epidemic response. In Belfast, the aftermath of the Famine also issued in a period of significant institutional change especially for the bodies that were charged with treating the sick. For example, the Great Famine and its aftermath of fever, as Richard Clarke has observed, marked the end of an era in medical care at the Frederick Street Hospital.¹³⁴ Largely as a result of the hospital's weak financial position it increasingly began to refuse admission to patients suffering from disease and instead predominantly focused on surgical cases.¹³⁵ Consequently, treatment, particularly for the sick poor in Belfast had to be delivered by other sources.

Following the introduction of the 'Medical Charities Act' in 1851 medical relief in Ireland was increasingly provided by the dispensary system which enabled the sick to be treated in their own homes, and thereby, to a degree, eased the pressure in the country's overcrowded hospitals.¹³⁶ At the same time, the act also introduced significant administrative reforms strengthening the capacity for state intervention in public health emergencies to a degree not matched elsewhere in the United Kingdom during the following two decades.¹³⁷ As Ronald Cassell notes:

¹³³ For the main resource on poverty and welfare in this period see, Gray and Crossman (eds), *Poverty and welfare in Ireland*. See also, Virginia Crossman 'Workhouse medicine in Ireland: A preliminary analysis' in Jonathan Reinartz and Leonard Schwarz (eds), *Medicine and the workhouse* (University of Rochester Press, New York, 2013).

¹³⁴ Minute Books of the Belfast Fever Hospital and The Annual Report and Statement of Accounts, with a list of the subscribers to the Dispensary and Fever Hospital of Belfast, Office of Archives Royal Victoria Hospital Belfast.

¹³⁵ Clarke, *The Royal Victoria Hospital*, p. 32

¹³⁶ 'Medical Charities (Ireland) Act' (1851) (14 and 15 Vict., c.68.) For a historical assessment of the implementation of the act see, Cassell, *Medical charities, medical politics*, pp. 78-130.

¹³⁷ Cassell, *Medical charities, medical politics*, p. 109.

A hodge podge of largely unorganised, unsupervised and uncoordinated medical facilities had been welded into a rationally administered nationwide system providing the Irish Poor with the most comprehensive free medical care available in the British Isles. At the same time the value of the dispensary system for epidemic control and vaccination had been amply demonstrated.¹³⁸

Medical provision also became increasingly formalised under the act's directives.¹³⁹ A Medical Commissioner was appointed to the Poor Law Commission, a position filled by Dr John McDonnell, Professor of Anatomy at the Irish College of Surgeons.¹⁴⁰ In addition, a number of experienced medical men joined the Poor Law inspectorate and were made responsible for the inspection of Poor Law medical facilities and practice.¹⁴¹ Five were initially appointed in 1851 although this number was reduced to four by 1855 after the commission reassessed the administrative requirements of the role.¹⁴²

By May 1852 Ireland had been divided into 723 dispensary districts, 215 of which were located in Ulster.¹⁴³ These districts were managed by three overlapping but administratively distinct authorities: The Poor Law Commissioners, Boards of Guardians and Committees of Management.¹⁴⁴ The Commissioners defined regulations, monitored performance, oversaw inspection, and required regular detailed reporting from local medical officers and guardians.¹⁴⁵ At a local level, Committees of Management, drawn from resident or property owning guardians and qualifying ratepayers who owned or occupied property valued at £30 or more per year, supervised day-to-day operations,

¹³⁸ Ibid., p. 128.

¹³⁹ For more on medical provision see Laurence Geary, 'The medical profession, health care and the Poor Law in nineteenth century Ireland' in Gray and Crossman (eds), *Poverty and welfare in Ireland* and for the dispensary system see Catherine Cox, 'Medical dispensary service in nineteenth century Ireland: Access, transport and distance' in Catherine Cox and Maria Luddy, *Cultures of care in Irish Medical History 1750-1970* (Palgrave MacMillan, Basingstoke, 2010).

¹⁴⁰ Dr John B White, 'Infection in a village community in the nineteenth century and the development of the dispensary system. Presidential Address to the Ulster Medical Society, 11 Oct. 2007' *Ulster Medical Journal*. Vol. 77(3) (2008), pp, 153-9.

¹⁴¹ Cassell, *Medical charities, medical politics*, p. 86.

¹⁴² Ibid.

¹⁴³ Burke, *The people and the Poor Law*, p. 244.

¹⁴⁴ Cassell, *Medical charities, medical politics*, p. 87.

¹⁴⁵ Ibid.

overseeing dispensary finances, the appointment of medical officers, as well as assisting with the acquisition of suitable buildings, tenders for medicines and medical supplies and the authorisation of medical treatment through the distribution of dispensary tickets.¹⁴⁶ Although locally administered, the system remained subject to close central oversight the of the Poor Law Commissioners who made sure that boards were held accountable for their expenditure.¹⁴⁷

The dispensaries' red and black tickets, so called because of the colour of their lettering, formed the basis of access to care and could also be issued by Dispensary Relieving Officers and Wardens appointed by local boards of guardians.¹⁴⁸ Black tickets entitled applicants to free medical care and medicines at the dispensary, while red tickets permitted home visits and associated treatment.¹⁴⁹ On occasion, however, the system facilitated corruption. John Lambert an inspector of the English Poor Law Board, for example, observed that 'retail tradesmen have been known to sign a book of tickets, and leave them to be distributed by their shopmen to any customers willing to accept them.'¹⁵⁰ In another example Lambert alleged that he had been informed that a member of one dispensary committee had sent one of his children with a ticket under a fictitious name in order to obtain a three month supply of cod liver oil.¹⁵¹ Still, the dispensary system was invaluable in bringing relief to the sick poor particularly during cholera outbreaks and alongside the provisions made by the Poor Law Commissioners was instrumental in reducing the death rate from the disease to much lower levels than had been experienced during either of the two previous epidemics.

¹⁴⁶ Cassell, *Medical Charities, medical politics*, p. 87.

¹⁴⁷ Marsh, *The effect of the 1918-19 influenza pandemic*, p. 31.

¹⁴⁸ Burke, *The people and the Poor Law*, p. 245.

¹⁴⁹ Ibid.

¹⁵⁰ *Twentieth report PLC* (1867), p. 182.

¹⁵¹ Ibid.

Alongside these developments in medical relief, the Act also strengthened the statutory framework for sanitary intervention. Clause nineteen transferred responsibility for the implementation of the ‘Nuisances Removal and Diseases Prevention Acts’ of 1848 and 49 to the Irish Poor Law Commission, transferring power from the Privy Council and the Central Board of Health and allowing Poor Law Authorities to remove dirt in a number of ways.¹⁵² This empowered guardians with the ability to act against owners or occupiers of property compelling them to remove nuisances, or to undertake such works directly and recover the associated costs from offenders or through the local electoral rates.¹⁵³ In practice, however, implementation remained uneven, as many Boards of Guardians were reluctant to enforce the legislation and the commission did not insist that they did so because of the associated expense.¹⁵⁴ When cholera arrived in 1853 however, the Poor Law Commission had little difficulty in acquiring the assistance of local authorities.¹⁵⁵ The encroaching epidemic encouraged both the commission and local authorities to, at least temporarily, speed up the process of effecting sanitary improvements and enabled, as the commission noted, ‘an amount of sanitary improvement previously unseen in the country.’¹⁵⁶

Belfast’s Preparations for Cholera 1853

In Belfast, as elsewhere in Ireland the board of guardians became the main body responsible for dealing with preparations for an epidemic of cholera. However, the main municipal and medical bodies, The Dispensary Committee, the Town Corporation and to a lesser degree the Committee of the General Hospital did work in coordination to assist

¹⁵² 11 and 12 Vict., c.123 and 12 and 13 Vict., c.111; Cassell, *Medical charities, medical politics*, p. 109.

¹⁵³ *Ibid.*, p. 110.

¹⁵⁴ Cassell, *Medical charities, medical politics*, p. 109.

¹⁵⁵ Burke, *The people and the Poor Law*, p. 245.

¹⁵⁶ See. *Third report PLC* (1855), p. xv, Cassell, *Medical charities, medical politics*, p. 112.

in preparing the town as effectively as possible. On 19 September, with the first case imminent, the *Belfast Newsletter*, optimistically declared that being, ‘forewarned and therefore forearmed, we have reason to hope that if the epidemic visit us, its ravages will be limited in extent, and mitigated in character.’¹⁵⁷

Despite, this confidence, it is important to note that the relationship between Belfast’s various civic organisations were not always harmonious. Under regulations issued by the Poor Law Commissioners, guardians in towns possessing municipal authorities were advised that responsibility for nuisance removal should ordinarily be left to such bodies, with guardians intervening only where local authorities failed to act effectively.¹⁵⁸ In Belfast, however, this arrangement contributed to continuing disputes between the corporation and the guardians regarding the division of responsibility and the enforcement of public health legislation.

Responsibility for nuisance removal within the borough continued to rest primarily with the corporation’s Committee on Police Affairs rather than the guardians. In October 1852 Samuel Browne was appointed medical officer and assisted by five constables undertook an extensive inspection of the town’s streets and houses, reporting directly to the board of health.¹⁵⁹ Initially employed for three months, Browne’s investigation was not completed until the following May, however the inquiry revealed the extent of Belfast’s prevailing sanitary deficiencies. Of the borough’s 12,902 houses, 3,113 housed two or more families, one third, 4,047 lacked rear accommodation, 4,326, had no drainage and almost half, 6,179 were without privies.¹⁶⁰ Conditions in Ballymacarrett were even worse. Of its 1,222 houses, 366 accommodated two or more families, 651 had no yards, 925 had

¹⁵⁷ *B.N.L.*, 19 Sept. 1853.

¹⁵⁸ Cassell, *Medical charities, medical politics*, p. 110.

¹⁵⁹ *B.N.L.*, 11 Oct. 1852.

¹⁶⁰ *Ibid.*, 4 May 1853.

no drainage and 811 lacked privies.¹⁶¹ The findings were, as Browne admitted, anything but flattering to the borough of Belfast. He recommended that every unpaved and unsewered street should be, ‘speedily sewered and paved,’ that streets containing houses with no rear accommodation should be swept at least twice daily, and that sanitary inspectors, operating under a dedicated sanitary committee should be employed to undertake inspections and enforce cleanliness throughout the town.¹⁶² In a later report Browne also emphasised the importance of preparation against cholera. While he expressed confidence that the authorities understood what measures were required and were willing to implement them, he also appealed directly to the public to take greater personal precautions. Particular emphasis was placed upon the clergy, whom he urged to form sanitary associations and to ‘enforce sanitary doctrines on the minds of the people,’ especially among the poorer classes who, he believed, neither appreciated the necessity of sanitary precautions nor understood the means by which health could be preserved.¹⁶³

Yet, regardless of the seriousness of Browne’s findings, it appears that the Committee on Police Affairs had not fully considered the report by the time it complained to the corporation in October that its existing powers were extremely limited and derived only from the sanitary provisions contained within the local Improvement Acts.¹⁶⁴ The committee’s report called for a further inspection of Belfast and maintained that the investigation carried out in the spring had revealed that the sanitary condition of the town had been considerably improved in comparison to what it had been during the previous cholera epidemic.¹⁶⁵ Browne was subsequently reappointed and by December had issued 4,126 notices requiring the removal of nuisances in premises, 1,143 notices ordering the

¹⁶¹ *B.N.L.*, 4 May 1853.

¹⁶² *Ibid.*

¹⁶³ *B.N.L.*, 19 Sept. 1853.

¹⁶⁴ *Ibid.*, 3 Oct. 1853.

¹⁶⁵ *Ibid.*

whitewashing of dirty houses, and 226 notices relating to the opening and cleansing of foul sewers.¹⁶⁶ Lodging houses also came under increased scrutiny. Of the 525 examined, 119 were found to be ‘totally unfit for the purpose of receiving any lodgers.’ Consequently, it was recommended that lodging-house keepers should be required to obtain licences, none of which would be granted without prior inspection.¹⁶⁷

With cholera expected at any moment, Belfast’s various civic authorities increasingly attempted to coordinate their preparations. The guardians and corporation jointly produced and distributed pamphlets particularly in the poorest districts of the town while advice regarding prevention and treatment was also published in the local press.¹⁶⁸ By late September, the powers of the ‘Diseases Prevention’ and ‘Nuisance Removal Acts’ had also been formally conferred upon the guardians following the country-wide circulation of instructions from the Poor Law Commissioners.¹⁶⁹ With all the local authorities now able to enforce the full powers of the legislation, *The Newsletter*, seeking to reassure its readership, confidently asserted that cholera could be successfully controlled by active sanitary intervention. ‘We have,’ it declared:

The undoubted assurance that this frightful pestilence is capable, to a very large extent, of being controlled and mitigated by human agency. That it is not only curable, but one of the most easily cured of all acute diseases when taken in time; and that it rarely becomes a pestilence in any community, or portion of a community, where active sanitary precautions have been adopted.¹⁷⁰

However, optimism rapidly gave way to greater urgency once the first case of cholera was officially reported on 20 September. At a meeting of the guardians the mayor, Dr

¹⁶⁶ *B.N.L.*, 2 Dec. 1853.

¹⁶⁷ *Ibid.*

¹⁶⁸ *B.N.L.*, 26 and 28 Sept. 1853.

¹⁶⁹ *Abstract reports to PLCs in Ireland* (1854), p. 21. The order had been issued by the commissioners on 15 Sept. 1853, but was not received/opened in Belfast until meetings of the guardians were convened on 23/24 Sept. See, *B.N.L.*, 23 Sept. 1853.

¹⁷⁰ *Ibid.*

William McGee, warned that ‘a visit of cholera was no longer a matter of speculation’ and urged immediate additional action.¹⁷¹ McGee requested that the guardians apply to the commissioners for a temporary suspension of some aspects of the ‘Medical Charities Act’ so that any medical officer might provide dispensary relief or arrange for sufferers to be admitted to hospital without the need for formal authorisation.¹⁷²

Hospital accommodation had already begun to be organised in anticipation of the epidemic. Wards had been prepared within the Union Hospital for cholera patients and additional accommodation had been offered by the committee of the General Hospital, which had already admitted a case in Frederick Street.¹⁷³ The Belfast Dispensary Committee also acted quickly after the meeting of the guardians, instructing district medical officers to ‘afford immediate relief in all cases of cholera and choleraic diarrhoea.’¹⁷⁴ At a subsequent special meeting it was also agreed that only one of the town’s two dispensaries, Barrack Street, would function as a cholera station. Browne considered this arrangement the most efficient because the cholera van, horse and associated equipment could remain there permanently ready for use.¹⁷⁵ The same meeting also saw Dr Alexander Knox, the Poor Law Medical Inspector assigned to Belfast, issue a letter to the town’s medical practitioners.¹⁷⁶ Five hundred copies of his letter were printed and distributed among the guardians and other authorities. The circular outlined the procedures required under the ‘Diseases Prevention’ and ‘Nuisance Removal Acts,’

¹⁷¹ *B.N.L.*, 23 Sept. 1853.

¹⁷² *Ibid.*

¹⁷³ *Abstract reports to PLCs in Ireland* (1854), p. 22. *B.N.L.*, 23 Sept. 1853. Dr Reid, the medical attendant, had set aside two wards with 26 beds and stated that more accommodation could be made available if required.

¹⁷⁴ *B.N.L.*, 23 Sept. 1853.

¹⁷⁵ *Ibid.*, 26 Sept. 1853.

¹⁷⁶ *Abstract reports to PLCs in Ireland* (1854), p. 21. Knox also published an important work which critically reviewed the medical profession’s understanding of Asiatic cholera. In a manner similar to contemporaries like John Snow or Andrew Malcolm, Knox argued that rigorous sanitary reform was vital and actively challenged the traditional view that public health measures only served to clear foul air. See, Alexander Knox, *An Enquiry into the Actual State of our Knowledge of Cholera* (Dublin: James McGlashan, 1849).

included guidelines on the treatment of cases of dysentery, diarrhoea and cholera and authorised every medical practitioner in the district to act as parish wardens, giving local doctors the power to send cholera sufferers to hospital or to be treated in their own homes.¹⁷⁷

Despite these new powers, however, a curious administrative inconsistency remained under the terms of their new responsibilities conferred by the instructions of Knox and the Poor Law Commissioners. The revised arrangements ended the previous practice whereby only dispensary doctors could issue tickets for medicine, yet practitioners themselves were still prohibited from directly dispensing the medicines they were authorised to prescribe and carry and instead were required to order medicines for patients directly from the dispensary.¹⁷⁸ Whether local practitioners rigidly adhered to these instructions is unclear, though the practicality of such a system during medical emergencies must surely have been questionable.

The sanitary condition of Belfast nevertheless remained the greatest source of concern. Shortly after these arrangements had been implemented medical officers began to express alarm about the unhealthy state of some districts. Chief among their complaints was the widespread prevalence of dysentery and diarrhoea, which they attributed largely to the failure to remove nuisance material that was constantly thrown out into the streets.¹⁷⁹ Additional preventative measures were suggested in the hope of preventing cholera from establishing a stronger foothold in the town. However, the chairman of the guardians was quick to insist that responsibility for keeping the town in a proper sanitary state lay outside their responsibility and remained the duty of the corporation.¹⁸⁰ Although this reluctance

¹⁷⁷ *Abstract reports to PLCs in Ireland* (1854), p. 21.

¹⁷⁸ *B.N.L.*, 23 and 26 Sept. 1853.

¹⁷⁹ *Ibid.*, 7 Oct. 1853.

¹⁸⁰ *B.N.L.*, 14 Oct. 1853.

fully to embrace additional sanitary precautions does not appear to have significantly worsened the limited outbreak experienced during 1853, the continuing uncertainty regarding the division of responsibility between Belfast's civic authorities exposed serious weaknesses in the town's public health administration. Thus, when cholera returned in 1854, it was responsible for significantly higher rates of morbidity and mortality than might otherwise have been the case.

Conclusion

The beginning of the 1850s witnessed significant changes in the methods employed to combat epidemic disease in Ireland. Yet, despite important developments in medical administration and public health provision, Belfast's rapid industrial expansion continued to generate severe sanitary and social problems. Overcrowding, inadequate drainage, polluted water supplies and the persistence of nuisances such as the Blackstaff River ensured that large sections of the labouring population remained highly vulnerable to disease. At the same time, the efforts of medical reformers including Andrew Malcolm, Henry McCormac and Samuel Browne helped to place questions of sanitation, ventilation, sewerage and water provision at the centre of public debate. Their interventions reflected a growing recognition that the health of the population depended not simply upon medical treatment, but upon broader environmental and sanitary reform.

Nevertheless, while awareness of sanitary deficiencies undoubtedly increased, the pace of practical progress remained slow. Financial limitations, disputes over property and jurisdiction, and political disagreements within Belfast Corporation repeatedly hindered attempts to implement comprehensive improvements. Tensions between the corporation and the board of guardians further complicated the administration of sanitary measures, particularly during periods of epidemic threat, when uncertainty persisted regarding the

precise allocation of responsibility for nuisance removal and disease prevention. Consequently, while public health provision in Belfast had become increasingly collaborative and occasionally preventative in outlook, reform remained largely piecemeal and reactive rather than systematic and was often accelerated only during periods of epidemic crisis. Even so, the wider administrative changes introduced in Ireland after the famine represented an important turning point in the management of epidemic disease. The 'Medical Charities Act' (1851) fundamentally altered both medical relief and public health administration through the centralisation of the dispensary system under the Poor Law Commission. The appointment of medical commissioners and inspectors, together with the extension of dispensary medical relief, created a far more coordinated framework for responding to epidemic crises than had previously existed. As Ronald Cassell has also argued, the system provided Ireland with one of the most extensive structures of publicly administered medical relief in the United Kingdom during the mid-nineteenth century.¹⁸¹

These reforms were already evident in Belfast's preparations for the anticipated return of cholera in 1853. The corporation, guardians, dispensary committees and medical officers all undertook measures designed to mitigate the effects of any renewed outbreak, while sanitary inspections, nuisance removal and emergency medical arrangements were expanded considerably. Yet the limitations of Belfast's sanitary infrastructure remained unresolved and the continuing disputes between civic authorities undermined the effectiveness of preventative action. Although cholera failed to establish a major foothold in Belfast during 1853, the persistence of these underlying deficiencies ensured that the town remained highly susceptible to epidemic disease. As the following chapter will demonstrate, when cholera returned more forcefully in 1854–55, Belfast's inadequate

¹⁸¹ Cassell, *Medical charities, medical politics*, p. 109.

sanitary provision and fragmented civic administration were reflected in mortality levels considerably higher than contemporaries had hoped sanitary reform might prevent.

Chapter Six

The cholera epidemic of 1853-55 in England, Ireland and Belfast

Introduction

As a consequence of cholera's supposedly negligible impact on mortality rates in Ireland between 1853 and '55, historians have generally regarded the epidemic as historically irrelevant.¹ As a result of this myopic viewpoint, apart from occasional cursory references of cholera epidemics after the mid-nineteenth century, little detailed attention has been paid to this period by Irish historians. Joseph Robins has observed that because much of the country remained untouched by cholera between 1853 and '55 the epidemic was not seen as a national emergency, though, on occasion there was a great deal of local alarm in some areas.² However, Robins' argument is based only on the 1854 report of the Poor Law Commissioners, whereas the following chapter additionally draws on the commissioners' 1855 and 1856 reports, the statistics of the Belfast Board of Guardians published in the *Belfast Newsletter* and the *Northern Whig*, together with the returns of the 1861 Census Commissioners, all of which cover the epidemic in its entirety.³

Taken together these sources suggest that cholera spread across a much wider extent of the country than has previously been acknowledged. Indeed, the Poor Law Commissioners themselves observed that the disease had extended over a considerable portion of Ireland. When the full period between 1853 and 1855 is considered, it also

¹ Creighton, *A history of epidemics*, p. 856.

² Joseph Robins, *The miasma*, p. 205.

³ *Ibid.*, pp. 204-5. Statistics for this period have been taken from the reports published by the Belfast Board of Guardians in the *Belfast Newsletter* and the *Northern Whig*. However, the reports from the *Newsletter* dominate due to the consistency of their publication. Local and national statistics have been obtained from the report of the Census Commissioners: Census of Ireland, 1861, Part III. Vital statistics. Vol. I. Report and tables relating to the status of disease BPP 1863 lviii [3204-II] I. Hereafter, Census of Ireland (1861) and *Third report PLC* (1855); *Fourth report PLC* (1856).

becomes apparent that the number of cholera deaths was slightly higher than the figures recorded by either Charles Creighton or Robins.⁴ While the epidemic did not have the same demographic impact as those of 1832 or 1848–49, cholera mortality rates remained remarkably similar. As Table 6.1 below demonstrates, mortality during the 1853–55 epidemic was broadly comparable to that experienced during the earlier outbreaks.

Table 6.1: Comparative Table of Approximate Cholera Mortality in Ireland 1831-1855⁵

Year	1831/2	1848/9	1853/5
% Cholera Mortality	38.4%	42.3%	39%

Figures compiled from sources on cholera mortality in Ireland used in this and previous chapters. They include the report of the Census Commissioners: *Census of Ireland* (1861); *Report of the Commissioners of Health* (1846-50); *Third and Fourth reports of the Poor Law Commissioners PLC* (1855 and 1856).

The response to cholera and other epidemic diseases in Ireland had also undergone widespread restructuring after the famine. As the previous chapter has shown, reform had focused upon the reorganisation of medical provision under the ‘Medical Charities Act’ (1851) and upon the increasing centralisation of cholera response both medically and administratively under the Poor Law. These changes were significant and arguably helped to reduce the number of overall cholera cases experienced in Ireland during this period. Nevertheless, series of acute localised outbreaks in different parts of the country demonstrates that the new structures of medical relief and sanitary administration were not always effective at a local level.

Among the towns most seriously affected was Belfast where morbidity and mortality rates during the epidemic were actually higher than those experienced during the more widely recognised outbreak of 1832. While this chapter agrees that the improved level of medical

⁴ See: *Census of Ireland* (1861); *Third report PLC* (1855); *Fourth report PLC* (1856).

⁵ *Census Commissioners: Census of Ireland* (1861); *Report of the Commissioners of Health* (1846-50); *Third report PLC* (1855) and *Fourth report of the Poor Law Commissioners* (1856).

provision afforded under the ‘Medical Charities Act’ most likely prevented mortality from becoming substantially greater, it will also argue that the severity of cholera in Belfast reflected the continuing sanitary difficulties faced by the town’s civic authorities. By examining, for the first time, the statistics of the Belfast Board of Guardians alongside those of the Poor Law Commissioners, this chapter will challenge Charles Creighton’s long-standing assertion that, ‘the cholera of 1854 was unimportant in Ireland.’⁶

The 1850s were also witnessed important developments in the scientific understanding regarding the association between cholera and contaminated water in Britain, Ireland and further afield. Much of this work was inspired by the research of the English epidemiologist Dr John Snow and, for this reason, this chapter begins by considering the experience of cholera in England during the epidemic of 1853/55. This is, however, made particularly difficult due to the relative scarcity of available contemporary sources dealing directly with the epidemic itself with much of the historiography of this period focuses principally on the scientific achievements of Snow.⁷ While his research will be considered, to relation to the origin of a growing scientific understanding of cholera in this period, the following section will focus more broadly on the similarities and differences between the cholera experience in England and Ireland particularly in relation

⁶ Creighton, *A history of epidemics*, p. 856.

⁷ One of the best minutely researched local accounts of the epidemic 1854 is Henry Wentworth Acland, *Memoir on the cholera at Oxford, in the year 1854, with considerations suggested by the epidemic* (John Churchill, London, 1856). In terms of general statistical information, particularly for London, the following reports have provided much of the evidence for this section on cholera in England, *General Board of Health. Report of the Committee of Scientific Inquires in relation to the cholera epidemic of 1854*, [C 1980], H.C. 1854-55, xxi, 1. Hereafter *GBH report* (1854); *General Board of Health. Medical Council. Appendix to report of the committee of scientific inquiries in relation to the cholera-epidemic of 1854*, [C 1996], H.C. 1854-55, xxi, 135. Hereafter, *Appendix to GBH report* (1854); *Report on the cholera outbreak in the parish of St. James, Westminster, during the Autumn of 1854* (Churchill, London, 1855). Snow’s research and its relevance to cholera prevention in the latter half of the century has already been extensively covered, among the best works are, Peter Vinten-Johansen (ed.), *Cholera, chloroform, and the science of medicine: A life of John Snow* (Oxford University Press, Oxford, 2003); Pelling, *Cholera, fever and English medicine*; Howard Brody, Michael Russell Rip, Peter Vinten-Johansen, Nigel Paneth, Stephen Rachman, ‘Map-making and myth-making in Broad Street: The London cholera epidemic, 1854’ *The Lancet*, Vol. 356 (9223) (2000), pp. 64-8.

to sanitary conditions and attempts to implement sanitary and public health reforms in a number of noteworthy industrialised towns affected by the disease.

The Cholera Epidemic in Britain 1853-54:

The Third epidemic of cholera in Great Britain and Ireland began in Newcastle and Gateshead in September 1853. Unlike previous epidemics, where cholera's progress could be tracked from India into Europe, in 1853 no one was entirely certain of the source of the outbreak. Although it is highly likely that the disease was once more transported aboard ships arriving from the Baltic ports, no confirmed connection was established.⁸

Newcastle's epidemic was short lived but severe, claiming 1,533 victims in a space of just nine weeks and a further 433 in Gateshead by the time of its cessation in November.⁹

However, demonstrating cholera's often erratic nature, the nearby borough of Tynemouth suffered only twelve deaths among a population of 30,000.¹⁰ A fact that local doctor Edward Headlam Greenhow, in a report to the London Epidemiological Society, attributed largely to proactive, energetic sanitary measures instituted by the local board of health in 1852 and again in 1853.¹¹

An 1854 commission employed to investigate the outbreak in the three towns blamed 'the heavy and stagnant state of the atmosphere' for causing conditions that had exacerbated

⁸ Creighton, *A history of epidemics*, pp. 849-50.

⁹ (1371 during the month of September alone). *Report of the commissioners appointed to inquire into the causes which have led to or have aggravated the late outbreak of cholera in the towns of Newcastle-upon-Tyne, Gateshead, and Tynemouth*, p. iii, xxxii and 579 H.C. 1854 (1818) xxxv 131. Hereafter, *Report of commissioners on Newcastle etc.* (1854). Creighton, *A history of epidemics*, p. 850. Approximate populations in 1853, Newcastle 88,000, Gateshead 26,000. The last recorded victim in Tynemouth was Mary Snodden a 54-year-old tramp, she had come from a house in Blyth to escape the disease but died in Shields on 30 Oct. 1853. *Report of commissioners on Newcastle etc.* (1854), p. 579.

¹⁰ *Report of commissioners on Newcastle etc.* (1854). p. xl.

¹¹ E. Headlam Greenhow, "Cholera in Tynemouth in 1831-2, 1848-9, and 1853," *Journal of Public Health and Transactions of the Epidemiological Society of London* (June 1855). pp 46-8.

the sanitary defects of Newcastle in particular.¹² The enquiry also was fiercely critical of the lack of dynamism that Newcastle's council had shown in response to tackling the town's sanitary deficiencies.¹³ It found that the council had failed to exercise sanitary powers conferred to them under a local act in 1846 and concluded that, owing to the absence of continued vigilance on the part of the town's sanitary authorities, 'no material or permanent improvement in the sanitary condition of the town, especially the poorer districts, appears to have taken place.'¹⁴ Most of the predisposing causes of zymotic or epidemic disease listed by the report, namely, poor sanitation, damp overcrowded habitations, lack of ventilation and the accumulation of filth were conditions concurrent with those experienced in almost every urbanised area of England and Ireland. In this regard, it is evident that the sanitary problems of English industrial towns were rarely dissimilar to those which prevailed in nineteenth-century Belfast.

It is also evident that few medical or civic authorities during this period looked beyond prevailing sanitary conditions in seeking explanations for the spread of cholera and, outside of London, comparatively little attention was given to the possibility that contaminated water played a central role in dissemination.¹⁵ Even in London, where stronger evidence existed, the General Board of Health remained cautious. While its Committee for Scientific Enquiries acknowledged the presence of faecal contamination within sections of the city's water supply, it nevertheless concluded that polluted water represented only one of several predisposing causes of cholera and maintained that, 'the

¹² *Ibid.*, pp. vii-viii. On 12 Sept. Mr Grainger, Superintending Medical Officer reported to the General Board of Health that: 'There was no doubt that the general malaria, rising out of the neglected and miserable parts of Newcastle, overhangs the whole town and penetrates into every domicile, and acts in this epidemic period as an intensifying, predisposing, and all-influential cause.'

¹³ *Report of commissioners on Newcastle etc.* (1854), p. xxii.

¹⁴ *Ibid.*, p. vi.

¹⁵ London and the discovery of links between dirty water and cholera will be discussed below.

influences which determine in mass the geographical distribution of cholera in London, belong less to the water than to the air.’¹⁶

Cholera in 1854: Scotland, London and the Scientific Investigation of the Broad Street Pump

From the north-east of England, cholera advanced into Scotland by late September 1853 where 500 deaths were recorded in Dundee during late autumn and winter. However, the epidemic did not reach its greatest intensity until the autumn of the following year. In total, some 6,000 people in Scotland died from cholera between 1853 and ’54, of whom, approximately 3,892 deaths occurred in Glasgow alone.¹⁷ Contemporary accounts for Scotland are comparatively scarce. However, 117 deaths from 243 cases were recorded in Edinburgh and rural outbreaks, while less thoroughly documented, were also believed to have claimed a significant number of lives. Particularly notable was the Ayrshire village of Symington where 110 cases and thirty deaths occurred among a population of just 240 people, the majority of fatalities later being attributed to the water from a public well.¹⁸

In England there was also a noticeable difference in the dissemination of cholera during 1854 in comparison to the previous epidemic, and, as Charles Creighton observed: ‘Few of the great foci of infection in 1849 were visited severely.’¹⁹ Liverpool, Manchester, Bristol and Leeds, for example, suffered only moderately in comparison to the previous two epidemics. Nevertheless, the overall number of deaths recorded in England for 1853-54, approximately, 20,097, remained comparable to the 21,800 deaths attributed to

¹⁶ *GBH report* (1854). pp. 47-8.

¹⁷ Creighton, *A history of epidemics*, p. 855. The epidemic began in late December 1853 and accounted for 849 deaths until the end of February. Another acute attack caused 1,306 deaths between mid and late March. In June mortality increased once more until August after which the epidemic gradually subsided.

¹⁸ *Ibid.*, pp. 855-6.

¹⁹ Creighton, *A history of epidemics*, p. 851.

cholera in 1832.²⁰ Since many provincial towns escaped severe mortality, much of the contemporary attention surrounding the 1854 epidemic consequently centred upon London where 10,738 cholera deaths were registered.²¹

Although many of London's poorest districts shared the same common sanitary issues as Belfast, the city's water supply became a central area of concern in districts where cholera was most prevalent especially in the east, south and south-east of the metropolis. Residents in these districts were supplied by the Lambeth Waterworks Company and the Southern and Vauxhall Company. Exposed to cholera by a polluted supply, the customers of the Vauxhall Company subsequently became unwitting participants in perhaps the most famous episode in the scientific investigation of the disease when an apparently irrefutable correlation between contaminated water and cholera infection was uncovered.²²

In August 1849, the eminent physician, Dr John Snow had published his essay *On the Mode of Communication of Cholera*.²³ Snow's research brought oral-faecal transmission to the fore and he also hypothesised that cholera was diffused via contaminated water. During the epidemic of 1854 he was afforded the opportunity to thoroughly test his theory.²⁴ Although cholera had appeared in London as early as September 1853, Snow did not commence his principal investigations until the epidemic returned in the summer of 1854. Examining the weekly cholera returns of the General Register Office in July, he

²⁰ Ibid., p. 816 and 852; Underwood, 'The history of cholera in Great Britain,' pp. 168-9.

²¹ Creighton, *A history of epidemics*, p. 852. Over 2,000 deaths occurred in the first week of September 1854 alone. See also, *B.N.L.*, 8 Dec. 1854.

²² Ibid., pp. 91-2.

²³ John Snow, *On the mode of communication of cholera* (J. Churchill, London, 1849).

²⁴ Snow believed that cholera was communicated by something that acted directly on the alimentary canal. The communicating bodies were compared by Snow to intestinal worms propagated by human intercourse and spread from person to person via oral-faecal interactions. See, Snow, *On the mode of communication of cholera*, p. 1 and 8. See also, Vinten-Johansen, et al, *Cholera, chloroform, and the science of medicine*, pp. 264-5.

observed that districts supplied by the Southwark and Vauxhall Water Company experienced markedly higher mortality from cholera than those receiving water from alternative sources.²⁵ Snow subsequently focused his investigations in the area of Soho, where he examined deaths attributed to cholera where victims had obtained drinking water from a single source, a public pump in Broad Street. After presenting his preliminary findings to the Board of Governors of the St James Workhouse, who had formed a special emergency response committee, the authorities ordered the removal of the pump handle.²⁶ Although the measure caused resentment among local residents, enduring accounts of the event have famously maintained that severity of the outbreak diminished soon afterwards. More recently however, historians have argued that the epidemic was already diminishing when the handle was removed, suggesting that the intervention's immediate practical impact was less decisive than later public health mythology implied.²⁷ Nevertheless, the incident became a lasting symbol of epidemiological investigation and strengthened Snow's broader argument concerning contaminated water supplies. In November 1854, an investigation was carried out by the Cholera Inquiry Committee appointed by the Vestry of St James in which Rev. Henry Whitehead, assistant curate at St Luke's Soho, sought to disprove Snow's findings.²⁸ However, following his investigations Whitehead found that his research convincingly supported Snow's conclusions and concluded that fifty-eight per cent of those who drank

²⁵ Snow also examined statistics from 21 Aug. to 19 Nov. 1853 which also showed higher mortality in districts supplied by Southwark and Vauxhall. His investigations into their water supply formed the centrepiece of his 1855 edition of *The mode of communication of cholera*. See, Brody, et. al., 'Map-making and myth-making.' pp. 64-5. Snow, *On the mode of communication of cholera* (Second edition) (Churchill, London, 1855).

²⁶ *Report on the cholera outbreak in the parish of St. James*, pp. v-vi and pp. 107-132; John Snow, 'The cholera near Golden-Square, and at Deptford' *Medical Times and Gazette*, Vol. 9 (1854), pp. 321-2.

²⁷ For example, see, Brody, et. al., 'Map-making and myth-making.' pp. 64-8.

²⁸ *Report of Rev. Henry Whitehead in Report on the cholera outbreak in the parish of St. James*, pp. 121-169.

from the pump developed cholera, while only seven per cent of those who had not used it contracted the disease.²⁹

Despite the apparently compelling nature of Snow's findings, they had little immediate influence upon official medical opinion. The miasmatist General Board of Health unequivocally rejected his conclusions after its Committee for Scientific Enquiries determined that cholera arose from 'an atmospheric ferment that interacted with the existing organic impurities in the residences and neighbourhoods of the poor.'³⁰ His investigation was similarly dismissed in Ireland where the *Dublin Quarterly Journal of Medical Science* regarded the research as insufficient.³¹ A later report by the Poor Law Commissioners likewise demonstrated that they too had little faith in the concept of the waterborne cholera transmission.³² Although they admitted that, 'cholera occasionally spreads by communication from individual to individual,' they strongly denied that there was a possibility that the disease could spread along watercourses; 'Cholera,' they noted:

Has prevailed with some severity in several large towns situated at the mouths of rivers, but it has not, in any one instance, chosen the course of the river in its spread. In Londonderry it has not run up the Foyle; in Belfast it did not follow the course of the Lagan; nor at Dublin or Cork that of the Liffey or the Lee.³³

Thus, despite the increasingly convincing evidence emerging from London during the epidemic of 1854, medical and official opinion remained deeply divided regarding the causes and transmission of cholera. In Ireland, where many of the same sanitary deficiencies persisted and where understandings of epidemic disease remained similarly

²⁹ *Report on the cholera outbreak in the parish of St. James*, pp. 78-9 and p. 125.

³⁰ Vinten-Johansen, et.al., *Cholera, chloroform, and the science of medicine*, pp. 345-6.

³¹ *DQJMS*, Vol. 19 (1855), pp. 131-2.

³² *Third report PLC* (1855).

³³ *Ibid.*, p. xxvii.

uncertain, the ongoing debate continued to shape both official responses and local experiences of cholera between 1853 and 1855.

Cholera in Ireland 1853-55

Concerns regarding the likelihood of the epidemic reaching Ireland pressed the Poor Law Commissioners into action as early as September 1853. The commissioners immediately notified boards of guardians and issued an order enforcing the sanitary provisions of the 'Nuisance Removal' and 'Diseases Prevention' Acts.³⁴ Under the instruction, all public thoroughfares were to be inspected and thoroughly cleansed while owners of dwellings found to be in an unsanitary condition were required to have their premises cleaned, whitewashed and disinfected. Guardians were required to strictly supervise these measures and were to carry out the works themselves in cases of noncompliance.³⁵

These precautions represented a more coordinated and centralised response than had existed during earlier epidemics, reflecting the increasingly interventionist role assumed by the Poor Law authorities after the famine. Nevertheless, they remained largely preventative and sanitary in character, thus, when cholera arrived in a given locality additional emergency measures were required.³⁶ In such cases, the commission issued a formal 'Cholera Order' under which letters of instructions were circulated to Dispensary Committees of Management and Medical Officers.³⁷ Dispensaries were authorised to remain open twenty-four hours a day, affected areas could be disinfected and arrangements made for the isolation and treatment of victims.³⁸

³⁴ *Second annual report of the commissioners for administering the Laws for Relief of the Poor in Ireland, under the Medical Charities Act, 14 and 15 Vict., cap. 68*, p. 306-307 H.C. 1854 (1759), xx, 219. Hereafter, *Second report PLC* (1854).

³⁵ *Third report PLC* (1855), p. 68.

³⁶ Cassell, *Medical charities, medical politics*, p. 112.

³⁷ Cholera Order and Letters of Instructions, Appendix A, Nos., 27-31, in *Second report PLC* (1854).

³⁸ *Third report PLC* (1855), p. xviii. Cassell, *Medical charities, medical politics*, p. 112. Dispensary Committees were also designated as Sanitary Committees.

The Cholera Order also significantly altered the delivery of medical relief. Experience gained during the epidemics of 1832 and 1848/49 had demonstrated that the commissioners understood the often rapid character of cholera dissemination and consequently realised that the traditional method of providing treatment to the poor via the dispensary ticket system was rendered impractical.³⁹ Medical officers were therefore instructed to treat any individual displaying symptoms of the disease without requiring tickets or other recommendations.⁴⁰ This ensured that during the initial stages of an outbreak, treatment was to be administered through the dispensary system and private practice, but where epidemics intensified the commissioners insisted that temporary hospital accommodation and additional medical appointments be provided where required.⁴¹

Medical Treatments and Continuing Uncertainty

Even with these increasingly organised administrative responses, there remained considerable uncertainty throughout Ireland regarding the actual treatment of cholera patients. While the necessity of implementing sanitary precautions had gained almost wholesale acceptance, medical understanding of the nature of infection and of the disease itself had advanced only marginally since the previous epidemics, consequently, treatment remained inconsistent and frequently ineffective. The administration of laxative purgatives and emetics to encourage vomiting therefore continued to rank among the most common methods of attending to cholera victims.⁴² Such treatments aimed to rid the patient of the supposedly 'poisonous matter' responsible for their distress. In practice however, they often accelerated the rapid depletion of vital fluids, hastening death in

³⁹ *Third report PLC* (1855), p. xviii.

⁴⁰ *Ibid.*, p. xviii.

⁴¹ *Ibid.*

⁴² See article on the treatment of cholera *B.N.L.*, 26 Sep. 1853.

almost every case.⁴³ Bloodletting, although significantly declining in popularity, also continued to be employed, while physicians, seeking effective solutions also experimented with much more radical treatment, including among others, boiling water blisters and the administration electric shocks.⁴⁴ Such treatments, as Norman Howard Jones has observed often amounted to little more than the physical assault of already weakened patients and in many cases, rendered the physician an ‘unwitting ally of *Vibrio Cholerae*.’⁴⁵

In Ireland, the Belfast physician Henry McCormac, who had previously championed the so-called ‘Indian Method,’ involving the administration of calomel, opium and purgatives, modified his recommendations slightly following his experience of the two previous epidemics.⁴⁶ While continuing to advocate his preferred methods of treatment, calomel and opium, McCormac increasingly began to emphasise the importance of preventative behaviour and personal discipline. The public, he argued, ‘should not depart from their ritual mode of living,’ but should also take additional precautions in anticipation of the arrival of cholera. He advised people to carry medicine when leaving home, to avoid ‘exciting causes,’ exhaustion, and undue fatigue, as well as, to wear sufficient clothing, maintain cleanliness and ensure proper nourishment.⁴⁷ McCormac additionally recommended that anyone in the early stages of cholera should swallow a teaspoonful of laudanum mixed with a little water and should vomiting ensue, two grains of solid opium and a little warm brandy with water or warm wine was to be administered alongside the application of ‘a little made mustard to the pit of the stomach.’⁴⁸

⁴³ Howard-Jones, ‘Cholera therapy,’ pp. 373-95.

⁴⁴ For more see, *Ibid.*, pp. 373-95.

⁴⁵ Howard-Jones, ‘Cholera therapy,’ p. 373.

⁴⁶ McCormac’s support of this method of treatment brought about considerable derision from fellow medical professionals in Belfast leading to public spats in the local press after the epidemic of 1832. See *B.N.L.*, 7, 14 and 17 Jan. 1834.

⁴⁷ *Ibid.*, 28 Sept. 1853.

⁴⁸ *Ibid.*

Characteristically confident in tone, he assured readers that if such remedies were administered promptly, medical assistance would seldom be required and that, ‘in not above one or a couple of instances out of a thousand will cholera persist.’⁴⁹

Elsewhere, medical officers were issued with guidelines on medicines based largely those issued by the General Board of Health during the 1848/49 epidemic. They were advised to carry supplies of various pills and powders including mercury and opium as well as a small jar of strong brown mustard; and, in a modest departure from previous advice, it was noted that patients should be allowed to drink freely, with the board insisting that: ‘experience shows that the denial of drink does not check vomiting, while it very much increases the suffering of the patient from the burning thirst which so often accompanies this disease.’⁵⁰ Advice issued by the Royal College of Surgeons in October 1853 was also widely distributed.⁵¹ However, the college’s guidance, unlike that issued elsewhere, did not recommend the use of aperient (laxative) medicines. Instead, it endorsed bed rest and stimulants, including warm punch made with brandy, whiskey and warm negus (Port, lemon juice and spices) as well as various stimulant powders and pills prescribed alongside treatments aimed at soothing patient discomfort including the application of flannels moistened with turpentine and the rubbing of the patient’s limbs in order to relieve painful cramps and spasms.⁵²

Significantly, however, none of the prevailing medical advice alluded to any attempt to rehydrate patients. Although the principles of intravenous saline infusion, had been explored as early as 1832 by medical researchers Dr Friedrich Jaehnichen and Rudolf

⁴⁹ *B.N.L.*, 28 Sept. 1853.

⁵⁰ Mustard was used as an emetic to induce vomiting. *Abstract reports to PLCs in Ireland* (1854), p. 10.

⁵¹ *Extracts of a report of the Cholera Committee of the King’s and Queen’s College of Physicians in Ireland in, Abstract reports to PLCs in Ireland* (1854), p. 10. See also, *B.N.L.*, 10 Oct. 1853.

⁵² *Abstract reports to PLCs in Ireland* (1854), p. 10.

Hermann and later promoted by the Irish physician William Brooke O'Shaughnessy, the procedure failed to gain widespread acceptance.⁵³ This was due, as Howard-Jones has noted, to inadequate medical equipment and by their lack of knowledge regarding aseptic preparations.⁵⁴ Many patients who might otherwise have survived likely died as a result of complications such as air embolisms or septicaemia.⁵⁵ With the benefit of hindsight it is clear that Jaehnichen, Hermann and O'Shaughnessy had in fact come across the fundamental principles that govern modern cholera therapy but contemporary medicine lacked the scientific and technical means to apply them successfully.⁵⁶ Consequently, both central and local approaches to treating cholera victims continued to rely heavily on advice and experience that physicians and bureaucrats had accumulated during previous epidemics and despite their evolving preparations, neither central authorities nor local medical practitioners were in any way capable of preventing recurrent epidemics.

The First Cases and the Subsequent Dissemination of Cholera in Ireland 1853/4

The limitations of cholera prevention were also evident in Ireland, where even the best pre-emptive preparations of central and local authorities were unable stop the re-emergence of cholera in the autumn of 1853. The first confirmed case was most likely that of a young girl from Belfast who had been sent to hospital on 20 September, after having been examined by Dr Andrew Malcolm and a local surgeon, George Wales.⁵⁷ Shortly afterwards, it was reported that the girl had recovered, nevertheless, rumours

⁵³ Jaehnichen (a physician) and Hermann (a chemist) were two German expatriates based in Moscow; for examples and analyses of this treatment see; W. B. O'Shaughnessy, *Report on the chemical pathology of the malignant cholera* (S. Highley, London, 1832). Howard-Jones, 'Cholera therapy,' pp. 385-93. See also, Charles C. J. Carpenter, 'The Jeremiah Metzger lecture: Myths, mandarins and molecules: The cautionary tale of cholera' *Transactions of the American Clinical and Climatological Association*, Vol. 92 (1981), pp. 167-193.

⁵⁴ Howard-Jones, 'Cholera therapy,' p. 392.

⁵⁵ *Ibid.*

⁵⁶ Howard-Jones, 'Cholera therapy,' p. 393.

⁵⁷ *B.N.L.*, 21 and 26 Sept. 1853.

rapidly circulated throughout the town regarding other suspected cases, some of which alleged that several respectable local gentlemen had fallen victim.⁵⁸ The *Belfast Newsletter* dismissed the rumours as false and heartless, yet, alternative evidence suggests that cholera had in fact appeared in Belfast much earlier than September.⁵⁹ Dr Knox, reported to the commissioners that the Dispensary Medical Attendants had told him of five further cases that had occurred within the previous three months, two of which had been fatal, and of another that had occurred in private practice.⁶⁰ Nevertheless, as the patient in the General Hospital was said to be convalescing, Knox concluded that there appeared to be ‘no ascertained case of the disease at present in Belfast.’⁶¹ Within a few weeks however, the situation would change, though in a manner unlike either of the two previous epidemics. Rather than spreading outward from a single point of entry, cholera during 1853–55 emerged in isolated outbreaks, connected to the movement of emigrant shipping.

In November 1853, two almost simultaneous outbreaks occurred in Belfast and at Queenstown, near Cork, after passengers from the emigrant ships, the *Guiding Star* and the *Kossuth*, some of whom were already sick, had disembarked at the ports.⁶² At Queenstown considerable alarm arose after healthy passengers from the *Kossuth* were accommodated in local lodging houses. In an attempt to prevent any potential spread of infection to the surrounding district, Dr Bartholomew Verling, the chairman of the local Committee of Health, wrote to the British Home Secretary, Lord Palmerston, requesting that a hulk be provided for use as a hospital ship.⁶³ Cork’s mayor, John Maguire, made a

⁵⁸ *Ibid.*, 26 Sept. 1853.

⁵⁹ *B.N.L.*, 26 Sept. 1853. *Abstract reports to PLCs in Ireland* (1854), p. 20.

⁶⁰ *Ibid.*

⁶¹ *Abstract reports to PLCs in Ireland* (1854), p. 20.

⁶² *Ibid.*, pp. 27-35; *Third report PLC* (1855), p. xv.

⁶³ See letter from B Verling to Lord Palmerston in, *Abstract reports to PLCs in Ireland* (1854), pp. 27-8.

similar petition to the Lord Lieutenant, though neither request proved successful.⁶⁴ In total, thirty-eight passengers of the *Kossuth* died and although several more cases were subsequently reported locally, only two, a fisherman, who had picked up a bundle of clothes that had been thrown overboard, and a woman who kept a lodging house in Queenstown, were directly linked to the outbreak on the vessel.⁶⁵

On 5 November 1853, the *Guiding Star* anchored in Belfast lough after encountering difficulties during its crossing.⁶⁶ Having sailed from Liverpool nine days previously with 560 Irish, Scottish, English and German emigrants on board it was forced to seek refuge in the Lough after the loss of several sails and the main top mast.⁶⁷ Shortly after leaving Liverpool a passenger had died in suspicious circumstances and by the time of the vessel's arrival at Cultra, eight passengers had already succumbed to cholera.⁶⁸

The ship was subsequently visited by the mayor, Dr William McGee, the Government Emigration Officer, Captain De Courey, and Dr John Pirrie of the Mercantile Marine Board. Their inspection revealed that there were eleven active cholera cases on board including a child whose condition was reported to be complicated by cerebral disease.⁶⁹ The ship's medical officer stated that he had administered recommended treatments to the sick passengers including the application of external heat, calomel and opium, antispasmodics and stimulants. Efforts had also been undertaken to disinfect the vessel, while arrangements had also been made to inter the dead at the workhouse and to have the sick removed to its hospital. By Sunday afternoon however, a further five new cases

⁶⁴ *Ibid.*, p. 28.

⁶⁵ *Abstract reports to PLCs in Ireland* (1854), pp. 31-6.

⁶⁶ Letter from Dr McGee to Dr McDonnell, 5 Nov. 1853 in, *Abstract reports to PLCs in Ireland* (1854), p. 23.

⁶⁷ *Ibid.*

⁶⁸ *Abstract reports to PLCs in Ireland* (1854), p. 23. Six had died before entering the lough and were buried at sea. Two further cases (a child and an adult) had become ill shortly after the ship's arrival.

⁶⁹ *Ibid.* See also. *B.N.L.*, Nov. 7, 1853.

and two deaths had occurred. McGee consequently authorised the burial of six victims at the union's expense, despite acknowledging that such action may have exceeded the strict letter of the law.⁷⁰

By the time the *Guiding Star* was towed back to Liverpool on 9 November, fifty-six people had been admitted to the Union Hospital and twenty-two deaths had occurred.⁷¹ The guardians later reported that all the cases at the workhouse hospital had been successfully quarantined within the institution, and significantly, that no outbreak had occurred in the town. However, the episode had caused considerable anxiety. The *Belfast Newsletter* praised the guardians and Dr McGee for their actions but clearly believed that the town had narrowly escaped disaster. Blaming the vessel's owners for their negligence, the paper remarked:

It is no doubt lamentable, that we should be obliged to pay so severe a penalty for the carelessness of those who, at such a season, packed five hundred and fifty human beings on an ocean voyage...but it would have been still more lamentable if, through and want of nerve or caution on the part of the authorities, the living freight of that vessel were now swarming in our crowded lanes and alleys, carrying the pestilence with them.⁷²

Only one further suspected case occurred in Belfast during 1853. On 23 November, a woman named Kelly became ill in the early hours in a house at 128 Millfield near the centre of the town.⁷³ Her family had not immediately called for medical assistance, and by the time Surgeon Hanna arrived she had already died and he pronounced the case to be, 'a most virulent form of Asiatic cholera.'⁷⁴ The *Belfast Newsletter* however, reported that the victim had been drinking, 'late and hard' the night before and concluded that it

⁷⁰ *Abstract reports to PLCs in Ireland* (1854), p. 23.

⁷¹ Dr McGee to Dr McDonnell, 9 Nov. 1853 in, *Abstract reports to PLCs in Ireland* (1854), pp. 25-6.

⁷² *B.N.L.*, 2 Dec. 1853 and 11 Nov. 1853.

⁷³ Extract from *The Belfast Banner* in, *Abstract reports to PLCs in Ireland* (1854), p. 27.

⁷⁴ *Ibid.*

was ‘possible if not probable, that a cause other than Asiatic cholera occasioned her death.’⁷⁵ Similar scepticism emerged at a subsequent meeting of the guardians where George Posnett dismissed the incident as merely ‘that description of cholera which is always less or more prevalent in Belfast, - namely that caused by whiskey.’ Consequently, the guardians publicly maintained that ‘no living case of cholera had yet appeared in the town.’⁷⁶ By the end of January 1854, the guardians had become sufficiently confident that cholera would not return to Belfast to propose that the services of two additional nurses and a medical gentleman appointed during the Guiding Star crisis be dispensed with.⁷⁷ Dr McGee strongly opposed the measure and warned the guardians not to be complacent. The disease, he observed, was carrying off some forty to fifty people per day in Glasgow and he was of the opinion that it would still reach Belfast.

The Spread of Cholera in Ireland, 1854–55

McGee’s warning proved well founded. Although only a few sporadic outbreaks had occurred throughout Ireland during late 1853, cholera reappeared in February and it seemed that a serious outbreak would follow. Yet, unlike the epidemics of 1832 and 1848/49, and much like England’s experience, few of the large Irish towns that had previously experienced severe outbreaks suffered comparable rates of mortality in either 1854 or ’55.⁷⁸ The first substantial outbreak occurred in Limerick where approximately 1,195 cases and 500 deaths were documented by December 1854.⁷⁹ Despite its severity cholera did not spread rapidly to surrounding districts, and this was a factor that became

⁷⁵ *B.N.L.*, 30 Nov. 1853.

⁷⁶ *Ibid.*, 2 Dec. 1853.

⁷⁷ *B.N.L.*, 27 Jan. 1854.

⁷⁸ *Third report PLC* (1855), p. xv.

⁷⁹ *Third report PLC* (1855), p. 368.

a defining characteristic of the epidemic throughout Ireland over the course of the succeeding year.⁸⁰

The Poor Law Commissioners tried and largely failed to understand the reasons behind the strange and unpredictable nature of cholera's dissemination. In places such as, Belfast, Limerick, and Cork the disease spread swiftly to surrounding districts, while elsewhere, most notably in, Coleraine, Londonderry, Enniskillen, Mullingar and Westport, outbreaks remained comparatively localised.⁸¹ As cholera did not spread uniformly the commissioners struggled to explain why an attack in one district would not lead to neighbouring areas becoming infected, nor why, the disease would spontaneously appear in areas some distance from its original seat.⁸² Unable to reconcile these patterns with either strict contagionist or miasmatic explanations, they cautiously concluded that, 'following the introduction of the unknown agent of cholera to any country, cases of apparently spontaneous origin...are of frequent occurrence.'⁸³

Throughout Ireland succeeding outbreaks were relatively small in comparison to those experienced during 1832 and 1848/9, though they were no less alarming or severe in their local impact. In the village of Finglas, near Dublin, for example, the source of a sudden serious outbreak was believed to be a labourer, James Reilly, who had recently returned to the area after working in Belfast.⁸⁴ Upon his return Reilly had taken lodgings in the village but fell ill shortly afterwards. He later recovered, however his wife and the young daughter of his landlady both died a short time later.⁸⁵ Cholera then spread rapidly

⁸⁰ *Ibid.*, p. xv.

⁸¹ *Ibid.*

⁸² *Third report PLC* (1855), p. xvi. In Belfast, cholera, it was observed, spread mostly to the north-west, east and south-west, in Limerick it spread in a predominantly southerly direction and in Dublin it spread principally to the south, west and north-west.

⁸³ *Third report PLC* (1855), p. xxv.

⁸⁴ *Ibid.*, p. xxiii.

⁸⁵ *Ibid.*

throughout the village, resulting in sixty-six cases and twenty-eight deaths in just six weeks.⁸⁶ Panic ensued and residents fled Finglas inadvertently carrying the disease to the nearby villages of Kill-of-the-Grange and Kingstown, where an entire family of seven was among the fatalities.⁸⁷ Subsequent cases of cholera in Dublin were traced back to these outbreaks, while in Ulster, similar incidences, indicative of the contagious nature of cholera were also recorded in Armagh and in the County Antrim districts of Ballymena, Randalstown, Clough and Ballymoney.⁸⁸ These were all believed to be traceable to earlier outbreaks in Belfast and the village of Glenarm. Although, on one hand, the commissioners used these and other cases as evidence of contagion, on the other, they remained firmly noncommittal stating that: ‘It is not our attention to assert, that the comparatively small number of cases which we have attentively observed...would suffice for a safe foundation on which to build a theory on the mode of origin and propagation of the disease.’⁸⁹

Taken together, these examples indicate the uneven and locally intense character of the outbreak. Apart from Limerick, only Dublin and Belfast experienced epidemics of comparable scale during 1854. In October, the *Freeman's Journal* reported a rapid advance of the disease in the capital, noting a sharp increase in the hospital returns the article warned that people had been generally ignorant of the danger posed by the disease and argued that: ‘Timely warning would have saved many lives lost by being in ignorance of their danger, or by neglect of those first small beginnings of disease which, from their trivial and painless character, fail to excite attention much less alarm.’⁹⁰

⁸⁶ Robins, *The miasma*, p. 205; A report on the epidemic in the *Freeman's Journal* 1854 records that there were around 70 cases of cholera and 100 of diarrhoea, resulting in 29 deaths. See, *F.J.*, 28 Sept.

⁸⁷ *Third report PLC* (1855), pp. xxiii-xxiv.

⁸⁸ *Ibid.*, p. xxiv-xxv and pp. 43-53.

⁸⁹ *Third report PLC* (1855), p. xxv.

⁹⁰ *F.J.*, 13 Oct. 1854.

Dr Mason, of the Dublin Sanitary Association, likewise attributed the situation to widespread public apathy and urged the press to promote and encourage stricter observance of sanitary precautions throughout the city.⁹¹ According to comments made during the weekly meetings of the Dublin Sanitary Association the outbreak appears to have remained sporadic, and precise figures for cases and mortality in the city are difficult to establish.⁹² Dublin newspapers were often reluctant to publish full statistics, offering only intermittent returns from the North and South Dublin Union Hospitals, neither of which provide a complete epidemiological picture. For example, up to 25 January 1855, The South Dublin Union recorded 234 cases of Asiatic cholera, thirty of choleric diarrhoea, and thirteen of diarrhoea, fever and related diseases with 124 deaths registered across these categories.⁹³ However, the union's physician, Robert Travers seems to have questioned the accuracy of the returns and estimated that as many as 400 deaths could have been attributed to cholera alone.⁹⁴ Returns for the North Dublin Union are similarly incomplete, listing just 264 cases of cholera but providing no clear mortality data up to the 11 January, when a request was made to rescind the cholera order.⁹⁵

The most reliable indicator of mortality in Dublin is therefore found in the annual reports of the Poor Law Commissioners. Drawing upon their third and fourth reports, published in 1855 and 1856, and which cover the entirety of the epidemic, it is possible to identify 1,206 cases and 452 deaths in Dublin representing a mortality rate of almost 38 per cent.⁹⁶ Even these returns however are likely to underestimate the true impact in the capital as

⁹¹ *F.J.*, 14 Dec. 1854.

⁹² See weekly reports of the Dublin Sanitary Association in *F.J.*, Dec. 1854 - Jan. 1855, in particular 20 Dec. 1854.

⁹³ *F.J.*, 10 Feb. 1855.

⁹⁴ *Ibid.*

⁹⁵ *F.J.*, 11 Jan. 1855. *Third report PLC* (1855), p. 351. The Order issued 12 Nov. 1853 was rescinded on 10 June 1854. However, it was reissued on 15 Sept. 1854 before being withdrawn again on 31 Jan. 1855.

⁹⁶ *Fourth report PLC* (1856) p. 149; *Third report PLC* (1855), p. 355-6. The returns for North Dublin in 1854 were 686 Cases and 230 Deaths and 7 cases and 3 deaths in 1855 For South Dublin there were 431 cases and 176 deaths in 1854 and 88 cases and 43 deaths in 1855.

patients presenting with premonitory symptoms, as well as those who were successfully treated, were often classified as cases of choleric or simple diarrhoea and were therefore excluded from the epidemics totals. This inconsistency, to some extent, helps to explain the absence of precise statistics for Dublin and also suggests that cholera may not have been prioritised by the city's civic agencies. In Belfast, by contrast, the renewed threat of cholera appears to have restimulated a growing recognition of the link between filth and disease and therefore a more sustained programme of sanitary response from 1853 onward. Although the measures employed remained constrained by financial limitations, political disagreement and incomplete scientific understanding, they also showed that Belfast's civic and medical authorities understood the significance of a more coordinated and interventionist public health response.

The Return of Cholera to Belfast 1854

By mid-March 1854, no cases of cholera had been reported by Belfast's medical officers, and it seemed possible that the extensive preparations implemented by the guardians and the corporation had spared the town from a serious outbreak. Although neither body had lost sight of Belfast's wider public health issues sanitary reform continued to be their principal focus. The town's unregulated slaughter houses, for example, led Samuel Brown to urgently recommend that the slaughtering of all cattle be removed from populous districts, particularly those in close proximity to Hercules Street.⁹⁷ The Blackstaff River likewise remained a constant concern, and debates regarding its sanitary condition and on

⁹⁷ *B.N.L.* 3 Mar. 1854. Giving the abominable state of Fulton's Entry as just one example, Brown recommended that, 'this place should be either closed up or a new street run through it to the North-East end of Smithfield.'

how to deal with the objections of the neighbouring landowners were an almost continual theme in the minutes of both the corporation and the guardians.⁹⁸

As preparations for the likely return of cholera continued the corporation remained primarily responsible for the sanitary upkeep of the town after 1854, while the guardians increasingly began assuming control of the practical management of cholera response. In February, Dr McGee directed the Union Hospital's committee to inspect premises at Barrack Street to determine whether, following repairs, they might serve as a separation ward for the reception of cholera patients and their families.⁹⁹ Colonel Clarke, the Poor Law Inspector, supported the proposal observing that the building could be rented for the relatively modest sum of £60 per annum. William Watson of the guardians, however, objected to the expense, and complained that the board was 'talking of cholera and frightening the people of town and country when no cholera was present.'¹⁰⁰ McGee replied that the committee had carefully considered the financial implications and was confident that its actions could not be regarded as extravagant, stressing that its intention was simply to ensure that the town was adequately prepared for any emergency that might arise.¹⁰¹ Despite these assurances, the proposal was ultimately abandoned, and Barrack Street continued to operate only as a dispensary and cholera station.

The threat of cholera however moved closer to Belfast and by 15 March between seventy and eighty cases had been reported in nearby Carrickfergus. After visiting the district, McGee noted that while arrangements had been introduced, including the establishment of a temporary cholera hospital in the grounds of the old jail, mortality had reached as

⁹⁸ See Chapter Five of this thesis. pp. 203-5: BBOG, Dec. 1853 to May 1855, PRONI BG/7/A/15-17 and Council Minutes, 1 Dec. 1853-19 July 1856, PRONI LA/7/2/EA/4.

⁹⁹ *B.N.L.*, 10 Feb. 1854.

¹⁰⁰ *Ibid.*, 24 Feb. 1854.

¹⁰¹ *Ibid.*

high as one in two.¹⁰² Most cases had occurred near the coast along the Woodburn River and victims were also believed to have transported the disease to Ballymacarrett on the outskirts of Belfast.¹⁰³ By 17 March, four cases had been reported there and this initial outbreak caused particular concern, not only because of the likelihood of contagion, but also because of its immediate proximity to Belfast. Fearing that a more serious outbreak might follow, McGee proposed that the local dispensary committee begin a system of house-to-house visitation without waiting for formal approval from the guardians. The dispensary's medical attendant, Dr Hamilton, concurred, observing that a similar system had produced beneficial results during an earlier outbreak in the village of Newtownbreda to the south-east of Belfast.¹⁰⁴

Growing concerns in Belfast led to a Cholera Order being issued on 21 March 1854 and within a few days the first cases appeared in Smithfield Court (six cases and three deaths) and in Washington Street (two cases) in the centre of the town, three or four more cases were also reported in other localities.¹⁰⁵ By 5 April thirty-two cases had been recorded and Dr McGee informed the guardians that the disease was so rife in some districts that immediate action was required.¹⁰⁶ On the same date, the guardians reported that there had been cases in Washington Street, Ritchie's Place, Smithfield Court, Chapel Lane, McLean's Entry, Francis Street, Brown Street, Green Street, Johnny's Entry, Church Street, Patterson's Place, Cooney's Court, and Prince's Street.¹⁰⁷ Although an additional medical officer was appointed, other suggestions proposed by McGee on behalf of the dispensary committee proved more contentious. These included the appointment of

¹⁰² *B.N.L.*, 15 Mar. 1854.

¹⁰³ *Ibid.*, 17 Mar. 1854.

¹⁰⁴ *Ibid.*

¹⁰⁵ The order was rescinded on 8 Dec. 1854. *Third report PLC* (1855), p. 351 and *Fourth report PLC* (1856), p. 149; *B.N.L.*, 3 Apr. 1854.

¹⁰⁶ *N.W.*, 6 Apr. 1854.

¹⁰⁷ *B.N.L.* 7 Apr. 1854.

additional doctors, the employment of medical students as house-to-house visitors, the appointment of temporary relieving officers, to supervise cleaning operations, the extension of the dispensary's opening hours, and a pay raise for the town's medical attendants.¹⁰⁸

It was the question of remuneration in particular which provoked considerable opposition among the guardians. Sir William Johnston, the elected guardian for Ballysillan, argued that the board could not adopt recommendations entailing such expenditure owing to the poor attendance of guardians at the meeting.¹⁰⁹ A heated exchange followed which culminating with McGee sarcastically remarking that he had no objection to postponement provided the board would pass a resolution guaranteeing that 'there would be no fresh cases of cholera till that day fortnight, or month.'¹¹⁰ The *Northern Whig* responded critically to what it called the *laissez faire* attitude of the guardians and similarly observed that; 'The would-be-very-cautious gentlemen declined to move that the cholera be requested to discontinue its attacks...till they had full time to dream over the matter.'¹¹¹ Defending McGee's position regarding what it viewed as the, 'miserable remuneration allowed to the Medical Officers,' the article further declared; 'We much mistake the temper of our townsmen, if conduct like this in a crisis such as is now at hand, will be tolerated for a moment.'¹¹² A special meeting of the guardians was convened the following Monday, during which the dispensary committee's recommendations regarding additional medical assistance were eventually adopted. The dispute regarding salaries however, continued unresolved.¹¹³ At a later meeting, McGee renewed his passionate

¹⁰⁸ *B.N.L.*, 7 Apr. 1854; *N.W.*, 6 Apr. 1854. McGee noted that he had seven medical students willing to take up the posts.

¹⁰⁹ *N.W.*, 6 Apr. 1854; *B.N.L.*, 7 Apr. 1854.

¹¹⁰ *Ibid.*, *N.W.*, 6 Apr. 1854.

¹¹¹ *Ibid.*

¹¹² *N.W.*, 6 Apr. 1854.

¹¹³ *B.N.L.*, 10 Apr. 1854.

appeal for an increase in salaries, but the board maintained their resistance, arguing that a previous rise from £50 to £75 per annum was more than sufficient.¹¹⁴ In August, the dispensary committee made a second appeal to the commissioners, but the matter remained unresolved until late December 1854, when the commissioners finally stated that they would not object to the payment of an additional payment of £75 for the town's six medical officers.¹¹⁵

In the meantime, cholera had begun to take a stronger hold in Belfast. By 14 April, forty-six cases and twenty-four deaths had been recorded among patients treated in the dispensary, hospital and in private practice, and from this date weekly cholera returns from Belfast and Ballymacarrett appeared regularly in the published minutes of the guardians.¹¹⁶ However the disease progressed remarkably slowly in comparison to previous outbreaks, a fact which McGee attributed to the success of the system of house to house visitation through which a number of cases of premonitory diarrhoea had been identified and successfully treated.¹¹⁷ Despite this apparent success, McGee remained anxious regarding the persistence of behaviour which he believed encouraged the spread of disease. He drew particular attention to the death of a woman in Smithfield whose relatives had ignored advice recommending immediate burial. Her husband subsequently fell ill with diarrhoea, and McGee linked both cases to wakes at which 'drunkenness prevailed and contagion was engendered.'¹¹⁸ Concerns regarding drunkenness also appear to have become an issue within the Belfast Workhouse, where the Master grew increasingly troubled by the conduct of some female paupers. On occasion, women who

¹¹⁴ *Ibid.*, 26 Apr. 1854; *N.W.*, 27 Apr. 1854.

¹¹⁵ Letter from the Belfast Dispensary Medical Staff to the Poor Law Commissioners, 7 Aug. 1854, in *BBOG*, 19 Aug. 1854; *B.N.L.*, 22 Dec. 1854.

¹¹⁶ *Ibid.*, 14 Apr. 1854; *N.W.*, 13 Apr. 1854.

¹¹⁷ *B.N.L.*, 21 Apr. 1854.

¹¹⁸ *Ibid.*

had been granted leave to visit friends returned to the institution in a state of intoxication, and his account singled out one woman in particular who, after returning drunk, behaved abusively towards both staff and inmates. Upon returning to the house a second time she was taken to hospital by the cholera cart where it was reported that she had died, but it was not subsequently reported whether intoxication or cholera had been responsible.¹¹⁹

By the end of April, only ninety-four cases of cholera had been reported in Belfast leading Samuel Browne to express cautious optimism that the epidemic would not be as severe as earlier outbreaks. A fact that he largely attributed to the considerable improvement in the sanitary condition of the town since the epidemic of 1849.¹²⁰ Seaton Reid also reported that a case had occurred in the workhouse after which a patrol was appointed so that any further cases could immediately be transferred to hospital.¹²¹ From mid-May onwards the epidemic appeared to subside, but by mid-July, cases began to increase once more and house-to-house visitations, which had been suspended at the end of June, recommenced.¹²² McGee warned the town's medical officers that they 'would have to buckle on their armour,' while the *Northern Whig*, with obvious concern, observed that, 'the character of this disease at present in Belfast is highly alarming and fatal.'¹²³

Cholera, Fear and Philanthropy in Belfast

The increased virulence of the epidemic during the summer months is also vividly illustrated in the diary of the Rev. Anthony McIntyre. In Little Donegall Street, he recorded the death of a man with whom he had previously spoken. While the man had appeared to be in good health in the evening he had died suddenly during the night of 31

¹¹⁹ *Ibid.*

¹²⁰ *B.N.L.*, 26 Apr. 1854 and 3 May 1854.

¹²¹ *Ibid.*, 19 May 1854.

¹²² *B.N.L.*, 30 June 1854.

¹²³ *Ibid.*, 25 July 1854; *N.W.*, 27 July 1854.

July.¹²⁴ In Lynas's Lane, off Great Patrick Street, he reported that there had been three fatal cases of cholera, including that of a woman who had recently travelled from Glasgow to collect the children of her sister, who herself had died from cholera only days earlier.¹²⁵ A few streets south, in Richie's Place, off North Street towards Smithfield, McIntyre described the deaths of three young girls one of whom had reportedly taken ill shortly after washing the feet of a cholera victim. Meanwhile, approximately 150 yards North he observed that there had been a particularly rapid spread of the disease in the Mustard Street area that had resulted in ten deaths in just a few days.¹²⁶

McIntyre's diary also reveals much about the nature of his philanthropic efforts while simultaneously noting his admiration for the level of 'sympathy and true benevolence' displayed by Belfast's poorer inhabitants towards one another.¹²⁷ Such benevolence, however, did not always extend to those seeking relief from other charitable sources. McIntyre recounted one incident which was, even by contemporary standards, strikingly severe. Ellen Martin, a mother of five residing in Robert's Court, Mustard Street, having been informed that her husband had contracted cholera and was not expected to recover, obtained a recommendation from Dr Ross, commonly referred to as a "line," which entitled her to financial assistance from the Ladies' Society (Destitute Sick Society).¹²⁸ This support was subsequently withdrawn after the orthodox Presbyterian missionary William Graham learned that she had sent her children to a school recommended by the Unitarian McIntyre. Attempting to intervene on her behalf, McIntyre appealed to the

¹²⁴ Diary of Rev. Anthony McIntyre, 1 Aug. 1854.

¹²⁵ *Ibid.*, 2 Aug. 1854.

¹²⁶ Diary of Rev. Anthony McIntyre 3 and 11 Aug. 1854. Ritchie's Place was a densely populated, narrow residential entry located directly off North Street. Mustard Street ran parallel to Little Donegal Street towards Carrick Hill. It contained around 80 houses and was named after Richard Caldwell and Co, Flour and Mustard Factory. It is now Library Street.

¹²⁷ *Ibid.*, 11 Aug. 1854.

¹²⁸ The Ladies Society was also known as the Destitute Sick Society. The line entitled Ellen to four shillings at four different times from the society.

Destitute Sick Society only to discover that all applications for relief required the approval of the district visitor, a mechanism which enabled Graham, acting ostensibly as a gatekeeper of orthodox religious propriety, to effectively veto Ellen's claim.¹²⁹ Yet, not all McIntyre's philanthropic efforts proved unsuccessful. In another instance, a family living above rooms where a cholera victim had died complained to the sanitary committee about the condition of the premises, but after McIntyre intervened the police office arranged for the immediate cleansing of the property.¹³⁰

Cholera's Escalation and Civic Response

As the number of cholera cases intensified in the areas observed by McIntyre, particularly in the Smithfield and Dock wards, McGee proposed that the guardians convert the nearby Barrack Street dispensary into a temporary cholera hospital. The premises were, however, deemed to be too small, and the proposal was dismissed. Instead, arrangements were introduced which allowed the dispensary act as a probationary ward for cholera and convalescent patients, an adaption which ultimately proved to be a beneficial addition in the fight against the disease in Belfast.¹³¹ By mid-August, the *Northern Whig*, noting the continued rise in both morbidity and mortality, reported that cholera had become increasingly virulent, showed no sign of abating, and estimated that as many as sixty per cent of those attacked had died.¹³² From the end of August until mid-September the number of cholera cases in the town averaged more than one hundred per week. The committee of the General Hospital attributed this increase partly to favourable meteorological conditions, observing that 'the mortality is very great, and the disease

¹²⁹ Diary of Rev. Anthony McIntyre, 14 Nov. 1854.

¹³⁰ *Ibid.*, 13 Oct. 1854.

¹³¹ *B.N.L.*, 11 and 18 Aug. 1854. McGee had made a similar suggestion in February when he asked the Committee of the Union Hospital to enquire into the possibility of the premises being converted into a separation ward for cholera patients and their families. See p. 244 above.

¹³² *N.W.* 15 Aug. 1854.

seems to be gaining strength and virulence with the continuance of the present fine weather.’¹³³ Public anxiety noticeably intensified. The *Northern Whig* reported that, that the lists of those prayed for during Roman Catholic services had become unusually large, while one visitor from Cork reportedly declared that he would ‘not remain a moment longer than he could help,’ adding that ‘when the newspapers give such bad accounts of the progress of the disease it must be much greater than is represented.’¹³⁴ Ironically, the local press were themselves accused of heightening public alarm, the *Belfast Mercury*, for example, quoted McGee who had told a meeting of the guardians that panic had been instigated by paragraphs in local newspapers particularly those referring to the frequency of recent funerals.¹³⁵

McGee nevertheless attempted to reassure both the guardians and the wider public regarding the severity of the epidemic. Referring to reports that mortality had exceeded fifty per cent, he argued that these figures had often combined cases of diarrhoea with cholera proper and insisted that mortality from cholera alone amounted to ‘barely thirty-three per cent’ and was ‘not greater than in other places.’¹³⁶ Addressing the population more generally, he advised that:

I must say there is no cause for people to be alarmed. If they keep their places clean and their persons clean, use good food-at least as wholesome food as they can afford- and avoid excesses of every kind, they need not be alarmed.¹³⁷

From the end of September the outbreak gradually began to subside and by early October Samuel Browne informed a meeting of the corporation that, in his view, cholera could now be regarded as having almost ceased to exist in epidemic form.’¹³⁸ By the end of the

¹³³ *B.N.L.*, 6 Sept. 1854.

¹³⁴ *N.W.*, 5 Sept. 1854; *Belfast Mercury (B.M.)*, 14 Sept. 1854; *F.J.*, 15 Sept. 1854.

¹³⁵ *Ibid.*, *B.M.*, 14 Sept. 1854.

¹³⁶ *B.N.L.*, 15 Sept. 1854.

¹³⁷ *F.J.*, 15 Sept. 1854.

¹³⁸ *B.N.L.*, 4 Oct. 1854.

month, the guardians dispensed with all of their house-to-house visitors but retained one cholera car as a precautionary measure.¹³⁹ On 10 November the guardians petitioned the Poor Law Commissioners to withdraw the Cholera Order. Fears of renewed outbreaks elsewhere in Ulster, however, delayed its removal until 8 December, though only three additional cases and two deaths were recorded in Belfast thereafter.¹⁴⁰

Statistical Analysis of the 1854 Epidemic

While Browne informed the corporation that the town had reason to be thankful that the visitation had proved comparatively light, the weekly returns of the guardians, published in the local press, and reproduced in Table 6.2, shows that the mortality rate in the Union Hospital had exceeded fifty per cent, and therefore suggests that the epidemic was in fact considerably more severe than his remarks implied.¹⁴¹ It is unclear how Browne had calculated the rate of mortality that he had quoted to the guardians; however, the published statistics for Belfast, much like those recorded for the rest of the country present a confusing and often contradictory picture of the epidemic's true scale. Unlike earlier outbreaks, separate returns were issued for dispensary and hospital patients. Reproduced in Tables 6.2 and 6.3, both included patients transferred from dispensaries to hospital care. The overlap and inconsistency within these figures consequently produced a fragmented statistical record from which it is difficult to establish a wholly comprehensive total.

¹³⁹ *Ibid.*, 27 Oct. 1854.

¹⁴⁰ *Third report PLC* (1855), p. 351.

¹⁴¹ 481 cases and 259 deaths between 12 Apr. and 25 Oct 1854 representing a mortality rate of 53.3 per cent. See Table 6.2 below for a tally of cases and deaths. See also, weekly reports of BBOG in *B.N.L.* and *N.W.* The morbidity and mortality rates and the issues regarding the accuracy of the statistics are discussed in the section below. See Table 6.2 below for a tally of cases and deaths. See also, weekly reports of BBOG in *B.N.L.* and *N.W.*

Table 6.2: Cholera Cases, Deaths, and Recoveries in the Union Hospital April-October 1854

Date (week up to)	Weekly Cases	Total Cases	Weekly Deaths	Total Deaths	Total Discharged Cured	Remaining
12 Apr.				9		
19 Apr.			5	14		
24 Apr.			7	21		
3 May			13	34		
10 May		74	3	37	34	3
17 May	7	81	6	43	37	1
24 May	3	84	1	44	38	3
7 June	8	92	4	48	43	1
12 July	20	112	10	58	48	6
19 July	6	118	4	62	53	3
24 July	16	134	8	70	55	9
2 Aug.	NO REPORT					
9 Aug.		183		97	75	11
11 Aug.- 6 Sept. ¹⁴²	NO REPORT					
6 Sept.	41		20			
13 Sept.		368		196	159	13
20 Sept.	46	414		220	174	20
27 Sept.	27	441		238	191	12
4 Oct.	38	479		256	214	9
11 Oct.	2	481		256	223	2
25 Oct.	0	481		259	222	0

Table compiled from the minutes of the Belfast Board of Guardians published weekly in the *Belfast Newsletter*. Blank spaces denote figures which were not recorded.

¹⁴² No public reports were issued for the hospital by the board of guardians during this period, but Dr McGee reported in mid-August that mortality was very high. See *B.N.L.* 24 Aug. 1854. The figures recorded in the above table appear to corroborate McGee's report and show that some 100 deaths occurred between 9 Aug. and 13 Sept.

Table 6.3: Cholera Cases, Deaths, and Recoveries in the Belfast Dispensaries 1854

Date (week up to)	New Cases	Total Cases	Weekly Deaths	Total Deaths	Total Discharged Cured	Total Sent to Hospital	Remaining Under Treatment
5 Apr.		27	9				
12 Apr.		40	6	15			8
19 Apr.	31	71	2	17	15		
24 Apr.	23	94		23			
3 May	14	115		29			
10 May	12	126		32	35	52	
17 May	14	140	6	38		57	
24 May	12	152		43	46	60	
7 June	10	162		45	51		3
14 June	0	162		45			
21 June	2	164	0	45			1
28 June	1	165	0	45			
5 July	5	168	3	48			
12 July	3	171	1	49			
19 July	10	181	5	54	1		
26 July	19	219	16	63	60	87	
2 Aug.	38	257	7	70	65		
9 Aug.	53	310	12	82	90		
16 Aug.	48	358	8	90	106	149	13
23 Aug.	77	435	15	105	136	174	20
30 Aug.	69	504	18	123		199	
6 Sept.	123	627	37	160	201	235	31
13 Sept.	108	735	34	194	233	256	52
20 Sept.	116	851	37	231	297	285	38
27 Sept.	58	909	26	257	332	301	19
4 Oct.	51	960	16	273	253	314	20
11 Oct.	30	990	16	289	371	319	11
18 Oct.	17	1007	8	297	381	322	7
25 Oct.	17	1018	6	303	388	324	3
8 Nov.	0	1018	1	304	388	326	1
22 Nov.	2	1020	1	305	388	327	

Compiled from the minutes of the Belfast Board of Guardians published weekly in the *Belfast Newsletter* 5 Apr. - 22 Nov. 1854. Blank spaces denote figures which were not recorded.¹⁴³

¹⁴³ N.B. These figures were not recorded in the BBOG minute book and appear only in the reports of the Belfast press.

By taking the disparity between the statistics of the guardians and dispensaries into consideration, Table 6.4 below presents a reconstructed estimate of total cases by adjusting for the overlap created by patients transferred from dispensaries to hospital care. On this basis, and after subtracting cases recorded as having been sent to hospital where these are already included within the hospital returns, it is possible to account for a minimum of 1,174 cases and 564 deaths from cholera in Belfast during the course of the epidemic.¹⁴⁴ This produces an estimated mortality rate of forty-eight per cent. While this figure is likely to provide a reasonably accurate indication of the severity of the outbreak, it should be regarded as a reconstructed minimum rather than a definitive total. As previously noted, they are derived from administrative returns which were themselves subject to inconsistency and duplication. The figures also exclude patients treated in private practice, although it is doubtful that their inclusion, would have significantly altered the overall morbidity and mortality rates.

Table 6.4: Reconstructed estimate of cholera cases and deaths in Belfast (adjusting for transferred cases between dispensaries and hospital)

Total cases, adjusted for duplication by excluding 327 cases recorded as transferred to hospital within the guardians' returns	Total Deaths	Total recoveries	Percentage Mortality
1174	564	610	48%

Figures sourced from the statistics of the Belfast Board of Guardians for the Union Hospital and the Belfast Dispensaries recorded in Tables 6.2 and 6.3 above.

¹⁴⁴ 1,174 cases calculated from the following. Total cases (1,501) minus 327 patients recorded as transferred to the Union Hospital and duplicated in the guardians' published figures See Tables 6.3-6.4 above.

In order to establish a more accurate comparison of morbidity and mortality rates in Belfast, the later reports of the Poor Law Commissioners have also been closely examined as part of this study.¹⁴⁵ Although these were based upon the weekly returns submitted by individual boards, and therefore should broadly correspond with the reports published by the guardians in the Belfast press, they in fact record substantially higher totals for Belfast during the epidemic. As Table 6.8 below demonstrates, the commissioners' *Third Report on the Relief of the Poor under the Medical Charities Act* (1851) recorded 1,871 cases and 677 deaths in the town during 1854.¹⁴⁶ Although these figures represent a markedly lower mortality rate of thirty-six per cent, they must be treated with caution, as it is highly probable that returns from Ballymacarrett and neighbouring districts, including Carrickfergus, Newtownards, and Bangor, were incorporated into the totals for Belfast. No final aggregate figures for these districts appear to have been published in the report and their inclusion would go some way towards explaining the disparity between the commissioners' returns and the totals published by the guardians.¹⁴⁷

Whatever the precise figures, it is clear that the combined efforts of the guardians, corporation and local sanitarians proved less effective than contemporaries might have hoped. Nevertheless, several measures, particularly the system of house-to-house visitation and the treatment of patients by dispensary physicians organised through the guardians, did make a significant contribution to Belfast's medical response to cholera. Nor should the sanitary efforts undertaken by the corporation's medical officer and his staff be overlooked. Under Samuel Browne's direction, the corporation attempted to

¹⁴⁵ The commissioner's reports and their statistical returns for the rest of Ireland and Ulster in particular are also discussed in more depth in a separate section below.

¹⁴⁶ See, *Third report PLC* (1855), p. 359.

¹⁴⁷ In Ballymacarrett for example figures suggest that there were at least 257 cases and 67 deaths up to 25 Oct. 1854. However, the local dispensary physician later claimed he had personally treated at least 300 and perhaps as many as 500 cases. See, Weekly reports for the Ballymacarrett Dispensary in the published report of the guardians, *B.N.L.* 11 Apr. - 25 Oct. 1854, and *B.N.L.*, 12 and 19 Jan. 1855. Dr Hamilton was subsequently awarded an extra payment of £100 for his efforts; he resigned shortly afterwards.

implement a sustained sanitary campaign throughout the town. During the fifteen months leading up to January 1855, Browne's inspectors carried out more than 40,000 visits, resulting in the issuing of approximately 25,000 notices for the removal of nuisances, the opening of obstructed sewers, and the cleaning and whitewashing of houses.¹⁴⁸ Subsequent inspections suggested that the vast majority of these orders had been complied with.¹⁴⁹ Despite these efforts, the corporation dismissed the sanitary staff and Browne resigned in disgust, though not before urging the corporation to continue its sanitary enquiries.¹⁵⁰ The municipal authorities, he insisted, 'should not permit themselves to be led to believe that any other public body can well execute works similar to those which have been effected under the authority of the town council.'¹⁵¹

Although cholera had ceased to present an epidemic threat in Belfast by the end of 1854, it continued to circulate elsewhere in Ulster during 1855, with sporadic outbreaks occurring in towns relatively nearby. In Ballymena, County Antrim, approximately thirty miles from Belfast, there were 121 cases and twenty-one deaths, most of which of which occurred in the first two months of the year.¹⁵² Thirty miles further North, in Coleraine, County Londonderry, a more severe outbreak resulted in 374 cases and 133 deaths between January and March.¹⁵³ Cholera's final case was reported to have occurred in the Galgorm medical district of the Ballymena Union on 14 April 1855 and the final toll recorded by the commissioners for Ulster during 1855, reproduced in Table 6.7, showed that the province had experienced 555 cases and 180 deaths.¹⁵⁴ While these outbreaks are important in understanding Ulster's experience of cholera in 1855, a more complete

¹⁴⁸ *B.N.L.*, 2 Feb. 1855.

¹⁴⁹ *Ibid.*

¹⁵⁰ Slater, *Belfast Politics*, p. 274.

¹⁵¹ *B.N.L.*, 2 and 7 Feb. 1855.

¹⁵² *Fourth report PLC* (1856), p. 150.

¹⁵³ *Ibid.*, p. 151.

¹⁵⁴ *Third report PLC* (1855), p. 354 and *Fourth report PLC* (1856), p. 146.

picture emerges from the broader statistical framework through which the Poor Law Commissioners recorded and interpreted the epidemic across Ireland. It is this framework, rather than the local returns alone, which ultimately shaped both contemporary perceptions and subsequent historical assessment of cholera's overall scale and severity during this outbreak.

Assessing the Statistics for Ireland 1853/5

In all, the epidemic in Ireland had lasted just over sixteen months and had cost some £11,637 of public funds split between the costs for the removal of nuisances and those for the administration of treatment to cholera patients.¹⁵⁵ The returns of the Poor Law Commissioners, which provide the most comprehensive and accurate statistics for the period, suggest that there were a total of 7,617 cases and 2,947 deaths between 1853 and '55 producing a mortality rate of 38.7 per cent.¹⁵⁶ On this basis, it may be argued that the overall toll was almost certainly higher than historians have previously suggested. Charles Creighton, for example, who, as noted above, believed the outbreak to be unimportant, relied solely on the deaths logged by the Census Commissioners for 1854. However, while he considered it improbable that all were, 'of the true Asiatic type,' he provided no evidential basis for his assumption.¹⁵⁷ Creighton also neglected to acknowledge that no

¹⁵⁵ *Annual report of the commissioners for administering the Laws for Relief of the Poor in Ireland, Including the Nineteenth report under 10 and 11 Vic., c. 90, and the Fourteenth report under 14 and 15 Vic., c. 68 with Appendices*, Appendix C, p. 187, H.C. 1866 (3668), xxxvi, 1. Hereafter, *Nineteenth report PLC* (1866); *Fourth report PLC* (1856), p. 11. £7,260 was spent on the removal of nuisances. This did not however include the guardian's expenditure for large towns including Dublin, Cork, Belfast and Limerick. A further £4,377 was expended on the treatment of patients.

¹⁵⁶ Of which 136 cases and twenty-seven deaths are recorded for 1853. The official report also records one case registered on 6 Jan. 1854. This has been subtracted from the total for 1853 used in this chapter. See, *Abstract reports to PLCs in Ireland* (1854), p. 42 and *Fourth report PLC* (1856), p.10. Statistics for the outbreak at Queenstown however were not included. See note in, *Abstract reports to PLCs in Ireland* (1854), p. 42 in which 6,619 cases and 2,606 deaths are recorded; See also, *Third report PLC* (1855), p. 354. For 1855 see, *Fourth report PLC* (1856), p. 146 where 862 cases and 314 deaths are recorded. The Census Commissioners record a total of 2,818 deaths between 1853 and 1855. However, case numbers are not listed in the returns. See, *Census of Ireland* (1861), p. 211.

¹⁵⁷ Creighton, *A history of epidemics*, p. 856.

corresponding case numbers were provided in the census returns, making any meaningful calculation of mortality impossible. Joseph Robin's more recent, though brief account, while likely to be more accurate representation, similarly overlooks key limitations in the surviving data. He cites the Poor Law Commissioners reports to suggest that there were 2,606 cholera deaths between 1853 and 1855.¹⁵⁸ However, this total relates only to the commissioner's totals for 1854.¹⁵⁹ He also chose to ignore morbidity and mortality statistics for 1855 entirely. Robins further refers to a figure of 3,488 deaths from diarrhoea and cholera recorded by the commissioners between late 1853 and early 1855, although the basis for combining this statistic is not clearly explained.¹⁶⁰ Inconsistencies in the historical data reinforce the difficulty faced when attempting to come to an estimation of national totals as it is clear that incomplete and uneven reporting have produced statistics for cholera which are notoriously imprecise. Without doubt, the official reports of the Census and Poor Law Commissioners, both omitted important statistical data. There is also considerable ambiguity regarding whether patients referred from dispensaries to hospitals were consistently and accurately incorporated into final returns. This is particularly significant when considering urban centres like Belfast. The dispensaries, after all were one of the most significant front-line services in terms of the provision of care, meaning that inconsistent or inaccurate record keeping disproportionately affected the apparent scale of the epidemic in some areas.

The 1861 Census Commissioner's Report on Cholera

The report of the 1861 Census Commissioners on Irish deaths in particular provides a moderately confusing perspective regarding the prevalence of cholera in Ireland during

¹⁵⁸ Robins, *The miasma*, p. 204.

¹⁵⁹ See Table 8, Appendix B in *Third report PLC* (1855), p. 354.

¹⁶⁰ Robins, *The miasma*, p. 204.

the decade preceding its publication. While the epidemic period of 1853/5 clearly stands out; significant numbers of cholera deaths, as Table 6.5 below shows, were recorded in the census for every year between 1851 and '61. Some 3,967 cholera deaths were registered during this decennial period. However, these statistics must be treated with caution, as the Census Commissioners relied largely upon the post-famine recollections of individual householders concerning the deaths of family members or neighbours rather than upon systematic medical or civic records. Consequently, the returns were particularly susceptible to errors of recall and misclassification, especially in rural districts.¹⁶¹ It is also probable that many deaths attributed to cholera outside the core epidemic years included cases of the endemic strain of cholera as well as other waterborne diarrhoeal diseases, including dysentery and typhoid fever.

Table 6.5: Cholera Deaths in Ireland as Recorded by the Census Commissioners 1851-1861

Year	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861
Deaths	188	383	460	1706	652	206	117	90	76	69	20

Table reproduced from Census of Ireland (1861), p. 211.¹⁶²

A further limitation of the census report lies in the exclusion of data from local dispensary returns. Only figures from infirmaries, general, specialist and institutional hospitals and family returns were included despite the fact that most cholera victims were initially treated or referred to hospital by dispensary doctors. Dispensary records which were included in both the printed statistics for Belfast and in the national statistics of the Poor Law Commissioners, as shown in Table 6.6 below, demonstrate clearly that dispensary physicians played a central role in diagnosis, treatment, and onward referral, underscoring

¹⁶¹ 2,169 Males and 1,798 Females. Census of Ireland (1861), p. 23.

¹⁶² Census of Ireland (1861), p. 211. 276 days are recorded for 1851 and 97 for 1861.

their significance and thus, their exclusion from the census returns clearly adds to the distortion of national figures for cholera.

Nevertheless, the mortality recorded by the Census Commissioners, reproduced in Table 6.6, does reflect a provincial pattern which is broadly consistent with the statistics of the Poor Law Commissioners. Ulster is shown to be the most heavily affected province recording 895 deaths at the height of the epidemic in 1854.¹⁶³ In comparison almost half as many deaths, 453, were recorded for Leinster, while 324 were recorded in Munster. Connaught, however, escaped almost entirely with only thirty-four deaths documented during the course of the outbreak.¹⁶⁴

Table 6.6: Census Commissioner's Statistics of Cholera Mortality in the Four Provinces of Ireland 1853/5

Province	1853	1854	1855	Total
Ulster	150	895	337	1382
Leinster	100	453	222	775
Munster	177	324	69	570
Connaught	33	34	24	91
Total	460	1706	652	2818

Table compiled from Census of Ireland (1861), pp. 177-219.¹⁶⁵

The Reports of the Poor Law Commissioners on Cholera 1853/5

A close examination of the four earlier reports of the Poor Law Commissioners, reproduced in Table 6.7, provides perhaps the closest approximation to an accurate statistical representation of cholera morbidity and mortality during the epidemic.¹⁶⁶ These returns demonstrate that Ulster, particularly County Antrim, was by far the worst affected region and that, at the height of the outbreak, Belfast recorded the highest number of both cases and deaths in Ireland. Table 6.8, which summarises the statistics for several of

¹⁶³ Census of Ireland (1861), pp. 177-219.

¹⁶⁴ Ibid

¹⁶⁵ Census of Ireland (1861), pp. 177-219.

¹⁶⁶ *First to Fourth reports PLC* (1854-56).

Ireland's largest towns, further reinforces the disproportionate impact of the epidemic upon Ulster's urban centres. Outside Belfast, significant outbreaks also occurred during 1854 in towns situated relatively nearby, most notably Lisburn, Newtownards, Larne, and Ballymena. Only Londonderry, with a total of just thirty-two cases and fifteen deaths recorded throughout the epidemic, emerged virtually untouched.

Table 6.7: Poor Law Commissioner's Reports for Cases and Deaths in Dispensaries and Union Hospitals for the Provinces of Ireland 1854-55

Province	Cases (1854)	Deaths (1854)	Cases (1855)	Deaths (1855)	Total Cases	Total Deaths	% Mortality
Connaught	49	31	15	8	64	39	60.9%
Munster	1672	695	16	2	1688	697	41.3%
Leinster	1570	586	276	124	1846	704	38.1%
Ulster	3328	1294	555	180	3883	1474	38%
Total	6619	2606	862	314	7481	2914	39%

Table compiled from statistics in *Third and Fourth reports of the Poor Law Commissioners (1855-56)*, pp. 369-70 and p. 152.

Table 6.8: Cholera Morbidity and Mortality in Selected Large Towns in Ireland 1854-55

Town	Cases (1854)	Deaths (1854)	Cases (1855)	Deaths (1855)	Total Cases 1854-55	Total Deaths 1854-55	% Mortality
Larne	259	123	23	9	282	132	46.8%
Londonderry	32	14	1	1	33	15	45.5%
Rathdown	383	155	84	45	467	200	42.8%
Dublin (South)	431	176	88	43	519	219	42.1%
Limerick	1195	500	7	1	1201	501	41.7%
Lisburn	347	139	3	1	350	140	40%
Belfast	1871	677	3	2	1874	679	36.2%
Coleraine	19	7	374	133	393	140	35.6%
Dublin (North)	680	230	7	3	687	233	33.9%
Ballymena	251	105	121	21	372	126	33.8%
Newtownards	277	92	8	2	285	94	32.9%
Cork	87	28	1	0	88	28	31.8%

Table compiled from statistics in *Third and Fourth reports of the Poor Law Commissioners (1855-56)*, pp. 369-70 and p. 152.

Nevertheless, the statistics of the Poor Law Commissioners must be treated with similar caution, as the published returns exclude patients treated in private practice and provide no indication of the numbers admitted to or treated within general hospitals. Even so, these omissions are unlikely to have significantly altered the overall statistical picture for cholera. The numbers treated outside the dispensary and union hospital system were probably comparatively small, owing both to underreporting and to the inability of many patients to afford institutional treatment. The experience of the Belfast General Hospital illustrates this clearly. Its annual report for 1854 noted that, owing to financial difficulties, the committee had by mid-September introduced a charge of one guinea per admission for ‘a better class of the inhabitants.’ Consequently, only three cholera cases were recorded at the hospital, of which just one was admitted.¹⁶⁷ Similar patterns appear elsewhere in Ireland. The Census Commissioners’ returns for general hospitals throughout the country record only four cholera deaths between 1853 and 1855, suggesting that the overwhelming majority of patients continued to be treated either through the dispensary system or within union hospitals.¹⁶⁸ Overall, the Poor Law Commissioners’ reports remain the most comprehensive statistical source for the epidemic and, crucially, reinforce Belfast’s position as the principal urban focus of cholera in Ireland during 1854.

Conclusion

Between 1851 and 1861 epidemic and endemic disease constituted the single greatest cause of mortality in Ireland, exceeding even respiratory illness. Diseases such as cholera, diarrhoea, dysentery and fever together accounted for approximately one in every 4.3 deaths during the decade, while respiratory illnesses accounted for roughly one in every

¹⁶⁷ Annual report of the Belfast General Hospital 1855; Belfast and *B.N.L.*, 15 Sept. 1854.

¹⁶⁸ Tables of deaths in hospitals and sanitary institutions in, Census of Ireland (1861), p. 10.

4.5 deaths.¹⁶⁹ The evidence suggests therefore, that, although important sanitary and medical developments had begun to have an impact on sporadic epidemics like cholera, the pace public of health reform remained sluggish and thus, was largely incapable of exerting a decisive influence over either endemic disease or the wider health consequences of industrialisation, overcrowding and urban poverty. Taken on its own however, one must broadly concur with Charles Creighton's assessment of the relative insignificance of cholera between 1853 and '55, but only in purely demographic terms. In comparison with other endemic or epidemic illnesses, cholera accounted for only a comparatively small proportion of overall mortality during the period, approximately 1 in 207 deaths, and therefore had a far less substantial impact on general mortality rates than diseases such as fever (1 in 17), scarlatina (1 in 32) and influenza (1 in 52).¹⁷⁰

Yet demographic insignificance should not obscure cholera's wider historical importance. The epidemic exposed continuing weaknesses within Ireland's sanitary infrastructure and revealed the limitations of mid-nineteenth-century medical knowledge, administrative coordination, and statistical reporting. As this chapter has demonstrated, official mortality returns were frequently inconsistent, incomplete, and methodologically problematic, particularly regarding the relationship between dispensary, hospital, and private practice cases. The discrepancies between the returns of the Census Commissioners, the Poor Law Commissioners and local institutional records strongly suggest that the true scale of the epidemic was greater than many contemporary and later commentators acknowledged.

Although reforms introduced under the Medical Charities Act improved aspects of medical administration and relief, these developments did not substantially reduce the lethality of cholera once infection occurred. Indeed, when mortality rates are examined

¹⁶⁹ Census of Ireland (1861), pp. 210-19.

¹⁷⁰ Census of Ireland (1861), p. 211.

closely, cholera remained every bit as deadly during 1853–55 as it had been during the previous epidemics. This is especially true in Belfast where mortality rates continued to rise. In 1832 cholera mortality in the town had been almost fifteen per cent. By 1848/49 it had more than doubled to thirty-three per cent though in both cases the figures were significantly lower than the overall national statistics.¹⁷¹ Between 1853 and 1855 however, Belfast's cholera mortality exceeded thirty-six per cent which was significantly closer to the overall national mortality rate of almost thirty-nine per cent.¹⁷² This figure is particularly striking given that Belfast appears to have been more comprehensively prepared for cholera than at any previous stage. The system of house-to-house visitation, for example, alongside the expanding role of dispensary physicians and the sanitary campaigns undertaken by Samuel Browne and the corporation represented a more organised and interventionist response than had existed during earlier epidemics.

While a marked sense of civic pride continued to be evident in the town the epidemic also exposed the enduring structural weaknesses of public health provision within Belfast. Overcrowding, defective drainage, insufficient water supply, and persistent insanitary housing conditions continued to characterise many of its poorest districts, particularly in the Dock and Smithfield wards where cholera proved most virulent. Equally significant was the absence of a clearly defined administrative division of responsibility between the corporation and the guardians. Although both bodies increasingly recognised the necessity of sanitary intervention, overlapping authority, financial disputes and administrative hesitation continued to undermine the effectiveness of their response. Consequently, while the epidemic of 1853–55 demonstrated that important advances had been made in the organisation of urban public health in Belfast, it also revealed the

¹⁷¹ Approximate overall mortality for Ireland 1832/33 - 38.4 per cent, 1848/49 - 42 per cent. See Chapters Two and Four of this thesis.

¹⁷² 36.2 and 38.9 per cent respectively.

considerable limitations of mid-Victorian sanitary reform and foreshadowed the continuing debates surrounding municipal responsibility, sanitary governance and disease prevention that would dominate the following decade.

Chapter Seven

Cholera and public health 1866

Introduction

Though cholera came to the United Kingdom for the final time in 1866 its impact was relatively insubstantial in comparison to the previous three major outbreaks of the disease. England experienced the greatest mortality with 14,378 deaths recorded by the Registrar General in the returns for 1866.¹ By contrast, Ireland, which had been subjected to much higher per-capita death rates particularly during the epidemics of 1832/33 and 1848/49, experienced a comparatively limited outbreak. Official figures for cholera in Ireland in which have been considered in detail below for the first time, recorded as few as 2,308 deaths during 1866.² While relatively significant mortality (198 deaths) was recorded in Munster during the epidemic, the impact of the disease was felt most severely in Leinster (1371), with Ulster (82) and Connaught (20) emerging from the outbreak virtually untouched.³

Perhaps because of cholera's relatively low mortality in this period, there is little dedicated historiography of the 1866 epidemic in Ireland. Charles Creighton's monumental study of epidemics in Britain, for example, does not examine the Irish

¹ *Twenty-ninth Annual report of the Registrar General* (1866) BPP 1867-68 xix (4006), p.185. Hereafter *Twenty-ninth report R.G.* (1866).

² *Twentieth report PLC* (1867), p. 31. While both Joseph Robins and Helen Burke have used the same source neither has considered the statistics in the detailed manner of this chapter, which has additionally examined in detail the returns of the 1871 Census Commissioners and the reports in the minutes of the Belfast's Sanitary Committee, the Dispensary Committee and the Belfast Corporation reports published in *The Belfast Newsletter*. See Census of Ireland, 1871, Part II. Vital statistics. Vol. I. Report and tables relating to the status of disease BPP 1873 LXXIV [C.1000], pp. 207-267. Hereafter, Census of Ireland (1871); the Minutes of the Belfast Sanitary Committee, PRONI LA7/9/AB/2. For a list of cases recorded by Belfast's medical officers. See, pp. 81-2 in particular. See also, Table 7.5 below, a copy of the original which is also included in Appendix 4 of this thesis. *B.N.L.*, 8 Aug. - 29 Nov. 1866. For secondary sources see, Robins, *The miasma*, pp. 204-7; Burke, *The people and the Poor Law*, pp. 275-6.

³ For Irish provincial mortality statistics see, Table 7.3 below.

experience in detail and incorrectly suggests that the only significant outbreak in Ireland occurred in Belfast.⁴ To date, only Helen Burke's study of the Poor Law, which argues that the impact of the epidemic was mitigated by the national system of medical relief, and Joseph Robins' study of epidemics in nineteenth-century Ireland, which puts forward a similar viewpoint, have addressed, albeit briefly, cholera's significance during the 1860s.⁵ However, Robins' overall conclusion, that the decline of large-scale epidemics in Ireland in the latter half of the nineteenth century was driven less by scientific discovery than by social and administrative improvements associated with public health expansion, remains widely accepted among modern Irish social historians.⁶

In England, where the disease had a much more significant bearing, particularly in the major cities, historians have considered various aspects of the cholera experience during 1866 and beyond.⁷ Ann Hardy, for example, has considered the development of the system to exclude cholera from England alongside the progress of preventative medicine in the late nineteenth century; but notes that:

The pattern of local responses to the later outbreaks, and the processes involved in cholera's gradual withdrawal from the continent, merit investigation, as does the wider context of the development of public health programmes in the different European countries.⁸

Thus far Historical assessment of the 1866 outbreak in England has remained largely concentrated on London, where the relative inaction of the East London Water Company

⁴ Creighton, *A history of epidemics*, p. 859.

⁵ Burke, *The People and the Poor Law*, pp. 275-6; Robins, *The miasma*, pp. 204-7.

⁶ Ibid., p. 229 and pp. 232-241. For similar views see for example: Crawford, 'Typhus in nineteenth century Ireland' and Deborah Brunton, 'The problems of implementation;' Caitriona Clear, *Social change and everyday life in Ireland, 1850-1922* (Manchester University Press, Manchester, 2007), p. 93.

⁷ Among the best examples of such studies of the 1866 epidemic in Britain include; Hardy, 'Cholera, quarantine and the English preventive system, 1850-1895'; Eadem., *The epidemic streets*; Pamela K. Gilbert, *Mapping the Victorian social body* (University of New York Press, Albany, 2004), and William Luckin, 'The final catastrophe-Cholera in London, 1866,' *Medical History*, Vol. 21(1) (1977), pp. 32-42.

⁸ Hardy, 'Cholera, quarantine and the English preventive system, 1850-1895,' pp. 250-269; Eadem., *The epidemic streets*, Ch. 9.

saw cholera shift from its previous strongholds of Southwark and the parishes to the south of the River Thames to become localised in the East End.⁹ Outside London, comparatively little attention has also been paid to Liverpool, where cholera had its most significant impact beyond the capital, and from where early Irish cases were traceable.¹⁰ Rita Scott's study of William Stewart Trench, Liverpool's Medical Officer for Health, nevertheless provides valuable insight into both the epidemic itself and the prevailing biases that led Victorian authorities to condemn the traditional Irish wake as a public health hazard rather than a customary bereavement ritual.¹¹ The section of this chapter which pertains to England will also concentrate on Liverpool and London in order to examine the differing opinions that existed among prominent medical men regarding the understanding of cholera as a waterborne disease.¹²

As previously noted, the comparatively limited demographic impact of cholera in Ireland has meant that the epidemic of 1866 has received little historical attention, and that, localised studies, like those produced for London and Liverpool, do not, until now, appear to have been warranted. Nevertheless, in terms of local responses to disease and the continuing development of public health provision, the epidemic remains historically significant. This chapter will argue that although cholera mortality in Ireland during 1866 was relatively slight, responses to the disease continued to act as an important catalyst in shaping countrywide public health provision throughout the latter half of the nineteenth century.

⁹ See for example, Luckin, 'The final catastrophe,' pp. 32-42; Gilbert, *Mapping the Victorian social body*, pp. 79-80; Creighton, *A history of epidemics*, pp. 856-9.

¹⁰ *Twentieth report PLC* (1867), p. 29.

¹¹ Rita Scott, 'Dr William Stewart Trench, Medical Officer of Health for Liverpool, 1863-1876: From middens to WC's' *Medical Historian*, Vol.13 (2002-2003), pp. 12-21.

¹² For more on the comparison of the attitudes of the 'medico-scientific "Avant-garde"' and the Metropolitan Medical Officers of Health and an assessment of the epidemic in London see, Luckin, 'The final catastrophe,' pp. 32-42.

Belfast provides a particularly important case study within the Irish experience of the epidemic. There, a severe water famine and the continuing sanitary problems associated with industrialisation and urbanisation once again exposed the discord that existed between the town's civic authorities regarding responsibility for sanitary intervention during the mid-1860s. While sharing the broader conclusions reached by both Robins and Burke concerning the effectiveness of the national system of medical relief, this chapter will examine the impact of the continuing disputes between the corporation and the guardians before and during the cholera crisis of 1866.¹³ It will argue that Belfast's comparatively limited mortality should not be interpreted simply as evidence of successful civic improvement. Rather, the town's experience reflected a combination of uneven sanitary reform, administrative preparedness, and the often-unpredictable epidemiological behaviour of cholera itself.¹⁴

Beyond its immediate demographic impact, the epidemic of 1866 also marked an important transitional moment in contemporary understandings of disease transmission and public health intervention. This chapter will therefore examine the changing global routes through which cholera spread, bringing the disease to towns in England and Ireland that had largely escaped the ravages of previous epidemics. It will also demonstrate that while the association between filth and disease continued to shape public health responses in both countries, one of the most significant developments of the period was the growing recognition of the relationship between contaminated water supplies and the transmission of cholera. The increasing acceptance of this connection indicates that national and local authorities had begun to recognise the importance of clean water provision and improved sanitation in limiting cholera morbidity and mortality. The measures implemented by

¹³ Robins, *The miasma*, pp. 204-7. Burke, *The People and the Poor Law*, pp. 275-6.

¹⁴ This argument regarding cholera's erratic nature was an almost constant feature of every epidemic and will be evidenced in more detail later in this chapter.

civic authorities and sanitarians after 1866 consequently played a significant role in preventing the return of epidemic cholera and helped shape the development of modern public health legislation.

Changes to the Global Dissemination of Cholera 1863-75

In a manner consistent with previous outbreaks, the fourth global pandemic of Asiatic cholera began in the Indian subcontinent during 1863.¹⁵ Lasting until between 1873 and 75, this global pandemic, as Robert Pollitzer has noted, stood in marked contrast to previous epidemics of the disease.¹⁶ On this occasion, cholera, did not penetrate Europe though its historically traditional routes via Persia (modern-day Iran) and Caspian Sea Ports. Instead, newly established transport networks enabled its dissemination throughout Arabia and into Egypt, Constantinople, southern France and Italy.¹⁷ In 1865 pilgrims returning from the Hajj at Mecca where MacNamara estimated some 90,000 fell victim to cholera, spread the disease throughout parts of Arabia, Mesopotamia, Syria, Palestine and also via sea to Suez.¹⁸ Transported onwards by railway to the Egyptian port of Alexandria, the first cases of cholera appeared in the city at the end of May and the beginning of June 1865 when residents contracted the disease after coming into contact with returning pilgrims.¹⁹ Though the outbreak was not particularly severe, Alexandria consequently became a distribution point from which cholera spread throughout Egypt and by steamer to several Mediterranean ports.²⁰

¹⁵ Hays, *Epidemics and pandemics*, p. 267.

¹⁶ Pollitzer, 'Cholera studies,' pp. 421-61. In this section Pollitzer also quotes from the following: Heinrich Haeser, *Lehrbuch der Geschichte der Medizin und der epidemischen Krankheiten*, vol. 3, (Third edition) (Jena, 1882); See also Pollitzer, *Cholera*, pp. 11-50 and Table 1, p. 18. of this thesis. For a contemporary account of the dissemination of cholera throughout Europe and beyond see also, MacNamara, *A history of Asiatic cholera*.

¹⁷ Haeser, *Lehrbuch der Geschichte der Medizin* (1882); Quoted in Pollitzer, 'Cholera studies,' p. 442.

¹⁸ MacNamara, *A history of Asiatic cholera*, p. 290; Pollitzer, 'Cholera studies,' p. 443.

¹⁹ MacNamara, *A history of Asiatic cholera*, p. 291.

²⁰ Pollitzer, 'Cholera studies,' p. 443.

Russia was also affected during 1865, when cholera attacked by different routes from the south, though the epidemic proved less severe than in previous visitations.²¹ Spreading further into Europe, cholera was particularly virulent in the south of Italy, and in Sicily. Paris also experienced an outbreak in September 1865 but while cholera became fairly widespread in France mortality rates remained low with only 10,000 deaths recorded throughout the rest of the country.²² During the winter of 1865/66 the epidemic abated considerably, only to flare up during the following spring when conflicts between Prussia and Austria and between Austria and Italy were blamed for the dissemination of the disease throughout central Europe. As it spread during 1866 Russian cholera deaths amounted to some 90,000, and where war was raging, the toll was even worse; an estimated 115,000 died in Prussia and over 110,000 in Austro-Hungary.²³ Elsewhere, almost 20,000 died in the Netherlands and over 30,000 in Belgium.²⁴ Nevertheless, the above statistics, reproduced from Pollitzer's minutely researched monograph, must be treated as approximations. Although relatively dependable figures for cholera are occasionally available, morbidity and mortality statistics were frequently corrupted by inaccurate reporting, misdiagnosis and by how different administrations and researchers collated the numbers that they published. Consequently, cholera historians universally acknowledge that it is virtually impossible to determine accurately the global mortality for this, or indeed any previous pandemic.

In England, where a severe epidemic was anticipated, there was a much greater sense of confidence that cholera could be successfully combatted than there had been during previous outbreaks. This belief stemmed, as Hardy has observed, from improvements

²¹ Ibid.

²² Pollitzer, 'Cholera studies,' p. 443.

²³ Cholera mortality of 80,000 has been recorded for Bohemia and Moravia alone and a further 30,000 succumbed to the disease in Hungary. Pollitzer, 'Cholera studies' p. 444.

²⁴ MacNamara, *A History of Asiatic Cholera*, p. 325; Pollitzer, 'Cholera Studies' p. 444.

achieved in the urban environment and public health organisation of London and other major cities and was founded, in the view of English sanitarians, ‘on the basis of accumulated evidence and experience of cholera as an associate of insanitary conditions.’²⁵ To some extent, however, such confidence proved misplaced, and the ensuing epidemic in Britain exposed significant deficiencies, particularly regarding the importance of a clean and efficient water supply.

Cholera in England: Southampton Liverpool and London 1865/66

Cholera first appeared in England in September 1865, but unlike its earlier outbreaks its previous points of entry, the north-eastern port towns, were initially unaffected.²⁶ Instead, the first English cases emerged in Southampton, which had regular contact with vessels from Alexandria and several vessels from the Peninsula and Oriental Company that had entered the port with cholera on board were blamed for causing the outbreak. Most notable among them were the *Vectis*, which was believed to have disregarded quarantine restrictions, and the *Delta*, which arrived in Southampton carrying cases of diarrhoea that Professor Edmund Parkes, who investigated the outbreak, believed to be cholera.²⁷

The first case in the town occurred on 17 September 1865 when James Rose, who lived in a house typical of the labouring classes, in that it was overcrowded and lacked sanitary facilities, became ill and had died by the twenty-fourth.²⁸ The ensuing outbreak in Southampton resulted in some sixty cases of cholera and thirty-five deaths, all of which

²⁵ Hardy, ‘Cholera, Quarantine and the English Preventive System,’ p. 254.

²⁶ This was due, as MacNamara stated, to the fact that cholera in this period, unlike its previous epidemics, had not attacked Germany or any of the Northern ports of Europe to any great extent. Consequently, England’s coastal towns of the north-east remained free of the disease. MacNamara, *A history of Asiatic cholera*, p. 302.

²⁷ *Ibid.*, p. 303. The *Vectis* had previously been in quarantine in Gibraltar. Other ships reported to have cholera on board included the *Ellora* which arrived at Southampton on 22 July and the *Nianza* which landed on 1 Oct.

²⁸ *Report of Dr Parkes in Eighth report of the Medical Officer of the Privy Council*, pp. 406-407. H.C. 1865 (3645), xxxiii, 421. Hereafter, *Report of Dr Parkes and Eighth report M.O. to P.C.* (1865).

occurred in a six week period between 22 September and 4 November.²⁹ From Southampton, the disease spread to Weymouth, Portland and Dorchester and from there to Epping Forest, where nine deaths were traced to a single house between 28 September and 9 October.³⁰ Upon investigation, a faulty cesspool was blamed for the outbreak its contents having leaked into a well.³¹ As a result of the incident at Epping Forest, apprehension regarding the danger of polluted water supplies grew among government officials. Nevertheless, they failed to act on their fears with any noteworthy urgency and a memorandum containing their concerns was not issued by the Privy Council until 24 July 1866.³² Among its recommendations, were various precautions against cholera, while local authorities were urged to inspect their water supplies with the memorandum warning that ‘drinking water, and breathing air, which is made foul with effluvia’ constituted the two principal dangers to public health during periods when diarrhoeal disease was epidemic.³³

In Liverpool, where a serious outbreak began in early July 1866, polluted water was not the principal factor that most concerned William Stewart Trench, the city’s Medical Officer of Health. Instead, reflecting many of the contemporary assumptions and ethnic prejudices directed towards the Irish diaspora in nineteenth-century Liverpool, Trench focused particular attention on Irish funeral customs, especially the practice of waking the dead. Within Liverpool’s public health discourse the Irish poor were frequently

²⁹ *Report of Dr Parkes in Eighth report M.O. to P.C.* (1865), p. 393 and *Ninth report of the Medical Officer of the Privy Council with appendix*, p. 244 H.C. 1867 (3949), xxxvii, 1. Hereafter, *Ninth report M.O. to P.C.* (1867).

³⁰ Creighton, *A history of epidemics*, p.857; For a full account of the deaths in Epping Forest see, *Eighth report M.O. to P.C.* (1865), pp. 28-9 and 438-440. See also *Report to The International Sanitary Conference of a commission from that body, to which were referred the questions relative to the origin, endemicity, transmissibility and propagation of Asiatic cholera*. Translated by Samuel L Abbot (Boston, 1867), pp. 32-3. Hereafter, *Report to the International Sanitary Conference* (1867).

³¹ Underwood, ‘The history of cholera in Great Britain,’ pp. 165-73. Privy Council: *Reprints from reports of the Medical Department for 1865-66 and 1873*. (London, 1884), p. 14.

³² *Ninth report M.O. to P.C.* (1867), pp. 228-9.

³³ *Ibid.*

portrayed by sanitary reformers and civic officials as inherently predisposed to disease, disorder and insanitary behaviour and Trench's commentary echoed these wider stereotypes.³⁴ He catalogued numerous examples of corpses being retained in overcrowded dwellings and pressed for powers enabling the rapid removal of bodies from wake houses.³⁵ Highlighting the death of an Irish cholera victim in Bispham Street, an area already well known to Liverpool's sanitary officers for overcrowding and poverty, he condemned the ensuing wake as: 'One of those shameful carousals, which, to the disgrace of the enlightened progress and advanced civilization of the nineteenth century, still linger as dregs of ancient manners among the funereal customs of the Irish peasantry.'³⁶

The language employed by Trench in his report nevertheless reveals more than simple concern for public health. He framed the outbreak through a moral and ethnic lens, portraying Irish cultural practices as primitive and incompatible with modern urban civilisation. At the same time however, contemporaries also believed that cholera contagion could linger around corpses and crowded wake houses, meaning that Trench's fears were not entirely without medical rationale according to prevailing theories of disease transmission. In fact, his concerns appeared to gain credence when cholera rapidly established itself in neighbouring streets. By the end of July, forty-eight people had died from cholera within a radius of 150 yards of the court in which the wake had taken place.³⁷ In an attempt to prevent the further spread of the disease, Liverpool's council instigated a vigorous programme of street cleaning and disinfection of houses and personal

³⁴ For more on this topic see: John Belchem, *Irish, Catholic and Scouse: The History of the Liverpool-Irish, 1800-1939* (Liverpool University Press, 2007).

³⁵ Scott, 'Dr William Stewart Trench,' p. 20.

³⁶ *Ibid.*, p. 18.; Trench, *Report on the health of Liverpool*, p. 23

³⁷ *Ibid.*

possessions under the directions of the 'Nuisance Removal Act.'³⁸ Two disinfecting establishments in the north and south of the city provided the public with free washing and disinfection of clothing and bedding and over 14,218 items were disinfected using dry steam in these institutions.³⁹ Although the efforts undertaken by the authorities most likely prevented a much larger epidemic from developing, the case fatality rate in Liverpool was still substantial. By 30 November, the outbreak had claimed 1,762 victims; only London would suffer higher mortality.⁴⁰

London's epidemic which lasted approximately twenty-three weeks resulted in some 5,973 cholera deaths.⁴¹ Yet, as William Luckin has acknowledged, while a decisive acceptance, that cholera was carried by water only really existed among the *avant-garde* of English epidemiologists; the increasingly vigorous debate concerning the relationship between polluted water supplies and cholera outbreaks became almost as significant as the city's mortality rate.⁴² The outbreak in London during 1866 was largely confined to the East-End of the city, an area supplied almost exclusively with water from the River Lea by the East London Water Company (ELWC).⁴³ The eminent statistician, William Farr's analysis of cholera mortality attributed responsibility for the outbreak almost entirely to the ELWC's supply, however his conclusions did not receive widespread acceptance. As Luckin has observed, the failure of the majority of those engaged in

³⁸ Trench, *Report on the health of Liverpool*, p. 38.

³⁹ The Ford Street Establishment in the north of the city provided a free public washhouse, a boiler house with drying facilities and four disinfecting stoves. To the south a second establishment in New Bird Street provided a receiving room and depository for infected clothes, a larger public washhouse a drying closet and a range of disinfecting chambers. Trench, *Report on the health of Liverpool*, pp. 168-70.

⁴⁰ *Ibid.*, p. 24. It is notable that Creighton recorded 2,122 deaths for the whole of the epidemic in Liverpool, substantially more than was recorded in the official reports. However, he gave no indication of where this figure was found. Creighton, *A history of epidemics*, pp. 856-859.

⁴¹ *Report on the Cholera Epidemic of 1866 in England: Supplement to the Twenty-ninth report R.G.* (1866). A report by John Netten Radcliffe, records 5,548 deaths but it is likely that figures for West Ham and Stratford included by Farr were not counted by Radcliffe. See, *Ninth report M.O. to P.C.* (1867), p. 276.

⁴² Luckin, 'The final catastrophe,' pp. 32-42.

⁴³ For more on the London water controversy see, Christopher Hamlin, *A science of impurity: Water analysis in nineteenth century Britain* (University of California Press, Berkeley, 1992), Ch. 6; Luckin, 'The final catastrophe,' pp. 32-42.

medicine and public health during the 1860s to recognise this correlation ‘smacked of scientific error and social irresponsibility.’⁴⁴ Nevertheless, Farr’s work stimulated both detailed investigation of the outbreak and considerable debate concerning the relative merits of miasmatic and scientific theories of cholera transmission.⁴⁵

In its defence, the ELWC insisted that overcrowding, deficiency of drainage and poor food, were just as likely to have encouraged the spread of cholera in their catchment area as impure or deficient supplies of water.⁴⁶ Most Metropolitan Medical Officers of health agreed and many endorsed a wide range of alternative hypotheses which implicitly minimised the direct influence of unsafe water.⁴⁷ This array of compromise theories was clearly attractive to the city’s medical officers particularly as they ‘could be accommodated both within the generalised miasmatic doctrine as well as within a looser version of the “exclusive” water theory.’⁴⁸ Thus, before, during and after the 1866 epidemic, medical officers sustained a powerful campaign for constant supply and regular cleansing of domestic storage systems, measures which, Luckin notes, ‘could be advocated without violation of a total belief system still resistant to incorporation of the “exclusive” water theory.’⁴⁹

Overall, the experience of the 1866 epidemic, particularly in London, suggests that at least some of the most prominent English sanitarians, including William Farr, John Radcliff and William Trench were beginning to move away from strictly miasmatic explanations of disease and towards more scientific interpretations of epidemic

⁴⁴ Luckin, ‘The final catastrophe,’ p. 33.

⁴⁵ See Farr in *Report on the cholera epidemic of 1866*, pp ix- xc; Netten Radcliffe in *Ninth report M.O. to P.C.* (1867), pp. 264-368 and the various reports of London’s medical officers contained within. See also, Trench, *Report of the health of Liverpool*, pp. 21-40.

⁴⁶ John M. Eyler, ‘William Farr on the cholera: The sanitarian’s disease theory and the statistician’s method’ *Journal of the History of Medicine and Allied Sciences*, Vol. xxviii (2) (1973), pp. 79-100.

⁴⁷ Luckin, ‘The final catastrophe,’ p. 35.

⁴⁸ *Ibid.*, p. 36.

⁴⁹ Luckin, ‘The final catastrophe,’ p. 37.

transmission. Over the following three decades, Radcliffe's conviction that authorities should act on the assumption that unsafe water constituted the primary medium through which cholera and typhoid spread would, as Luckin has concluded, exert a decisive influence on British water treatment policy.⁵⁰ Measures of this nature significantly improved public health and, although other diseases associated chiefly with industrialisation would come to dominate mortality statistics, Asiatic cholera would never again return to Britain in similar epidemic proportions.⁵¹

The Slow Pace of Public Health Reform and the Belfast Water Crisis

While debates concerning waterborne transmission increasingly shaped public health policy in England, Belfast continued to struggle with many of the sanitary deficiencies characteristic of rapidly industrialising Victorian towns. Few social historians have overlooked the significance of these problems, yet it is unlikely that many would now accept Emrys Jones's conclusion that Belfast escaped the worst excesses of filth and misery experienced in comparable British cities.⁵² Although Belfast entered the post-Famine decades buoyed by industrial success and with an engrained sense of civic pride, its administrators continued to struggle to provide the necessary amenities required in a rapidly growing industrial centre which was now a city in all but name. With marked deficiencies in water supply and sewerage together with the enduring sanitary issues

⁵⁰ Ibid., p. 42. Anne Hardy also points to the attention paid to water quality supplies and adds that a further contributing factor was the increased regulation of shipping. See Hardy, 'Cholera, quarantine and the English preventive system,' p. 255.

⁵¹ Cholera threatened Britain again in 1872. However, there were very few deaths and no epidemic crisis. See, Michael Worboys, *Spreading germs: Disease theories and medical practice in Britain, 1865-1900* (Cambridge University Press, Cambridge, 2000), p. 116.

⁵² For Britain, see for example, Hamlin, *Public health and social justice*; Wohl, *Endangered lives*; and more recently, Allen, *Cleansing the city*. For Belfast, see, Froggatt, 'Industrialisation and health in Belfast;' Connolly, 'Belfast: The rise and fall of a civic culture;' Bardon, *Belfast*; Royle, *Clanging Belfast*; Emrys Jones, 'Late Victorian Belfast,' p. 112.

associated with the overcrowded housing of the town's poor, it is perhaps surprising that Belfast, unlike other large towns, remained virtually free from cholera during 1866.

One mid-nineteenth-century incident in particular served to significantly impede the pace of public health and sanitary improvement in Belfast. In 1855, a local solicitor, John Rea, filed a suit against the town's corporation alleging unauthorised borrowing, misappropriation of funds, disenfranchisement of ratepayers, and promotion of private interests.⁵³ His Chancery Suit, as it became known, was tried in Dublin and resulted in a thorough investigation of the corporation's political and financial affairs, finding that £273,000 of its funds had been misapplied or illegally raised since 1845.⁵⁴ The financial difficulties arising from the case were initially addressed through a combination of rate increases and reduced expenditure, and while the litigation continued through the courts during the following decade, the corporation's capacity to undertake large-scale urban and sanitary improvements was effectively curtailed.⁵⁵ After the protracted proceedings were finally concluded with the passage of the Belfast Award Act in 1864, the corporation was burdened with debts of £120,000, while the respondents to the suit were left responsible for legal costs of approximately £50,000.⁵⁶ Although many welcomed the settlement with relief, Rea himself was deeply dissatisfied with the terms of the award and was later forcibly removed from a House of Lords committee hearing.⁵⁷ Samuel Browne, the corporation's former Medical Officer of Health, subsequently argued that the lengthy proceedings had seriously impaired the council's financial capabilities and, as a consequence, left the sanitary condition of Belfast's poorest districts largely

⁵³ John Rea, Dictionary of Irish Biography, dib.cambridge.org and Dictionary of Ulster Biography, www.newulsterbiography.co.uk.

⁵⁴ For the details of the Chancery Suit see Budge and O'Leary, *Belfast: Approach to crisis*, pp. 60-1 and Slater, *Belfast Politics*, pp. 280-7.

⁵⁵ Johnson, *Middle class culture and civic identity*, p. 222.

⁵⁶ 'Belfast Award Act,' 1864 (27 and 28 Vict. c. 198); Maguire, *Belfast*, p. 97; Budge and O'Leary, *Belfast: Approach to crisis*, pp. 60-1; Slater, *Belfast politics*, pp. 280-7.

⁵⁷ Slater, *Belfast politics*, p. 284.

neglected. The suit, Browne observed, had ‘pushed everything else aside and had arrested sanitary progress.’⁵⁸

With the litigation behind them however, the years after the ‘Belfast Award Act’ saw building in the town recommence with considerable rapidity, particularly over the course of the ensuing three years.⁵⁹ The corporation also expanded its control over the borough, securing three further local acts between 1865 and 1868. These measures enabled the opening of a new graveyard and extended municipal jurisdiction to the neighbouring townlands of Ballymacarrett and Ballynafeigh, developments that effectively ensured the continued growth of both population and industry.⁶⁰ Yet the renewed pace of development did little to silence criticism of Belfast’s sanitary condition elsewhere. The *Dublin Builder*, an illustrated Irish architectural, engineering, mechanics and sanitary trade magazine, for example, was moved to comment on the state of a town that frequently styled itself as energetic, intelligent and progressive.⁶¹ According to the periodical, the verdict of ‘disinterested onlookers’ was that Belfast had failed to keep pace with necessary urban improvements.⁶² While acknowledging that the appearance of the town had improved through street widening schemes and the removal of derelict property, the article compared Belfast to a ‘well-dressed member of the weaker sex’ who had systematically neglected the use of soap and water.⁶³ Belfast, it argued, had overlooked some of its most disgraceful and gigantic nuisances, particularly. water supply the paving streets and sewer provision.⁶⁴ Referring to the increasingly serious water crisis and the prolonged bureaucratic disputes surrounding the town’s supply, the author reserved

⁵⁸ Dr Samuel Browne, ‘On the progress of sanitary enquiry in Belfast’ *Transactions of the National Association for the Promotion of Social Science* (Belfast, Meeting 1867, Published 1868), pp. 479-80.

⁵⁹ Owen, *A history of Belfast*, p. 282; Maguire, *Belfast*, p. 97.

⁶⁰ Slater, *Belfast politics*, p. 242; Johnson, *Middle class culture and civic identity*, p. 222.

⁶¹ *The Dublin Builder*, Vol. vii (137) (1865), p. 205.

⁶² *Ibid.*

⁶³ *The Dublin Builder*, p. 205.

⁶⁴ *Ibid.*

particular criticism for the Water Commissioners' administration, maintaining that 'If talk would have done the work, Belfast would have the best supply of water in the Three Kingdoms.' Its criticism continued in even more forceful terms:

No language could be too strong to use in censuring the imbecility and culpable dereliction of duty of the useless – more, mischievous public body which has brought the town into such straits. We fear yet they will have a heavy list of disease and death to answer for.⁶⁵

Though the *Dublin Builder's* criticism of Belfast's sanitary shortcomings was arguably not unwarranted, it would ultimately be the authorities in Dublin rather than Belfast who faced the predicted heavy toll of disease and death when cholera subsequently spread through Ireland.⁶⁶

With criticism mounting on their failure to provide an adequate water supply or implement a modern sewerage system, both the Belfast Corporation and the Board of Guardians came under increasing pressure to demonstrate that they were taking action. Although there previously had been little coordinated ability or dynamism to affect the necessary reforms, after 1865, it is clear, that more concerted efforts were made to at least alleviate some of the most pressing of Belfast's public health issues. Acting on the recommendations of Samuel Brown, a sanitary committee, comprising of one inspector and five deputy inspectors of nuisances, one for each ward of the borough, had been established in 1864.⁶⁷ Among its most important achievements was the creation of a permanent system of sanitary inspection, a service that had previously existed only during periods of imminent crisis. Inspectors investigated complaints ranging from stagnant cesspools and slaughterhouses to accumulations of offensive matter and smoke pollution

⁶⁵ *The Dublin Builder*, p. 205.

⁶⁶ For Dublin see below, p. 290.

⁶⁷ Appendix 7: Statement of Dr Samuel Browne, Consulting Sanitary Officer to Belfast in *Taxation of Towns Inquiry Commission* (1877), p. 209. Browne had become a member of the corporation in 1862.

from factory chimneys, and proceedings were regularly initiated against offenders. Proceedings were also taken against owners of streets and houses requiring them to cleanse sewers and cover over open drains. Nevertheless, the minutes and reports of the Belfast Sanitary Committee suggest that there remained no determined effort to tackle the entrenched sanitary problems of the poorest districts. Open sewers continued to be commonplace, as did the habitual accumulation of domestic refuse in backyards and on the streets outside dwellings.⁶⁸

Despite these efforts, by the summer of 1865 Belfast faced two interconnected crises that threatened to undermine recent sanitary initiatives. Growing fears of cholera's possible return to Ireland were compounded by an alarming prevalence of fever throughout the town. Anxiety intensified further as the acute water shortage made residents and authorities acutely aware of the need for adequate and uncontaminated supplies. The Belfast Water Commissioners now faced the increasingly real prospect of a water famine, to which they were largely unable to respond effectively. The spring and early summer of 1865 had been exceptionally dry and water reserves in some of the town's basins were reported to be as much as 200 inches below their normal levels, with others entirely empty.⁶⁹ On 27 June, Joseph Watt, the Relieving Officer for the Board of Guardians, reported that it was his belief that fever's rise to near epidemic proportions was directly related to the shortage of water; 'In portions of the College Dispensary District' he observed, 'there are many streets the populace of which are dependent on a few scattered fountains that only supply water for about two hours four days in the week.'⁷⁰ Many of

⁶⁸ The Minute Books of the Belfast Sanitary Committee, 7 Feb. 1865 - 13 Nov 1873 provide a good deal of insight into the issues faced in Belfast during this period. Reports were also presented to the meetings of the corporation which are best viewed from the verbatim reports published in *The Belfast Newsletter and Northern Whig*.

⁶⁹ Loudan, *In search of water*, p. 56; See also *B.N.L.* and *N.W.* In particular, the frequent reports from meetings of the Belfast Corporation, Sanitary Committee and Water Commissioners, as well as editorials and correspondence from residents between June and October 1865.

⁷⁰ *B.N.L.*, 28 June 1865. See also, *N.W.*, 28 June 1865.

those who gathered at these fountains failed to obtain any water at all, and even for those who succeeded, conditions were far from satisfactory. According to Watt, ‘before the water is twenty-four hours in the house it becomes so bad that it is sheer necessity compels them to use it.’⁷¹ Similar complaints echoed throughout the town, leading Watt to remark that, ‘this may be naturally expected when it is considered the foul source from which inhabitants of the lower portions of the town are supplied, namely the River Lagan.’⁷² Within weeks the situation was so grave that tap water in Belfast was increasingly unfit for domestic use and said to be green in colour.⁷³

By early August, official concern had intensified. Guardian Samuel Tierney attacked the inefficiency of the water commissioners stating that; ‘The green filth which the Water Commissioners were sending into the town for the use of the inhabitants was such that he did not know what the consequence would be.’⁷⁴ Referring to rumours about the possibility of an epidemic of Egyptian cholera and clearly concerned that the supply of water provided to the poor by the Belfast Water Commissioners was abominably filthy, Tierney argued that ‘it was far more important to take measures with reference to fever at the present time than with reference to a disease of which they had no sign...we have more reason to be frightened about fever than about the Egyptian cholera.’⁷⁵ In reply, John Hamill, one of the guardians for the St George’s Ward, remarked, ‘Ah sure the Water Commissioners are doing all they can.’ Tierney, noting the frustration of the town’s poor reacted angrily: ‘Doing! Why there is no water for the town even now, after a large expenditure to procure a temporary supply. Poor people talk of complaining to the

⁷¹ *B.N.L.*, 28 June 1865.

⁷² *Ibid.*, 28 June 1865.

⁷³ *N.W.*, 9 Aug. 1865; Loudan, *In search of water*, p. 57.

⁷⁴ *Ibid.*, 9 Aug. 1865.

⁷⁵ Rumours regarding a possible epidemic of Egyptian cholera began to circulate in Belfast from Aug. 1865. *B.N.L.*, 8 and 9 Aug. 1865. N.B. In the nineteenth century, “Egyptian cholera” did not refer to a new strain but to cholera outbreaks associated with, or believed to have emanated from, Egypt, particularly via the key port of Alexandria

guardians, and complain bitterly because we don't do something for them, but what can we do?'⁷⁶

At much the same time, further confirmation of the scale of the crisis emerged in the press. On 10 August, the *Newsletter* confirmed that it had inspected the towns reservoirs and found that the upper basin was empty, and had been all year, the town basin was similarly empty and the Clear Water basin was so low that 'there was not more than or three inches of water over the "rose head" through which the 16-inch main is supplied.' Describing the town as being 'in the midst of a water famine,' the editorial also offered a notably vivid account of the lack of an available supply:

Surrounded by hills in which never-failing streams take their rise, furnished with enormous reservoirs, and all the appliances for storing and distributing the water which the bounty of Heaven affords us, the town, nevertheless, cannot at this moment obtain one drop of pure and wholesome water, save what is brought through the streets in barrels drawn by donkey carts, and sold at so much per measure. The reservoirs are empty. The steam-pumps, which are working night and day, are only sending up a small quantity of a vile compound in which the refuse of a hundred flax-holes and the sewage of towns and villages are mingled. Not one drop of the stuff which is being supplied by the Water Commissioners is fit for human use.⁷⁷

Obtaining water therefore became the premium concern for the residents of Belfast.⁷⁸ In the Cromac district water reached the price of sixpence a bucket and water carts, who had to wait until water levels rose in the town's wells before they could be filled, were emptied almost as soon as they appeared on the streets.⁷⁹ Owners of some wells gave whatever spare water they could to the residents of the poorest districts for free.⁸⁰ Yet, despite such charitable donations as well as three days of heavy rain in mid-August, which had only added around half an hours' worth of water to the towns reservoirs, people were often to

⁷⁶ *B.N.L.*, 9 Aug. 1865.

⁷⁷ *B.N.L.*, 10 Aug. 1865.

⁷⁸ Loudan, *In search of water*, p. 56.

⁷⁹ *Ibid.*, p. 57.

⁸⁰ For examples and proposals of thanks see, *B.N.L.*, 26 and 29 Aug. and 1 Sept. 1865.

be seen running from door to door with bowls begging for water and ‘working men frequently walked several miles into the countryside in hope of obtaining even the smallest supply.’⁸¹

As the crisis deepened, the water commissioners did everything they could to improve provision. Pumps were borrowed and erected at wells to supply districts most in need, while water was also pumped from the River Lagan, requiring the employment of men at weekends. However the quality was so poor that the operation was quickly abandoned.⁸² With the shortage at its height, a dispute between the commissioners and mill owners deprived Belfast of as much as six million gallons of water after the main protagonist, William Girdwood, a local printer, had demanded the annual payment of £1,000 to compensate for the supply of excess water from his seven acre dam at Carr’s Glen at the north of the town.⁸³ A prolonged series of meetings took place in which the mayor acted as an intermediary in an attempt to come to a resolution. The Newsletter carried full accounts of the meetings and was clearly frustrated that a solution could not be found.⁸⁴

The paper argued that the blame, lay firmly at the door of the water commissioners, and it added that: ‘The public health is endangered and sanitary precautions are rendered impossible.’⁸⁵ As an example they referenced the experience of Thomas Boyd, a baker from North Street, who had reported that a tumbler of water taken directly from a pipe belonging to the Belfast Water Commissioners contained, ‘tens of thousands of minute

⁸¹ Loudan, *In search of water*, p. 58; *B.N.L.*, 15 and 25 Aug. 1865.

⁸² Additional engines and pumps were ordered at the end of August 1865 after a representative of the commissioners travelled to Manchester and obtained 2 pumps that had originally been made for the authorities at Newcastle-on-Tyne costing £120 and £140, respectively. *B.N.L.*, 26 Aug. and 1 Sept. 1865. Loudan, *In search of water*, pp. 56-8. The commissioners were ordered to cease pumping water in late October. *B.N.L.*, 20 Oct. 1865.

⁸³ Loudan, *In search of water*, pp. 56-8; *B.N.L.*, 18 Aug. 1865.

⁸⁴ From the beginning of August, the paper reported on the issue on an almost daily basis. See *B.N.L.*, 7 Aug. 1865 - 1 Sept. 1865. The weekly reports of the Belfast Water Commissioners were also published in both the *Newsletter* and *Northern Whig*.

⁸⁵ *B.N.L.*, 1 Sept. 1865.

insects as well as water beetles many of which were an inch in length and which would have made a splendid collection for a vivarium.’⁸⁶ The stalemate between the commissioners and the mill owners continued into October and the issue was only finally resolved when the weather intervened and water levels rose once more. Litigation between the commissioners and Girdwood nevertheless persisted, and it was ultimately ruled that the Old Park Bleach and Print Works, owned by Girdwood, should receive priority access to the water required for its operation.⁸⁷ The amount of water available to the commissioners from Carr’s Glen was therefore significantly reduced, and while plans were advanced for works at Woodburn and other future schemes, these developments came too late to secure adequate supplies for Belfast’s neediest residents in the short term. The water crisis had a profound impact and prompted subsequent efforts to improve Belfast’s supply. Nevertheless, progress toward securing adequate provision was slow, and sufficient supplies were not fully achieved until the early twentieth century, when water was finally piped to the city from the Mourne Mountains.⁸⁸ The town’s response to outbreaks of fever and cholera during 1865 and ’66 were therefore arguably hampered not only by the lack of water supplies fit for human consumption, but also by the inability to provide a concerted sanitary effort to wash streets and flush out sewers in Belfast’s poorest districts. Without sufficient water to flush out sewers, decomposing organic matter accumulated, creating severe public hygiene problems. When Joseph Watt showed his concern in late June, warning a meeting of the corporation that the situation would significantly increase the risk of fever, he correctly predicted the severity of the ensuing outbreak.⁸⁹

⁸⁶ Loudan, *In search of water*, p. 57; *B.N.L.*, 1 Sept. 1865.

⁸⁷ Loudan, *In search of water*, pp. 56-8.

⁸⁸ Budge and O’Leary, *Approach to crisis*, pp. 113-14. Emrys Jones, ‘Late Victorian Belfast,’ p. 115.

⁸⁹ *B.N.L.*, 28 June 1865.

The water crisis in Belfast was far from unique. Concerns over water purity, provision and their connection to cholera was also widespread other major Irish towns. In Dublin, for example, the supply drawn from the reservoir of the Grand Canal, was believed to be so poor that it was regarded with such distrust that one contemporary observed: ‘Drink canal water as it is and you swallow filth and animated nature; boil it and you drink a concoction of poison.’⁹⁰ In Mallow, County Cork, where twenty-six deaths from cholera occurred in the final few months of 1866, the registrar noted that: ‘The greater number of cases occurred in the locality of a well, the water of which was in daily use by the people dwelling in its neighbourhood.’⁹¹ Subsequent analysis by Professor Cameron of Dublin confirmed that the water from the well was unfit for human consumption and contained, ‘a large amount of organic matter derived from animal sources.’⁹²

This evidence demonstrates that, alongside the growing acceptance of the link between filth and disease, there was an increasing, albeit confused, acknowledgement of the role of water and the spread of cholera in Ireland. A report on the epidemic by Dr Thomas Hyden and Dr Richard Cruise at Dublin’s Mater Misericordiae Hospital, illustrates this uncertainty particularly clearly. The two doctors failed to reach any firm conclusions and frequently contradicted themselves in their findings.⁹³ While they acknowledged a general concession that water might serve as one of cholera’s means of communication, they maintained that, impure water, merely created a predisposition to attack, rather than acting as the primary medium of transmission (the principle infection being supplied through the air). They concluded, nonetheless, that: ‘It is however, conceivable and highly

⁹⁰ Brian MacGiolla Phadraig, ‘Dublin one hundred years ago’ *Dublin Historical Record*, Vol. 23(2/3) (1969), pp. 56-71.

⁹¹ *Third Annual report of the Registrar General of Births Deaths and Marriages Ireland 1866*, p. xxvi H.C. 1870 (C130), xvi, 845. Hereafter, *Third report R.G.* (1866).

⁹² *Ibid.*

⁹³ Thomas Hayden and Francis Richard Cruise, *Report on the cholera epidemic of 1866: As treated in the Mater Misericordiae Hospital, Dublin; With general remarks on the disease*, revised and reprinted from *DQJMS*, May 1867 (Fannin, Dublin, 1867), p. 44.

probable that cholera is frequently communicated in this way.’⁹⁴ Such vague and contradictory statements reflected the broader disarray that still prevailed among medical practitioners in Ireland and beyond. Nevertheless, both central and local authorities, drawing on the pattern established during previous epidemics, once again adopted a programme of anticipatory preparations as the threat of cholera approached in 1865.

Preparations in Belfast 1865

In late August 1865, the impending return of cholera focused the attention of the Belfast Board of Guardians on the condition of some of the town’s least hygienic streets. At their weekly meeting, the Clerk read a circular from the Poor Law Commissioners dated 23 August 1865, warning that Asiatic cholera had appeared in several Mediterranean ports and had advanced to the coasts of Italy and Spain. While noting that no immediate visitation was expected, the Commissioners urged the guardians to review the preventive and mitigatory powers available to them under the Nuisance Removal and Diseases Prevention Acts of 1848 and 1849. The letter recalled the successful organisation of dispensary districts during the 1853–55 epidemic and encouraged active enforcement of nuisance removal powers, which “ought to be continuously in action.”⁹⁵

The chairman, Dr William McGee, expressed concern about the administrative changes. While acknowledging that a sanitary committee was already in full operation, a point reinforced by Thomas Gaffikin, one of the guardians for the Cromac Ward, McGee emphasised that its members had their own duties to attend to and indicated that, should cholera arrive, the guardians ‘could refer to the active measures employed on a former occasion.’ Highlighting Belfast’s persistent sanitary issues however, Charles Ward drew

⁹⁴ Hayden and Cruise, *Report on the cholera epidemic of 1866*, pp. 44–6.

⁹⁵ *B.N.L.*, 30 Aug. 1865. See also *N.W.*

attention to serious nuisances, including open sewers in streets such as Railway Street and Sussex Street, where several residents were hospitalised with fever. He stressed the scale of the challenge facing the corporation, stating it would be impossible for it to meet the full extent of public requirements.⁹⁶ Ward also raised concerns regarding the inadequate provision of clean water, reporting that some residents had gone without water for a fortnight. One local resident, he noted, had obtained water so filthy that even his pony would not drink it. Others, he observed had been even more outspoken, and wished to see the Water Commissioners put on a rail and thrown into the polluted Blackstaff River.⁹⁷ Despite these criticisms and the obvious dissatisfaction with the commissioners' inaction, Belfast remained free of cholera until the summer of 1866. In the intervening period, however, fever posed a serious threat that further exposed deficiencies in the town's public health system.

In early September 1865, Dr Halliday reported that fever was epidemic in the town, although it was not as severe as previously experienced.⁹⁸ Over 450 cases had been reported across the town's various districts, yet these figures were acknowledged to under-represent the true scale of the outbreak. At the corporation's monthly meeting, Thomas Gaffikin, criticised the suspected inaccuracy of the returns made by the town's medical officers, noting that: 'In one house there might be six or seven persons suffering from fever, yet the medical officer would only report one case from that house.'⁹⁹ The relieving officer agreed and stated that after he had admitted three fever patients to the hospital no trace of them could be found in the books of the medical officers.¹⁰⁰ Despite these statistical failings, Councillor Thomas Boag at a subsequent meeting at the beginning of

⁹⁶ *Ibid.*, 30 Aug. 1865.

⁹⁷ *B.N.L.*, 30 Aug. 1865.

⁹⁸ *B.N.L.*, 5 Sept. 1865.

⁹⁹ *Ibid.*

¹⁰⁰ *B.N.L.*, 5 Sept. 1865.

December, was anxious to affirm the improved quality of public health in Belfast and remarked that the town had never been in a more healthy state or more exempt from disease.¹⁰¹ However, the Registrar General's report later showed that Boag's optimism had been misplaced, recording 334 deaths from fever; the third highest cause of mortality in Belfast during 1865.¹⁰²

Irish Preparations for the Approach of Cholera: 1865-66

In addition to Belfast's fever outbreak, the autumn of 1865 saw the prevalence of cholera throughout Europe prompt the Irish Poor Law Commissioners to issue a circular to all Boards of Guardians instructing them to implement the provisions of the 'Diseases Prevention,' 'Nuisance Removal' and 'Sewage Utilisation' (1865) Acts.¹⁰³ Although no major outbreak had yet occurred, the commissioner's experience of the disease during previous epidemics led them to prioritise early preventative action. When the threat of another epidemic intensified during the spring and summer of 1866, they reissued the directives in May and again in July.¹⁰⁴

Over the following months however, the management of cholera prevention and treatment came under new legislation that partially restructured public health administration in Ireland. At the end of August 1866, the commissioners rescinded all powers previously granted under the 'Nuisance Removal' and 'Diseases Prevention' Acts (1848/49). They also informed guardians that action against infectious disease would henceforth be administrated under the 'Diseases Prevention Act' (1855) and the new 'Sanitary Act'

¹⁰¹ *Ibid.*, 2 Dec. 1865. See also *N.W.*, 2 Dec. 1865.

¹⁰² *Second annual report of The Registrar of Births Deaths and Marriages (Ireland) 1866*, p. 88. H. C. 1870 (4), xvi, 701. Hereafter, *Second report R.G.* (1866).

¹⁰³ 'Sewage and Sewage Utilisation Act' 1865 (28 and 29 Vict. c. 75). *Twentieth report PLC* (1867), p. 27.

¹⁰⁴ *Twentieth report PLC* (1867), p. 27.

(1866).¹⁰⁵ Although the introduction of the ‘Sanitary Act’ conveniently coincided with arrival of cholera, it also placed considerable additional pressure on the resources of guardians across the country.¹⁰⁶

The Act consolidated earlier legislation, and essentially extended the powers of the 1855 Diseases Prevention Act, it also provided dedicated sanitary authorities for enforcement purposes.¹⁰⁷ Countrywide, dispensary management committees were designated as sanitary committees, and each dispensary district became a designated area for the treatment of cholera and its premonitory symptoms.¹⁰⁸ Sanitary committees were required to meet weekly, and medical officers to submit weekly returns to the committees and daily returns to the Commissioners. In measures similar to those implemented during the 1854/55 epidemic, dispensary doctors were required to give free treatment to any individual showing symptoms of the disease.¹⁰⁹ Guardians were further instructed to publicise arrangements for treatment in affected areas, disinfect houses, clothing, and bedding, abate nuisances, and ensure the rapid burial of the dead. In port towns, additional measures were introduced to inspect and manage cholera cases arriving by ship. All associated expenditure was to be met from the rates.¹¹⁰ With these new legislative measures in place, the commissioners were confident that where Poor Law Unions had put preliminary measures in place, cholera regulations could subsequently be enforced in every dispensary district within forty-eight hours of cholera’s appearance. A particularly

¹⁰⁵ Ibid., pp. 159-63. For the Orders of the Sanitary Act and Diseases Prevention Act see *Twentieth report PLC* (1867), Appendix C, Orders and circulars of instruction issued under the ‘Medical Charities Act’ and ‘The Sanitary Act’ and correspondence, pp. 151-68.

¹⁰⁶ *Nineteenth report PLC* (1866), p. 17.

¹⁰⁷ T.W. Grimshaw, ‘The Public Health (Ireland) Act 1878’ *Dublin Journal of Medical Science*, Vol. 66 (4) (1878), pp. 355-64.

¹⁰⁸ *Twentieth report PLC* (1867), p. 28. For more on the dispensary system see Catherine Cox, ‘Medical dispensary service in nineteenth-century Ireland: Access, transport and distance’ in Cox and Luddy, *Cultures of care*.

¹⁰⁹ Robins, *The miasma*, p. 206.

¹¹⁰ *Twentieth report PLC* (1867), p. 28.

significant departure from the 1854 approach was the decision to grant boards of guardians and sanitary committees the power to implement regulations immediately, without first seeking central approval.¹¹¹ This change enabled local authorities to respond far more swiftly to emerging threats and to introduce pre-emptive measures without delay.¹¹²

Cholera in Ireland 1866

Elsewhere in Ireland, the entry of cholera into the country aboard shipping from Liverpool had become a tangible threat by the spring of 1866. On 3 May, a German emigrant ship arrived in Cork with cholera reported among the passengers on board. Two had already died on route and as there were no quarantine measures in place at Cork the vessel was immediately ordered back to Liverpool.¹¹³ In England, the Home Secretary, Sir George Grey, expressed disappointment at receiving no warning from the officials at Cork and noted that the government was only made aware of the incident after receipt of a telegram from the Mayor of Liverpool. Immediately afterwards, the Privy Council issued directions urging the authorities at Liverpool to take the appropriate precautions, with Grey noting that he had little doubt that similar directions would also be issued to Cork. Although it is unclear what preparatory measures were taken, no cases of cholera were recorded in Cork until the disease re-emerged in September. Once established, the outbreak intensified over the following three months, during which approximately 235 cases and eighty-seven deaths were recorded in the city, a total that was significantly higher than it had been during the previous epidemic.¹¹⁴

¹¹¹ *Twentieth report PLC* (1867), p. 28

¹¹² For the organisation of medical relief under the Medical Charities Act (1851) see *Copy of Report from John Lambert, Poor Law Inspector to Gathorne Hardy M.P. President of the Poor Law Board (England)*, 9 Nov. 1866, in *Twentieth report PLC* (1867), pp. 178-83.

¹¹³ *Hansard*, clxxxiii, 358-60, 03 May 1866.

¹¹⁴ From 1854-55 there had been only eighty-eight cases and twenty-eight deaths from cholera in Cork. See, Table 6.8 in Chapter Six of this thesis which has been compiled from the *Third and Fourth reports PLC*, pp.

For the rest of Ireland, the quarterly returns published in the reports of the Registrar General for 1866 offer further valuable insights into the spread of cholera across the country. Of particular note are cases that were recorded prior to the commencement of the epidemic proper in July, alongside the repeated concerns expressed by some officials regarding the sanitary condition of many small Irish towns. In the district of Portadown (Lurgan Union), for example, one ‘undoubted’ death from ‘pure Asiatic cholera’ was recorded as early as 15 March, and two deaths, also attributed to cholera, were reported in Newtownards around the same time.¹¹⁵ In the period leading up to 5 June, additional early cases were recorded across two Ulster Poor Law Unions, alongside outbreaks of smallpox, scarlatina, measles and whooping cough, reflecting the wider circulation of epidemic disease prior to the full onset of cholera. The returns also indicate that, the sanitary condition of towns affected by cholera was a persistent concern of local administrators throughout Ireland. While the registrars of some districts reported favourably on the sanitary state of their respective areas, the majority complained of a lack of adequate sanitary precautions with the districts of Portrush, Bellaghy, Ardara, Kilskeer, Mullingar and Carrick on Suir singled out as being especially deficient.¹¹⁶ This prompted the Registrar General to issue a stern warning to those Poor Law Unions which had failed to implement the recommended sanitary precautions. The districts in question, it was noted, ‘might well see the dire results of their negligence...now that cholera is at our doors.’¹¹⁷

369-70 and p. 152. For 1866 see: *Twentieth report PLC* (1867), p. 245. For more on the outbreak including case studies see Dr W Jackson Cummins ‘Remarks on cholera’ and F.A. Purcell, ‘Transactions of the Cork and Cork City Medical and Surgical Society: Cholera: A report of thirty-eight cases of cholera occurring consecutively in the city of Cork during the outbreak of this year (1866); Recording the first case and the introduction of the epidemic’ *DQJMS*, Vol.44 (1867), pp. 42-57 and pp. 253-8. Cummins was the physician to the Cork Dispensary and Blackrock Cholera District and Purcell was secretary to the medical and surgical society.

¹¹⁵ The Portadown victim died within fifteen hours of becoming ill. *Third report R.G.* (1866), p. xvii.

¹¹⁶ *Third report R.G.* (1866), p. xvii.

¹¹⁷ *Ibid.*

It is clear therefore that one interpretation remained consistent: cholera was repeatedly associated with the filthiest districts of urbanised areas. In Dublin, Dr Edward Mapother, in assessing the city's sanitary condition, drew on a report by a London medical officer, noting that its conclusions were especially applicable to the condition of Dublin's poor, but also extended, quite poignantly, to almost every urban centre in the country:

Let us picture to ourselves the man of the alley come home from his work; the house is filthy, the look of it is dingy and repulsive, the air is close and depressive; he is thirsty, the water-butt decayed, and, lined with disgusting green vegetation, stands open nigh a drain, and foul liquids, which cannot run off, are about it, tainting it with an unwholesome and unpleasant taste, the refuse heap with decaying vegetable matter is near, and the dilapidated privy and cesspool send up heavy poisonous and de-pressing gases. Is not the sumptuous gin-palace a tempting resource.¹¹⁸

Cholera's resurgence in Ireland during the spring and summer of 1866 was not entirely unexpected, given its prevalence in several English ports, such as Liverpool and London.¹¹⁹ In their subsequent report, the commissioners attributed the majority of early Irish cases to the arrival of sailors and passengers, particularly those from Liverpool.¹²⁰ However, they remained confident that the implementation of preparatory preventative measures would provide adequate protection. In addition to the introduction of new legislative measures and continuing efforts aimed at improving sanitation and hygiene, the dispensary system, now the principal national organisation for medical relief, was more developed, more experienced, and therefore, was regarded as better equipped than in previous outbreaks.¹²¹ It was largely as a consequence of these preparatory measures

¹¹⁸ Mr Rendle, Medical Officer for Health (London) quoted in E.D. Mapother, 'The sanitary state of Dublin' *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. iv (1864), pp. 62-76.

¹¹⁹ Robins, *The miasma*, p. 206.

¹²⁰ *Twentieth report PLC* (1867), p. 27.

¹²¹ Robins, *The miasma*, p. 206; Burke, *The people and the Poor Law*, p. 276.

that cholera mortality in Ireland during 1866 was relatively slight in comparison with earlier epidemics.

Table 7.1: Commencement Dates of Epidemic Cholera in Ireland 1866

TOWN	Date of first case
Dublin (South)	27 July 1866
Wexford	27 July
Dublin (North)	2 Aug.
Belfast	9 Aug.
Kilkeel (Co. Down)	10 Aug.
Rostrevor (Co Down)	11 Aug.
Buncrana (Co. Donegal)	12 Aug.
Kilkelly (Co. Mayo)	12 Aug.
Ballylinan (Co Kildare)	12 Aug.
Dunlavin (Co Wicklow)	14 Aug.
Drogheda	14 Aug.
Roscommon	6 Sept.
Mountmelick (Queens County)	6 Sept.

Table compiled from statistics provided in *Twentieth report PLC* (1867), p.29.¹²²

As Table 7.1 indicates, the first cases of the main Irish outbreak occurred on the eastern seaboard and were reported simultaneously in Dublin and, approximately seventy-five miles away, Wexford on 27 July 1866. The disease then spread rapidly and became widespread across the country, although its dissemination followed no clear or predictable pattern. Areas widely distant from each other including Down, Donegal, Wicklow, Roscommon and Queens County, were affected, but the worst of the epidemic was largely confined to the province of Leinster and almost wholly to Dublin, where the Poor Law Commissioners report for 1867 recorded 1389 cases and 753 deaths.¹²³ Yet, while case numbers in Dublin were comparatively low, mortality rates, particularly among hospitalised victims, were as high, if not higher than those recorded in any previous epidemic. At the Mater Misericordiae Hospital for example, where 197 patients were

¹²² The commissioners observed that in all of the cases listed the patients had arrived in their respective localities from Liverpool. *Twentieth report PLC* (1867), p. 29.

¹²³ Robins, *The miasma*, p. 206; *Twentieth report PLC* (1867), p. 31.

treated between 17 August and 18 December, mortality was over fifty-three per cent, while similar rates were also recorded in the city's Meath and Sir Patrick Dun's Hospitals.¹²⁴ Two reports in the *Medical Times and Gazette* by Dr Mapother and Reverend Samuel Haughton further suggest that the number of cholera deaths was significantly higher than the official returns of the commissioners.¹²⁵

The commissioners' reports also show that the correlation between filth and the spread of disease had become a primary concern throughout Ireland. For instance, in Bray, Co. Wicklow, where sixty-eight deaths were attributed to an outbreak of cholera, the commissioners remarked that, 'surely there must have been something very deficient in the sanitary arrangements of this town.'¹²⁶ In Arklow, also in Co. Wicklow, where sixty-six deaths were recorded, the medical inspector, John Hill, reported that although efforts had been made to disinfect and whitewash the houses of the poor, the sewerage of the lower part of the town remained highly defective. His observations were corroborated by the local registrar, who noted that 'The sanitary state of Arklow is in a most unsatisfactory condition; the same state of overcrowding habitations, deficient sewerage and want of pure water, as [sic] existed previous to the recent outbreak of cholera and for the past thirteen years.'¹²⁷

¹²⁴ 197 patients 106 deaths, see, Hayden and Cruise, *Report on the cholera epidemic of 1866*, p. 18. This report also provides comprehensive details of treatments administered as well as a commentary on the disease itself. It is interesting to note that among these patients, 33 per cent (65) of cases were attributed to neglected diarrhoea, and almost 22 per cent (43) to contagion. Of the remainder, only 3 are attributed to foul water while 18 were said to result from intemperance. Other causes included eating cold or badly cooked cabbage and drinking sour porter. See also; Robins, *The miasma*, p. 206.

¹²⁵ The report of Dr Mapother, Medical Officer for Health Dublin, in *The Medical Times and Gazette*, 12 Jan 1867, records 863 deaths as well as 52 additional deaths from people brought into Dublin Hospitals with the disease, making a total of 915. In a later report also in the *Medical Times and Gazette* Rev Samuel Haughton recorded that there had been 1,198 deaths from cholera by the end of 1866, although it must be noted that he did not divulge how his figures had been obtained.

¹²⁶ *Third report R.G.* (1866), p. xxxi. See also Letter to the commissioners from Thomas L Whistler Medical Officer to the Bray dispensary district in *Twentieth report PLC* (1867), pp. 176-7. There were 124 cases between 29 Sept. and 29 Dec. 1866, 62 of which died at home and a further 7 in hospital (69 in total).

¹²⁷ *Twentieth report PLC* (1867), p. 248. The Rathdown Union which covered an area of 75 square miles in Counties Dublin and Wicklow encompassing Bray and Arklow suffered 576 cases and 270 deaths during the outbreak. See also: *Report of John Hill, Medical Inspector to the Arklow dispensary district Rathdrum*

Similar concerns regarding entrenched sanitary neglect were evident elsewhere in the country. In the north of Ireland, the poor condition of towns beyond Belfast also remained a significant concern, although responses were often reactive rather than preventive. In Portaferry, County Down, the town's medical officer, Alexander Philson, reported that after the first appearance of cholera the dispensary committee endeavoured to improve local sanitary conditions. Residents of houses adjoining that of the first victim, fisherman Andrew Young, also undertook cleaning and whitewashing efforts. Despite their efforts, another crew member, James Smith, became ill the following day (21 October) and died shortly afterwards. Philson observed that, 'the poison having been once imported found a congenial spot for its further development in the wretched filthy hovels surrounding Smith's house.'¹²⁸ Other cases quickly followed, and in two particularly insanitary houses, 'where pigs and ducks ran riot,' only one resident in ten escaped infection.¹²⁹

Total morbidity and mortality statistics for Ireland during the 1866 epidemic

The duration of the cholera epidemic in Ireland which lasted from July to December 1866 was relatively brief in comparison with earlier outbreaks. However, as with previous epidemics, accurate statistics for cholera mortality in Ireland during 1866 paint a far from conclusive picture and serve to highlight the inconsistencies within the recorded data. In particular, the Census Commissioners' returns omit important categories of data. For example, the 1871 census records, reproduced in Table 7.2 below to provide provincial

Union. 19 Sept. 1866, in *Twentieth report PLC* (1867), pp. 171-3; *Third report R.G.* (1866), p. xxxi. The fear in Arklow was such that residents mounted armed patrols on the Bridge and banks of the River Avoca and when the carriage conveying patients to the local fever hospital appeared people ran from it in terror. See, Jim Rees, 'The cholera epidemic of 1866' *Arklow Historical Society Journal* (1982), quoted in Robins, *The miasma*, p. 206.

¹²⁸ Report of Alexander Philson, Medical Officer of the Portaferry Dispensary, Downpatrick Union. 20 Oct - 2 Nov. 1866 and Letter from same, 18 Nov. 1866, in *Twentieth report PLC* (1867), pp.174-5.

¹²⁹ 7 in total had cholera 1 of whom had died by the time of the report 2 others were reported to have diarrhoea.

mortality rates, documented a total of 1,671 deaths from cholera but provided no details of case numbers.¹³⁰

Table 7.2: Provincial Cholera Deaths in Ireland for 1866 as Recorded by the Census Commissioners

Province	Deaths
Leinster	1371
Munster	198
Ulster	82
Connaught	20
Total	1671

Table compiled from Census of Ireland (1871), pp. 207-67.

In comparison, the Poor Law Commissioners annual report, published in 1867, documents more than 600 additional cholera deaths than are recorded in the census returns.¹³¹ Their figures, which have been reproduced in Table 7.3 below and adjusted to avoid double counting dispensary cases sent to hospital which were duplicated in the hospital returns, show that 4,309 cases of cholera were treated by dispensary doctors or in state supported hospitals during the 1866 epidemic, resulting in 2,308 deaths.¹³² Almost certainly however, these statistics, which have been used in the studies of both Joseph Robins and Helen Burke, fall short of the true figure of cases and deaths, but by how much is indeterminable.¹³³ The inclusion in the hospital returns of cases originally treated at dispensaries and subsequently sent to hospital and the absence of cases treated in private practice which were also not included in the returns of either of the commissioners means that the true toll of cholera morbidity and mortality during 1866 will remain unknown.¹³⁴

¹³⁰ Census of Ireland (1871), pp. 207-67.

¹³¹ *Twentieth report PLC* (1867), p. 31 and pp. 240-54.

¹³² See Table 7.3 below compiled from *Twentieth report PLC* (1867), p. 31.

¹³³ See Robins, *The miasma*, p. 206; Burke, *The people and the Poor Law*, pp. 279-280.

¹³⁴ (5,195 cases). See, *Twentieth report PLC* (1867), p. 254.

Table 7.3: Provincial Cholera Deaths in Hospitals and Dispensaries in Ireland for 1866 as Recorded by the Poor Law Commissioners

Province	Cases	Deaths
Leinster	3622	2009
Munster	541	229
Ulster	87	32
Connaught	59	38
Dublin	1389	753
Less the number of dispensary cases sent to hospital and also included in the hospital returns	-883	
Total	4309	2308

Table compiled from *Twentieth report of the Poor Law Commissioners* (1867), p. 31.

Further statistical information can be gleaned from the annual report of the Registrar General's Office on births, deaths and marriages. While this report suggests that there were more deaths from cholera (2,501) than were recorded elsewhere during 1866, it offers no corresponding information on morbidity rates. Much like the census returns, it must therefore be treated with caution as an accurate indicator of the epidemic's overall impact.¹³⁵ More detailed insights are often obtainable at a local level, where surviving records make it possible to reconstruct both the progress of the disease and the practical implementation of preventative measures. Regional studies of areas like Belfast provide particularly valuable examples in this regard. Although the epidemic largely bypassed the town, its experience illustrates how national directives were interpreted, adapted, and enforced at a local level, while also revealing contemporary attitudes towards cholera, sanitation, and public health administration. It is worth noting that while abundant sources of regional statistical data exist, overall figures have not been fully collated in any single comprehensive publication to date.

¹³⁵ (1,167 males and 1,334 females). See, *Third report R.G.* (1866), p. 82. See also Letter from William Burke F.C.P.I. (Fellow of the King's and Queen's College of Physicians in Ireland) to the Registrar General on the Causes of Death in Ireland from the same report, pp. 95-8.

Cholera in Belfast 1866

The first indications of a return of cholera to Belfast came on 7 May 1866 when it was reported that there had been a fatal case of the disease in Peters Hill near the Shankill Road.¹³⁶ The *Belfast Newsletter* was typically derisive and dismissed the report stating that the death was ‘unaccompanied by the remotest trace of cholera.’¹³⁷ This view appears to have been widely shared. Unlike previous epidemics, where rumoured cases had generated considerable alarm, and despite the fact that cholera was spreading rapidly throughout continental Europe, it seems that Belfast’s authorities felt unthreatened by the disease. At the end of July, for example, Dr McGee, who had gained considerable experience of cholera during its two previous outbreaks in Belfast, told a meeting of the Board of Guardians that there was no need for alarm provided the board did its duty. He expressed confidence in the institution's readiness, assuring those present that ‘In their own establishment, in four hours they could use the whole ground floor, or four wards, for acute cases of cholera,’ and adding that ‘At no great expense they would be able to make provision for and check the disease.’¹³⁸

Such confidence, however, contrasted sharply with the sanitary realities that continued to characterise many of Belfast’s poorest districts. Attention turned once again to the deplorable sanitary condition of some parts of the town, and while efforts were clearly being made to address specific problems such as nuisance removal, the authorities continued to be largely overwhelmed by the scale of the problem. An editorial in the *Belfast Newsletter*, for instance, while commending the preparations of the guardians in respect of cholera, launched a fierce attack on the conditions in some of Belfast’s most

¹³⁶ *B.N.L.*, 9 May 1866.

¹³⁷ *Ibid.*

¹³⁸ *B.N.L.*, 25 July 1866.

insanitary streets.¹³⁹ Encouraging readers who wished to verify the facts for themselves to walk from Hercules Place to North Street, the article painted a grim picture of the circumstances endured by many of the town's poor:

He will, only a few yards from Castle Place, come to the mouth of a wretched entry, one glance down which is sufficient to try the strongest of nerves...it is but the breadth of a narrow hall. Filth and offal lie upon the surface and miserable children...go through the farce of playing in the dark halls and tottering stairs of the houses.¹⁴⁰

'Scores of people live in these comfortless abodes,' the article continued:

They have to contend with poverty, with almost perpetual sickness, with the near neighbourhood of vice and crime...what can be expected in such a place, amid villainous smells; without one draught of fresh air; without a single water pipe for the purposes of cleanliness; without anything which can secure the ordinary decencies of life.¹⁴¹

This was the description of just one street; other parts of the town were said to be even worse, to the point that anyone venturing into some areas of inner Belfast would quickly find themselves what was described as a labyrinth of wretchedness and dirt. Around Carlisle Circus, at the junction of the Crumlin and Antrim Roads, the streets were said to resemble ploughed fields.¹⁴² Referring to the centre of the town, an influential merchant writing in the *Belfast Newsletter* called the district between Hercules Street, Berry Street, North Street and Smithfield a 'foul and festering plague-spot,' full of every physical and moral horror, and warned that, unless cleared and replaced, it exposed Belfast to the continual and imminent danger of epidemic diseases. He urged the corporation to speed up the clearance of the area and the purchase of adjoining properties as part of a wider scheme of improvement, including the construction of a central retail market and new

¹³⁹ Ibid., 26 July 1866.

¹⁴⁰ *B.N.L.*, 26 July 1866.

¹⁴¹ Ibid.

¹⁴² *B.N.L.*, 26 July 1866 and 11 Aug. 1866.

slaughterhouse to replace existing insanitary facilities.¹⁴³ However, owing largely to a lack of funds rather than administrative inaction, tenders for the new slaughterhouse were not issued until 1867, and Hercules Street remained a notorious example of urban deprivation until it was finally cleared to make way for Royal Avenue more than a decade later. Hercules Street therefore remained as a notorious example of poor sanitation and hygiene until it was finally pulled down to make way for Royal Avenue more than a decade later.¹⁴⁴

Against this backdrop of persistent sanitary deficiencies, reports of cholera's return attracted increasing attention during the summer of 1866. On 3 August, rumours circulated that the disease had reappeared in Belfast after James Duggan, a local gardener, was suddenly taken violently ill. He was attended to by Dr McMurtry, who found Duggan to be suffering from an aggravated form of English cholera, from which he subsequently recovered.¹⁴⁵ Nevertheless, anxiety regarding an impending epidemic was clearly growing and, within days, the first verified case occurred in the suburb of Ballymacarrett. Discovered in McGivern's lodging house, Bridge End, on the night of 8 August, the case, was, like many others diagnosed elsewhere in Ireland, traceable to Liverpool. Thomas O'Neill, a recent arrival from the English port, was seen at his accommodation by Dr Seaton Reid and Dr James Murray of the Ballymacarrett Dispensary, who found there was little they could do as the patient was already in an advanced stage of collapse.¹⁴⁶

¹⁴³ *B.N.L.*, 13 Aug. 1866.

¹⁴⁴ *B.N.L.*, 5 Sept. 1867: The scheme was not completed until 1881. For more see: C.E.B., Brett, 'The Edwardian City: Belfast about 1900 in Beckett and Glasscock, *Belfast: The origin and growth of an industrial city*, p. 124; Clarke, *The Royal Victoria Hospital*, p. 32; Marcus Patton, *Central Belfast: An historical gazetteer* (Ulster Architectural Heritage Society, Belfast, 1993), p. 282.

¹⁴⁵ *B.N.L.*, 4 Aug. 1866.

¹⁴⁶ *B.N.L.* 10 Aug. 1866. Both James and Daniel Murray are listed as physicians in the Belfast and Province of Ulster Directory but only James was in Ballymacarrett. See, The Belfast and Province of Ulster Directory 1866. www.street-directories.proni.gov.uk (accessed 23 Jan. 2014), p. 85 and p.178. In the 1868 Belfast Street Directory, James Murray is listed as resident medical officer at the Ballymacarrett Dispensary. 1868 Belfast / Ulster Street Directory, <https://www.lennonwylie.co.uk/ballymacarrett1868.htm> (Accessed 23 Jan. 2014). James is also listed in the medical directory for this period. See: *The Medical Directory* (London: Churchill Livingstone, 1864),

O'Neill died the following afternoon some eighteen hours after becoming ill.¹⁴⁷ On 11 August two more cases were reported to the Belfast Sanitary Committee by Dr Murray and it seemed that cholera would soon become epidemic. Edward Magowan, who lived a short distance from O'Neill's residence died just a few hours after becoming ill while James Magowan who lived about a quarter of a mile from the others recovered in the Union Hospital. Dr Murray however concluded that 'no connection whatsoever was traceable between these persons.'¹⁴⁸ Shortly afterwards another fatal case occurred in Torrens Row off Hercules Street. James McDonald, aged seventy, had been suffering from diarrhoea and had attended the dispensary in Lancaster Street in order to obtain medicine before returning to work. Later the same evening he became so ill that his friends called for Dr Corry who diagnosed Asiatic cholera but could do nothing to arrest its progress and he died within a few hours of the diagnosis.¹⁴⁹

As confirmed cases and fatalities accumulated and with public concern intensifying, Belfast's foremost cholera physician Henry McCormac, sought both to reassure the population and to promote preventative measures. His recommendations, which included the consumption of wholesome food and adherence to strict habits of temperance and cleanliness, echoed much of the advice that he had advocated during previous outbreaks. He also, however, introduced several additional suggestions, some more unusual than others. He advised abstaining from food between meals and recommended the

811 also the 1869 edition on page 874. Also listed is Sir James Murray, inventor of Milk of Magnesia, 78 years' old in 1866, he had retired from medical practice in 1852. For more on him see, Ulster History Circle, <http://www.ulsterhistory.co.uk/jamesmurray>. (accessed 23 Jan. 2014); Dictionary of Ulster Biography <http://www.newulsterbiography.co.uk/index.php/home/viewPerson/1226>.

¹⁴⁷ Letter from Dr Murray to the Belfast Sanitary Committee, Nov. 1866, in Minute Book of the Sanitary Committee, 7 Feb. 1865 - 13 Nov. 1873. See also, *B.N.L.*, 10 Aug. 1866.

¹⁴⁸ Letter from Dr Murray to the Belfast Sanitary Committee, Nov. 1866.

¹⁴⁹ *B.N.L.*, 11 Aug. 1866. These as well as the majority of the cases that occurred in Belfast during this outbreak are recorded in the Minutes of the Sanitary Committee. For a list of cases recorded by the Medical Officers see pp. 81-2. See also Table 7.5 below and Appendix 4 for a copy of the original list.

consumption of charcoal filtered water.¹⁵⁰ Toast-water - a preparation of water boiled and poured over a square inch of well browned bread to be drunk when cold - was also recommended as a dinner drink.¹⁵¹ McCormac's longstanding emphasis of plentiful ventilation, was however taken to a slightly extreme level at the cholera hospital, where he advocated the removal of windows altogether, claiming that this had produced 'the very best results.'¹⁵² In terms of treatment, McCormac focused entirely on the benefit of dilute sulphuric acid for arresting diarrhoea, while insisting that aperient (laxative) medicines, castor oil, salts etc. should only be administered under medical direction. Sulphuric Acid, by contrast, was promoted as a cheap and readily available remedy; a teaspoonful diluted in water and taken every half-hour would, he claimed, arrest diarrhoea and, if taken morning and night, would, 'have the desirable property of averting cholera and diarrhoea altogether.'¹⁵³

Civic Responses

While physicians concentrated upon prevention and treatment at the individual level, the principal responsibility for protecting public health during 1866 rested with Belfast's civic authorities. In consequence of the deaths in Ballymacarrett, a special meeting of the corporation was convened on 11 August. At the meeting, an extract of a letter from Councillor Joseph Lee was read to the attendants. Apologising for his absence, Lee stressed that addressing the sanitary state of the town was of utmost importance and urged the corporation to support the Belfast Sanitary Committee, so that; 'the sanitary state of the town may be immediately improved to the utmost regardless of expense.'¹⁵⁴ The sanitary committee, which had convened the previous day, presented a supplementary

¹⁵⁰ Henry McCormac, 'Cholera: its early treatment and especially its prevention,' *B.N.L.*, 11 Aug. 1866.

¹⁵¹ *Ibid.*, 11 Aug. 1866.

¹⁵² *Ibid.*

¹⁵³ *Ibid.*, 11 Aug. 1866.

¹⁵⁴ *B.N.L.*, 13 Aug. 1866.

report based on one submitted at an earlier monthly meeting. In it, the town solicitor, Samuel Bruce, recommended the appointment of additional sanitary inspectors. He insisted that ‘neither money, nor labour, nor anything should be spared to put Belfast in the state which it should be in, in order to provide for a great and unfortunate calamity should cholera visit them.’¹⁵⁵ Noting that a circular had been issued to the town clerk by the Poor Law Commissioners containing the provisions of the ‘Nuisance Removal’ and ‘Disease Prevention Acts,’ Bruce proceeded to remind those in attendance that, that the corporation was now equipped to undertake prompt and effective sanitary intervention under a clearly defined legal framework. Under these powers, premises deemed to be in violation could be inspected on notification by constables, with offenders required to remedy conditions within twenty-four hours or face enforcement measures, including fines of up to £5 per day.¹⁵⁶

At the same meeting, attention turned to the role of the Belfast General Hospital and the problem of isolating cholera cases from general patients. While the committee conceded that subscribers had a right to expect to receive treatment within the institution, Robert Knox, Lord Bishop of Down and Connor, noted that the hospital lacked both sufficient capacity and the means of expansion in order to accommodate cholera patients.¹⁵⁷ A proposal that the Lancaster Street dispensary buildings be transferred by the guardians for use as an auxiliary cholera hospital was considered, but although preliminary discussions had taken place earlier in May, negotiations had broken down and no agreement had been reached. It was therefore concluded, after consultation with the hospital’s medical staff, that on ‘purely medical terms’ cholera cases could not, for the present, be admitted.¹⁵⁸

¹⁵⁵ George Herdman and William White were put forward for the roles at a salary of 14s per week. *B.N.L.*, 13 Aug. 1866.

¹⁵⁶ *Ibid.* Later the same month they were rescinded to be replaced by the new ‘Sanitary Act.’

¹⁵⁷ *Ibid.*

¹⁵⁸ *B.N.L.*, 13 Aug. 1866.

Consequently, alternative options for the accommodation of victims had to be considered and responsibility for patients and their treatment continued to rest primarily with the guardians. However, to address what they believed to be the root cause, the town's poor sanitary condition, collaboration with the corporation was also required.¹⁵⁹

This coordination was formalised at a meeting of the corporation on 14 August, when full sanitary powers were delegated to the sanitary committee, which committed itself to cooperation with the guardians who held similar but more extensive statutory authority.¹⁶⁰

The committee authorised its sanitary inspector Hugh Norwood to appoint four extra assistant inspectors in order to remove nuisances and issue notices to sanitary offenders.

Norwood was also instructed to appoint as many additional labourers, whitewashers and scavengers as the 'emergencies of the case demand.'¹⁶¹ The committee recommended that

house-to-house visitations and any subsequent removal to hospital be undertaken by the guardians and also directed that the board provide full medical support for any dispensary district where cholera or diarrhoea prevailed.¹⁶² In order to strengthen surveillance, Dr

Samuel Browne requested that the guardians' medical inspectors supply the address of every house in which cholera occurred, enabling the systematic recording of cases. He

observed that this would not only produce a more accurate account of morbidity but

would also allow the sanitary committee to concentrate resources on the most vulnerable

districts. Browne also emphasised the advantages of the workhouse hospital, which he

described as one of the best institutions in the country for the treatment of epidemic

disease.¹⁶³

¹⁵⁹ Ibid.

¹⁶⁰ *B.N.L.*, 14 Aug. 1866.

¹⁶¹ Ibid.

¹⁶² *B.N.L.*, 14 Aug. 1866.

¹⁶³ Ibid. The medical inspector's returns, recorded in the minutes of the sanitary committee, while relatively few in number, provide a valuable and much more detailed account of the areas where cholera prevailed in Belfast than during any previous outbreak. See Minute Book of Sanitary Committee, 7 Feb 1865 - 13 Nov

Towards the end of August, no further confirmed cases of cholera had occurred in the Belfast Union, still, speculation and rumour continued to circulate. Medical inspectors were nonetheless required to investigate suspicious deaths and to be visibly active in order to prevent any escalation of public alarm. This was evident almost immediately, when on 23 August, the death of a woman called McAnney was reported as cholera. Although the disease was later dismissed as the cause, the sanitary inspector ordered that the house be fumigated and disinfecting fluid sprinkled over the street as an additional precaution after which no further suspicious cases were reported in the vicinity.¹⁶⁴ In the absence of cases following the early August cluster the sanitary committee dispensed with its daily meetings and resumed its normal weekly schedule. Its minutes, however, demonstrate that the threat of cholera had made it one of the most active bodies within the corporation. During August alone, its officials had inspected 210 streets from house-to-house, abated 653 nuisances, cleared 133 stopped sewers and arranged the construction of ashpits for sixty houses. Additional sewers were constructed to drain effluent from 193 houses, numerous dead animals, mostly pigs and dogs, were removed from pools of water in various parts of the town, and 617 houses were whitewashed.¹⁶⁵

Yet, despite this push to improve the condition of much of the town, Councillor Samuel Tierney, during a meeting on 5 September, remained sceptical of the effectiveness of the new measures and expressed concern that the introduction of the 'Sanitary Act' would put an end to the powers of the existing sanitary committee. With the dispensary committee also set to be designated as a sanitary committee under the terms of the act,

1873. Additional instructions issued in November 1866 required medical officers of the dispensary districts within the Borough to supply information of all cases of cholera which had occurred within the previous 24 hours daily before 10 o'clock giving names in full, ages, residences where treated and the results as far as practicable. Minute Book of the Sanitary Committee, 12 Nov. 1866. See also copy of the returns in Appendix 4.

¹⁶⁴ *Ibid.*, 24 Aug. 1866.

¹⁶⁵ Minute Book of Sanitary Committee, Aug. 1866. See also, *B.N.L.*, 3 Sept. 1866.

Tierney feared that confusion would arise regarding jurisdictional responsibility and that the possibility that prosecutions for sanitary offences would collapse as a result. At the same time, concerns were also raised that the insufficient action had been taken by the corporation to remove dung heaps collected at several locations within the borough. The amassed heaps of manure (subsequently sold as fertiliser), many of which were gathered in front of dwellings, causing offensive smells and as Samuel Tierney had apparently observed while worshipping at his own church, 'attracted flies as big as bees.' Charles Ward, guardian for St George's, quipped that 'the flies had perched on Mr Tierney's nose and distracted his devotions.'¹⁶⁶ Despite such complaints, it was not until November that the corporation resolved to prohibit the accumulation of manure heaps within the borough and confirmed the acquisition of four acres of land at Dundonald for the disposal of scavenging waste.¹⁶⁷

In a further special meeting of the various dispensary committees held on 11 of September and chaired by Joseph Bigger it was resolved that the guardians would be requested and required to address the issues of the Blackstaff River and Pound Burn and that 2,000 copies of cholera regulations were to be printed and distributed throughout the town.¹⁶⁸ The committee also ordered all agencies responsible for the sanitary condition of Belfast's streets to ensure frequent and effective cleansing, and that all dwellings in insanitary condition, whether due to defective drains, privies, ash pits, or the keeping of pigs or animal waste, be subjected to immediate abatement measures. In order to enforce these provisions, the guardians were to be granted extended powers and were also to assume responsibility for managing any subsequent cholera outbreak. Importantly, this

¹⁶⁶ *Ibid.*, 5 Sept. 1866.

¹⁶⁷ *B.N.L.*, 2 Nov. 1866.

¹⁶⁸ *B.N.L.*, 12 Sept. 1866.

arrangement enabled intervention even where responsibilities overlapped with those of the corporation.¹⁶⁹

In practice however, the guardians clearly preferred negotiation over carrying out remedial measures or enforcement, and thus, resolved to send a deputation to the corporation. Their hesitation exposed the continued ambiguity of institutional boundaries in mid-nineteenth-century Belfast and suggested that the guardians remained reluctant to openly challenge municipal authority. A heated dispute consequently erupted regarding responsibility for the Blackstaff nuisance, which revealed competing interpretations of its causes and the appropriate means of remedy. Some guardians emphasised the immediate sanitary dangers, particularly flooding in working-class districts and the accumulation of waste, while others, more sympathetic to the corporation, framed the issue as requiring long-term infrastructural reform, pointing to a proposed sewerage scheme that would ultimately divert waste and restore the river. Critics, however, rejected this approach as an unacceptable delay in the face of urgent risk.¹⁷⁰ It was a debate that would therefore remain unresolved in the long term, although the guardians were most likely to have been greatly relieved in November, when Dr Browne confirmed that responsibility for nuisance removal would remain with the corporation, while the provisions of the Diseases Prevention Act would be carried out and enforced by the guardians.¹⁷¹

Beyond these bureaucratic disputes the most pressing sanitary issue confronting those in charge of public health responses in Belfast remained the absence of a comprehensive system of sewerage within the town and its surrounding areas. The existing infrastructure was ineffectual and largely confined to main thoroughfares, rendering it inadequate for a

¹⁶⁹ *Ibid.*

¹⁷⁰ *B.N.L.*, 12 Sept. 1866.

¹⁷¹ *B.N.L.*, 2 Nov. 1866.

rapidly expanding industrial town. The County Antrim and Belfast Borough Act of 1865 sought to address this by seeking to grant the corporation exclusive control over public health administration while at the same time enabling the development of a complete and efficient sewerage system by constructing new sewers in addition to the existing infrastructure.¹⁷² During 1866, James Montgomery, the borough surveyor, collaborated with the celebrated London engineer Joseph Bazalgette to design a scheme for the drainage of the borough.¹⁷³ The plan had three major objectives: to construct intercepting sewers to remove sewage from the River Lagan and other waterways; to prevent the pollution of the shore of Belfast Lough, the harbour and docks; and to collect storm water from the Blackstaff River and Pound Burn in regulating reservoirs.¹⁷⁴ However, the scheme largely ignored the urgent necessity of providing adequate sewerage within Belfast itself. Consequently, many of new buildings constructed in this period, although often provided with sewers by their owners under the supervision of Montgomery and his staff, continued to discharge effluent into unhygienic communal cesspools.¹⁷⁵ Despite the evident need for the installation of a modern sewerage system comparable to those constructed in other industrial towns and cities, the corporation's need to effect cost-cutting measures arising from its debt which by the end of 1866 stood at over £220,000 arguably hampered the full implementation of the system.¹⁷⁶ As a result, it would be over

¹⁷² 'County Antrim and Belfast Borough Act' (1865) (28 and 29 Vict c.183).

¹⁷³ Connolly, 'Belfast: The rise and fall of a civic culture,' p. 46. See also, the examination of James Montgomery in *Taxation of Towns Inquiry Commission* (1877), pp. 58-61; also, Appendix 9 and Montgomery's report, 13 Feb. 1875 in the same, pp. 210-11. It was estimated in 1866 that the scheme would cost some £160,000. By 1875 however, this had risen to a figure in excess of £200,000.

¹⁷⁴ *Taxation of Towns Inquiry Commission* (1877), Appendix 9 and Montgomery's report, 13 Feb. 1875, pp. 210-11.

¹⁷⁵ Houses which were over 100 feet from a main sewer were only connected where practicable and therefore the construction of cesspools was always recommended. See, examination of Montgomery in *Taxation of Towns Inquiry Commission* (1877), p. 60.

¹⁷⁶ £228,471, 1, 2. See, *Returns of local taxation in Ireland, 1866-68*, p. 15, 1867, H.C. (4081), lviii, 761.

twenty years before a revised sewerage programme was finally adopted in 1887, it was completed some seven years later.¹⁷⁷

Notwithstanding the limited progress made in regard to sanitation, cases and deaths from cholera in Belfast throughout the remainder of 1866 continued to occur only infrequently. On 12 September, Patrick Wilson, from Bow Street, off the Falls Road, died after being diagnosed with Asiatic cholera. Yet it was not only the disease that contributed to the fatal outcome. In a revealing example of how the fear that accompanied cholera and the lingering distrust of the medical community among some of the towns poor, Wilson refused to be sent to hospital, while his friends drove the inspector who had come to collect him unceremoniously from the house.¹⁷⁸ Nevertheless, it appears that little animosity was shown to those involved, and Hugh Norwood, who visited after the death, ensured that the house was fumigated in line with procedure.¹⁷⁹

Despite the directives issued by the Poor Law Commissioners the Belfast Sanitary Committee continued to function as the principal body responsible for public health issues. By November 1866, the corporation was preparing to introduce new powers intended to prevent the occupation of overcrowded and unfit dwellings, particularly those lacking rear accommodation. Samuel Browne welcomed the proposals and noted that recent signs of cholera's spread had prompted the sanitary committee to resume its daily meetings.¹⁸⁰ At the same time, however, the corporation sought to distinguish the committee's functions from those exercised by the guardians and dispensary. During a special meeting held on 9 November the existing sanitary committee was therefore

¹⁷⁷ William Luckin, 'Pollution in the city,' in Martin Dauntton (ed.), *The Cambridge urban history of Britain, Volume III, 1840-1950* (Cambridge University Press, Cambridge, 2000), pp. 214-5.

¹⁷⁸ *B.N.L.*, 13 Sept. 1866.

¹⁷⁹ *Ibid.*

¹⁸⁰ *B.N.L.*, 2 Nov. 1866.

discharged and was replaced with a new nuisance committee conferred with powers to abate nuisances and deal with the town's sewers.¹⁸¹ Browne observed that one of its most pressing challenges would be addressing the condition of the approximately 4,000 houses in Belfast that lacked rear accommodation.¹⁸² While incidences of cholera remained remarkably low (only 26 cases had been officially reported between 8 August and the time of the meeting) it was within houses such as these that the disease had been most prevalent.¹⁸³ Browne remarked that almost every recorded case had occurred in localities that were 'in the worst sanitary condition,' and as an example of the deprivation he had witnessed, he described one unnamed street in which cholera had appeared and declared that few of the gentlemen present would be prepared to house any animal in it.¹⁸⁴

By mid-November, Belfast's civic authorities continued to argue about accountability for applying cholera regulations and reporting morbidity and mortality statistics. At a meeting of the guardians, Thomas Gaffikin complained that the corporation's sanitary committee had, at times, experienced difficulty in obtaining reports from the dispensary's medical officers in regard to cholera cases.¹⁸⁵ Samuel Tierney responded that the dispensary committee constituted the only sanitary committee in the town and that it was the only body to which the medical officers should report. The corporation, he added, 'should concentrate on the removal of nuisances and not interfere with the work of the guardians.'¹⁸⁶ In regard to the number of cases of cholera and the treatment of sufferers, Tierney also defended the dispensary committee maintaining that while he believed many

¹⁸¹ *Ibid.*, 10 Nov. 1866.

¹⁸² *Ibid.*

¹⁸³ Browne, however, was convinced that there had been more.

¹⁸⁴ *B.N.L.*, 10 Nov. 1866.

¹⁸⁵ *Ibid.*, 14 Nov. 1866.

¹⁸⁶ *Ibid.* A solution was finally found after the attendees agreed to adopt a resolution permitting reports to be sent to the corporation.

of the cases to be ordinary diarrhoea, the dispensary's physicians had dutifully attended to all occurrences of sickness, regardless of their nature.¹⁸⁷

The clear and intense rivalry which existed between the corporation and the guardians was also exposed by a further argument regarding overall responsibility for disinfecting houses which arose at the same meeting. John Hamill, acting as the voice of reason, argued that the guardians and corporation should be collaborating rather than fighting. Chair of the meeting, David Taylor, attempted to clarify the corporation's position, observing that 'The Town Council do not want to attend medical cases...they want to prevent the spread of cholera by putting the houses in a better sanitary condition.'¹⁸⁸ Others accused the guardian's sanitary committee of failing to fulfil its duties because it had made no effort to disinfect houses. Charles Ward, attempted to end the disagreement remarking firmly that he did not care who carried out the sanitary regulations as long as they were carried out.¹⁸⁹

These administrative disputes were further compounded by disagreements over cholera's existence which split opinions among civic officials. Councillor Tierney, steadfastly refused to accept the possibility that the disease was present in Belfast, maintaining that all the reported cases had been English cholera, caused by, 'bad potatoes and bad food.'¹⁹⁰ Taylor, citing Dr Reid's report as evidence, countered that there had been at least two cases of Asiatic cholera, and noted that both victims had died only a short time after the onset of symptoms. Tierney remained unconvinced, claiming that other respected medical men in the town had declared there was no cholera.¹⁹¹ By the end of November,

¹⁸⁷ *B.N.L.*, 14 Nov. 1866.

¹⁸⁸ *Ibid.*

¹⁸⁹ *B.N.L.*, 14 Nov. 1866.

¹⁹⁰ *Ibid.*

¹⁹¹ *B.N.L.*, 14 Nov. 1866.

conflicting reports regarding cholera's prevalence continued to cause tension. Tierney, argued that medical officers at the dispensaries and workhouse were laughing at the reports coming from the corporation's sanitary committee, which included one woman with dropsy who was brought to the hospital as she was thought to be suffering from cholera, and a young boy who had eaten a pound of crab apples on an empty stomach. The boy, Tierney observed sarcastically, 'had diarrhoea and it was no wonder.'¹⁹² Thomas Gaffikin likewise continued to criticise the accuracy of the dispensary medical officers' returns, attributing several alleged errors to the misdiagnosis of cases by a junior medical officer attached to the Barrack Street dispensary.¹⁹³ Within the corporation however, opinion was less divided. Although Dr Browne, firmly believed that the majority of cases were a form of English cholera, he accepted that there had in fact been several cases of Asiatic cholera and maintained that the disease continued to present a genuine threat to public health.¹⁹⁴ Ultimately however a full-blown epidemic failed to materialise. Reid's' final report to the commissioners, reproduced below in Table 7.4., recorded only twenty-eight cases and fifteen deaths between August and November 1866, figures that were far exceeded by cases attributed to English cholera and diarrhoea.¹⁹⁵ In a later meeting of the corporation Browne would admit that he believed that there had been more than twenty-six cases and admitted he knew of more.¹⁹⁶ In 1868, his paper on the *On the Progress of Sanitary Inquiry in Belfast* submitted to the National Association for the Promotion of Social Science, Browne stated that there had in fact been seventy-three cases and thirty-three deaths (45.2 per cent mortality).¹⁹⁷

¹⁹² Ibid., 28 Nov. 1866.

¹⁹³ Ibid.

¹⁹⁴ *B.N.L.*, 3 Dec. 1866.

¹⁹⁵ See Table 7.4 below from Dr Reid's report to the commissioners, *B.N.L.*, 30 Jan. 1867.

¹⁹⁶ *B.N.L.*, 10 Nov. 1866.

¹⁹⁷ Samuel Browne, 'On the Progress of Sanitary Inquiry in Belfast', *Transactions of the National Association for the Promotion of Social Science* (London: Longmans, Green, Reader and Dyer, 1868), 480.

Within a few weeks, fears of another devastating epidemic had largely subsided, and the incoming mayor, David Taylor, praised the actions of his predecessor, who, he claimed, had met the initial threat with energy through the enforcement of stringent sanitary measures.¹⁹⁸ Yet, despite the heightened activity of the sanitary authorities during 1866, little had fundamentally changed in Belfast's sanitary infrastructure from the previous decade. It is therefore arguable that the city had, in reality, escaped a major epidemic largely through beneficial circumstance rather than through any decisive transformation of its public health system.

Assessing the Statistics for 1866

In common with previous outbreaks the morbidity and mortality statistics Belfast's 1866 cholera outbreak are far from straightforward. A close comparison of the cholera returns published in the *Belfast Newsletter* with the reports submitted by medical officers to the Belfast Sanitary Committee reveals a number of discrepancies.¹⁹⁹ While, the medical officers' returns differ only slightly from those compiled by Reid (Table 7.4), recording twenty-six cases and sixteen deaths, these figures almost certainly understate the true extent of the outbreak.²⁰⁰ Table 7.5 below however, seeks to address this problem by supplementing the official medical returns with the names of individuals identified as cholera victims in reports published by the *Belfast Newsletter*. When these sources are combined evidence emerges for at least forty-three cases of cholera in Belfast during the epidemic. Even this total however, cannot be regarded as definitive. The ultimate outcome of fourteen cases remains unknown, making it difficult to establish a reliable mortality

¹⁹⁸ *B.N.L.*, 3 Dec.1866.

¹⁹⁹ N.B. While cholera morbidity and mortality was also reproduced by the *Northern Whig* and *Banner of Ulster* as well as other publications, their statistics would have been gained from the same sources. Therefore, *The Belfast Newsletter* reports have been used here in order to keep continuity and with previous chapters of this thesis.

²⁰⁰ Minutes of the Belfast Sanitary Committee, p. 82. A copy of the original report is included in Appendix 4 of this thesis.

rate. Browne's 1868 figures, however, appear to be significantly more representative of the true scale of the outbreak. Nevertheless, these statistical differences reinforce the broader difficulties associated with nineteenth-century cholera statistics especially when civic and medical administrators appear to have been at loggerheads.

Uncertainty regarding the accuracy of official returns remained a source of controversy even after the epidemic had passed. At a meeting of the guardians in January 1867, Samuel Tierney dismissed the seven cholera cases reportedly treated in the workhouse as fabrications, claiming that 'the reports that went to the sanitary inspectors had been drawn up by a boy that was not qualified to give an opinion.'²⁰¹ Thomas Gaffikin, a hardened critic of the official returns throughout the duration of the outbreak likewise maintained that some of the reports supplied by the night officer were inaccurate and complained that exaggerated accounts of cholera had created unnecessary public alarm and adversely affected trade.²⁰² Despite these criticisms, the matter was quickly dropped, leaving many of the questions surrounding the true scale of Belfast's 1866 outbreak unresolved in official circles.

Table 7.4: Cholera and Diarrhoea Cases and Deaths in Belfast 1866.²⁰³

Months 1866	Asiatic Cholera		Diarrhoea\ English Cholera		Totals	
	Cases per month	Deaths per month	Cases per month	Deaths per month	Asiatic Cholera\ Diarrhoea	Deaths
Jan.	0	0	14	1	14	1
Feb.	0	0	11	1	11	1
Mar.	0	0	9	0	9	0
Apr.	0	0	10	1	10	1
May	0	0	11	0	11	0
June	0	0	8	0	8	0
July	0	0	14	0	14	0
Aug.	2	1	28	1	30	2
Sept.	0	0	20	2	20	2

²⁰¹ *B.N.L.*, 30 Jan. 1867.

²⁰² *Ibid.*

²⁰³ *B.N.L.*, 30 Jan 1867.

Oct.	10	7	18	0	28	7
Nov.	16	7	31	0	47	7
Dec.	0	0	22	0	22	0
Total	28	15	196	6	224	21

Compiled from Dr Reid's report to the commissioners in the *Belfast Newsletter*, 30 Jan. 1867.

Table 7.5: List of named Asiatic cholera victims recorded by Medical Officers and in the *Belfast Newsletter* 8 Aug. - 29 Nov. 1866

Date	Name	Residence	Recovered (+Comments)	Died (+Comments)
8 Aug. 1866	Thomas O'Neill	Hollywood Road		At home 9Aug.
11 Aug.	Edward Magowan	Hollywood Road		At home 11Aug.
11 Aug.	James Magowan	Hollywood Road	In hospital	
11 Aug.	James McDonnell	1 Torrens Row		At home 11 Aug.
17 Aug.	Margaret Sinclair	4 Hudsons Entry		In hospital
20 Aug.	Catherine McCool	104 Carrick Hill	Recovered	
20 Aug.	Mary Moorhead	144 Carrick Hill	Recovered	
30 Aug.	Eliza Jackson	19 Carrick Hill	Recovered	
11 Sept.	Patrick Wilson	9 Bow Street		In hospital 12 Sept.
9 Oct.	Rose McCullagh	9 Bells Lane		In hospital
14 Oct.	Peter Carty	14 Hudsons Entry		In hospital
18 Oct.	John Kerr	70 Cullingtree Road		In hospital 19 Oct.
26 Oct.	John Johnston	6 Cullingtree Road		In hospital 31 Oct.
2 Nov.	Joseph Hinds	Smithfield Court		3 Nov.
4 Nov.	Francis Hinds	Smithfield Court		In hospital 5 Nov.
4 Nov.	Mary Hinds	Smithfield Court		In hospital 5 Nov.
4 Nov.	John Madden	Shields Court		In hospital 5 Nov.
4 Nov.	William McQuade	22 Cullingtree Road		In hospital 6 Nov.
4 Nov.	Michael Campbell	25 Cullingtree Road	Under treatment	
10 Nov.	Mary Johnston	10 Norton Street		
10 Nov.	James McArtney	12 Norton Street		
11 Nov.	Catherine McKenna	30 Cinnamond Street	Reported better	
	Milligan	30 Cinnamond Street		Buried yesterday

	Milligan	30 Cinnamond Street		
	Mary Bell	Shields Court		
14 Nov.	Robert Campbell	12 Taylors Street		In hospital 14 Nov.
Continues Below				
16 Nov.	James McClure	4 Hope Street	Removed by friends to Ballymacarrett in a covered car	
20 Nov.	Sarah Ann Davidson	4 Malcolmson Street		
	Hugh McArtney	Killen Street		
	Ritchie Balie	Little Georges Street		
	Eleanor Ellis	10 Killen Street		
21 Nov.	Bella Carson	Letitia Street		
23 Nov.	James Maurice	Millfield		
	Jane (?) Ellis	10 Killen Street		
29 Nov.	Elizabeth Halfpenny	42 Little Edward Street	Under treatment at home	
	Thomas Buchannon	16 Valentine Street	Sent to hospital	
No Date	Patrick Harvey	?		In hospital
	Sarah ?ench (likely Trench)	Backship Street	Recovered	
	Mrs Clarke	William Street	Recovered	
	Patrick McLaughlin	Boyd's Court		Oct.10
	Mary Glass	Round Entry		
	John Culand	10 Kings Court		
	Robert Gibson			

Compiled from Minutes of the Sanitary Committee, p. 82 and from reports in *The Belfast Newsletter*. ‘?’ Denotes entries/part entries which are illegible.

Conclusion

Legislative changes had significantly expanded the powers available to both the corporation and the guardians by 1866. Yet, much as during the epidemic of 1854–55, neither body proved willing nor able to assume overall responsibility for the sanitary management of mid- to late-nineteenth-century Belfast. Instead, overlapping jurisdictions

and continuing disputes regarding responsibility frequently complicated public health administration. The corporation, in particular, remained constrained by the severe financial consequences of the Chancery Suit and was largely overwhelmed by the demands of the persistent problems of nuisance removal, waste disposal, and water provision. Although both institutions undertook extensive precautionary measures, many of the town's most serious sanitary deficiencies remained unresolved. In this respect, little had fundamentally changed since the previous decade, and the environmental conditions associated with epidemic disease persisted or had worsened across many of Belfast's poorest districts.

The approach of cholera did not initially provoke the same degree of alarm that had characterised previous epidemics. This relative confidence was not unique to Belfast, it was also evident throughout Ireland, and reflected, at least in part, a growing faith in the abilities of the national system of medical relief, the dispensaries as well as the wider machinery of public health administration. Nevertheless, the Belfast outbreak revealed continuing weaknesses within that system. Disputes concerning administrative responsibility, diagnostic uncertainty and the reliability of official statistics all persisted throughout the epidemic, and in some cases, continued even after the immediate threat had passed.

Although the 1866 epidemic, as both a medical and social crisis, had comparatively little demographic impact in Belfast, this cannot be altogether attributed to any substantial improvement in the town's sanitary condition. Indeed, the evidence suggests that cholera, although statistically impossible to quantify with complete precision, remained highly lethal among those affected, while the neighbourhoods in which cases occurred continued to be characterised by overcrowding, inadequate drainage, and poor environmental conditions. Belfast's escape from a major epidemic was therefore less a testament to the

effectiveness of its sanitary reform than a consequence of cholera's often unpredictable behaviour, combined with a considerable degree of fortuitous circumstances, rather than being solely attributable to the success of any sustained or effective preventive measures.

Chapter Eight

Postscript and conclusion

Postscript: The Aftermath of cholera and the lead up to the introduction of the Public Health Act (Ireland) 1878

The years after cholera had ceased to be a major epidemic concern in the industrialised centres of Britain and Ireland were characterised by intensified scientific enquiry and renewed efforts aimed towards gaining a better understanding of the causes and transmission of epidemic disease. Although sanitary reform had become increasingly accepted as an effective means of reducing mortality particularly in urban towns and cities, considerable uncertainty still surrounded the precise nature of infection and contagion. Debates concerning polluted water, environmental conditions and epidemic dissemination therefore continued to shape both medical thought and public health policy throughout the latter half of the nineteenth century.

This chapter examines the aftermath of cholera through three interrelated themes: the continuing scientific and moral debates surrounding epidemic disease after 1866; the development of public health administration in late nineteenth-century Belfast; and the circumstances leading to the introduction of Ireland's first comprehensive Public Health Act in 1878. It concludes with a brief synthesis of the principal arguments advanced throughout the preceding chapters.

Competing theories: Miasma, Contagion and Germs the Continuing Debate

During the later nineteenth century medical opinion remained divided between the two traditional doctrines of contagion and anti-contagion. In practical terms, however, it was

anti-contagionist thinking, particularly its emphasis upon environmental and sanitary reform, which exercised the greatest influence over public health policy. Ironically, although many of its assumptions regarding disease causation were ultimately incorrect, sanitary intervention, nevertheless contributed significantly to declining mortality rates in many urban centres.¹

Owing largely to a series of international conferences, held from 1854 onwards, there was a growing acceptance of the existence of a specific ‘cholera poison.’ Although germ theory had not yet become a fully recognised or understood philosophy, scientists and medical men were increasingly describing cholera as a toxin, thereby lending greater credibility to contagionist arguments.² A raft of international publications was published throughout the period, each carrying competing explanations for the disease’s, propagation and treatment.³ Dr M. Crocq, from Brussels, for example, following experimental research conducted on dogs, argued unequivocally that cholera was highly contagious and spread through the evacuations of infected patients.⁴ Responding to a paper delivered by Dr M. Shrimpton at the International Medical Congress in Paris in 1867, which contested the communicability of cholera, Crocq cited a case in which a

¹ Ibid., pp. 229-31. For general histories of epidemic disease see Peter Baldwin, *Contagion and the state in Europe, 1830-1930* (Cambridge University Press, Cambridge, 1999); Patrice Bourdelais, *Epidemics laid low: A history of what happened in rich countries* (Johns Hopkins University Press, Maryland, 2006); Hays, *Epidemics and pandemics*; Terence Ranger and Paul Slack, *Epidemics and ideas: Essays on the historical perception of pestilence* (Cambridge University Press, Cambridge, 1992), and for cholera see, Hamlin, *Cholera: The Biography*.

² For more on the Conferences and the ongoing debates regarding contagion and anti-contagion see, Howard-Jones, *The scientific background of the International Sanitary Conferences*, pp. 1-108 and Valeska Huber, ‘The unification of the globe by disease, pp. 453-76. For Ireland see, Robins, *The miasma*, pp. 207-8 and 225-9.

³ See for example, Cummins, ‘Remarks on cholera,’ pp. 42-57; E. Hart, ‘Waterborne cholera’ *DQJMS*, Vol. 96 (5) (1893), pp. 421-40; John MacPherson, *Epidemic cholera: Its mission and mystery, haunts and havocs, pathology and treatment: With remarks on the question of contagion, the influence of fear, and hurried and delayed interments* (Carleton, New York, 1866); Pacini, *Osservazioni Microscopiche e Deduzioni Patologiche sul Cholera Asiatico*; Max von Pettenkofer, *Cholera: How to prevent and resist it* (Baillière, Tindall, and Cox, London, 1883); Rea, ‘Contagion of Cholera,’ pp. 355-9; R. Wilkins, ‘Thoughts on the etiology of cholera’ *Madras Quarterly Journal of Medical Science*, Vol. 10 (1866), pp. 321-37.

⁴ *The British Medical Journal (B.M.J.)*, 12 Jan. 1867.

physician, after closely examining a patient's stools, contracted the disease himself and subsequently died.⁵

In Ireland, Sir Dominic Corrigan remained deeply sceptical of contagionist interpretations. Although not entirely dismissing the possibility of person-to-person transmission, Corrigan firmly rejected strict contagion theory and republished his *Cholera Map of Ireland* in 1866 in support of his position.⁶ He feared that belief in contagion encouraged panic and flight rather than rational sanitary action, observing that 'the fear of contagion demoralises the mind and extinguishes the best affections of the heart.'⁷ Other Irish physicians, including the renowned Dr Robert Graves, on the other hand, remained convinced that cholera and fever were directly communicable between individuals, while some doctors, in the absence of conclusive scientific information, preferred to remain uncommitted to either side.⁸ Giving evidence before a parliamentary committee on Dublin hospitals as early as 1854 for example, Dr William Stokes, remarked that; 'Too much has been said as to the connection of epidemic diseases, and what is termed the sanitary state of the people and that there are causes still hidden from us which regulate the invasion of epidemics.'⁹ Sir William Wilde, similarly acknowledged the uncertainty surrounding epidemic disease, although his observations tended to err towards contagionist interpretations. He noted that; 'It is very difficult to define any law

⁵ *B.M.J.*, 7 Sept. 1867. For Shrimpton's paper see Dr M. Shrimpton, 'Choléra, son siège, sa nature-contagion' in Masson, V (ed.), *Congrès Médical International de Paris, août 1867* (Mason, Paris, 1868), pp. 549-553. For Crocq's response see the discussion on pp. 561-2 after the following paper, Dr G. Bonnet, 'De la prophylaxie du choléra morbus' in Masson, V (ed.), *Congrès Médical International de Paris, août 1867* (Mason, Paris, 1868), pp. 554-61.

⁶ Corrigan, *The cholera map of Ireland*, p. 3 and p. 6.

⁷ *Ibid.*, p. 14.

⁸ Corrigan, *The Cholera Map of Ireland*; Graves, 'On the progress of Asiatic cholera' *DQMS*, Vol. vi (1848), pp. 289-316 and Vol. vii (1849), pp. 1-38. For Graves' opinion on water and the spread of cholera see vol. ii, pp. 12-13.

⁹ *Report from the Select Committee on Dublin Hospitals*, p.175, H.C. 1854 (338) xii, 1. Hereafter, *Report from the Select Committee on Dublin Hospitals* (1854).

or give any general opinion on the subject of epidemics. In the case of cholera for instance, you cannot tell why it comes, but it generally follows the lines of human intercourse.’¹⁰

International sanitary conferences also reflected these continuing uncertainties. As Christopher Hamlin has noted their conclusions also ‘lacked teeth.’¹¹ The International Sanitary Conference held at Constantinople in 1866, for example, was particularly influenced by the theories of the German scientist Max von Pettenkofer, who did not deny the existence of microbes but did reject the idea that cholera spread primarily through contaminated drinking water.¹² Instead, von Pettenkoffer advocated telluric theory, which held a middle ground between the principles of contagionists and anti-contagionists, and proposed that the cholera ‘poison’ was an emanation from the earth generated from a localised interaction between a specific pathogen, the soil, and the groundwater.¹³

Despite the fact that two publications, presented by the Italian microscopist Filippo Pacini and the British epidemiologist John Snow, both appeared to provide a comprehensive understanding of cholera, their conclusions were largely ignored in favour of von Pettenkoffer’s doctrine.¹⁴ To facilitate its deliberations, the conference formed special committees to examine the origin, endemicity, transmissibility, and propagation of cholera, along with specific preventive measures, general hygiene practices, actions required in the Orient, quarantine arrangements, and the progression of the 1865 epidemic.¹⁵ Although delegates accepted that cholera could be spread through the

¹⁰ *Report from the Select Committee on Dublin Hospitals* (1854), p. 186.

¹¹ Hamlin, *Cholera: The biography*, p. 195. For more on the conferences see also: *Report to the International Sanitary Conference* (1867); Baldwin, *Contagion and the state in Europe*, pp. 123-233; Howard-Jones, *The scientific background of the International Sanitary Conferences*, pp. 1-108; Huber, ‘The unification of the globe by disease,’ pp. 453-476.

¹² Howard-Jones, *The scientific background of the International Sanitary Conferences*, pp. 23-4.

¹³ This was a theory which von Pettenkoffer would present repeatedly in a period covering almost 40 years. See. Alfred S. Evans, ‘Pettenkofer revisited: the life and contributions of Max von Pettenkofer (1818-1901)’ *The Yale Journal of Biology and Medicine*, vol. 46(3) (1973), pp. 161-76.

¹⁴ Howard Jones, *The scientific background of the International Sanitary Conferences*, pp. 23-34.

¹⁵ *Ibid.*, p. 31.

evacuations of infected patients and acknowledged the role of contaminated water and food in transmitting the disease, they continued to maintain that atmospheric and local environmental influences played a decisive role in epidemic development. They concluded therefore, that scientific knowledge could do no more than formulate hypotheses regarding any specific procreant.¹⁶ As the delegates observed:

Whether the generative principle of cholera be called a contagion, a germ, or a miasm. It has always escaped all investigations, it has never been possible to isolate it, and it is known only by its effects. In this respect, it does not differ from other morbid principles. All that is known is that it regenerates itself in man in virtue of the morbid process that it has occasioned.¹⁷

Eight years later, however, attitudes towards contagion had begun to shift significantly, and the 1874 conference concluded that the introduction of a single cholera patient into a locality could give rise to an epidemic.¹⁸ Although delegates accepted that individuals suffering from diarrhoea could transmit cholera and acknowledged the importance of water in its dissemination, they nevertheless regarded human movement as the principal aggravating factor in the spread of the disease. The conference therefore voted unanimously in favour of the following resolution:

The conference accepts the transmissibility of cholera by man coming from an infected environment; it considers man as able to be the specific cause only outside the influence of the infected locality; further, it regards him as the propagator of cholera when he comes from a place where the germ of the disease already exists.¹⁹

The conference's delegates also unanimously decided that 'cholera could not be propagated by the atmosphere no matter what its condition might be.'²⁰ While this

¹⁶ *Report to the International Sanitary Conference* (1867), p. 95.

¹⁷ *Ibid.*, p. 94.

¹⁸ Howard-Jones, *The scientific background of the International Sanitary Conferences*, p. 38; Robins, *The miasma*, p. 217.

¹⁹ Howard-Jones, *The scientific background of the International Sanitary Conferences*, p. 38.

²⁰ Robins, *The miasma*, p. 218.

appeared to mark a decisive rejection of miasma theory, atmospheric conditions were still regarded as the principal vehicle for the disease's generative agent.²¹ Although scientific consensus remained elusive, the period nevertheless witnessed a gradual convergence between competing explanatory frameworks, even if a single causal principle had yet to be established.

The sanitary conferences would continue well after Robert Koch's re-discovery of the cholera vibrio in 1884.²² However, even then, germ theory continued to court controversy among delegates. At the 1892 Vienna conference, the editor of a German medical journal noted that although the English Cholera Commission had also found the bacillus they had 'obstinately denied its significance.'²³ Yet, as Howard-Jones points out, there was no unanimous rejection of germ theory in England.²⁴ In Ireland, the *Dublin Journal of Medical Science* printed a lengthy article at the end of 1893 by the editor of the *British Medical Journal* which conclusively accepted that cholera could only be diffused by water contaminated by the cholera bacillus.²⁵ The sanitary conferences, however, were the main international medium by which the waterborne theory of cholera gained universal acceptance and they were pivotal in shaping future worldwide public health responses. Significantly, England, despite being the centre of most resistance to germ theory, was the first country to rid itself of epidemic cholera by continuing to ensure the provision of pure water supplies and the sanitary disposal of human waste.²⁶ This development had important implications for Ireland, where public health responses in this

²¹ Howard-Jones, *The scientific background of the International Sanitary Conferences*, p. 39.

²² Koch's discovery had been anticipated 30 years before by Filippo Pacini of Florence. See, Pacini, *Osservazioni microscopiche e deduzioni patologiche sul cholera asiatico* and Howard-Jones, 'Robert Koch and the cholera vibrio,' p. 380.

²³ *Deutsche Medizinische Wochenschrift*, vol. 11 (1885), p. 347, quoted in Howard-Jones, *The scientific background of the International Sanitary Conferences*, p. 58.

²⁴ *Ibid.*

²⁵ Ernest Hart, 'Waterborne cholera' *DQJMS*, vol. 96(5) (1893), pp. 421-40. See also, Robins, *The miasma*, p. 228.

²⁶ Howard-Jones, *The scientific background of the International Sanitary Conferences*, p. 100.

period were closely shaped by English legislative and administrative models.²⁷ However, while the gradual convergence of international medical opinion provided important wider context for late nineteenth-century public health reforms, developments in Ireland were shaped primarily by domestic administrative reorganisation rather than by direct scientific consensus.

Public Health in Ireland After 1870

The period after 1870 was critical to the development of modern Ireland. Social and economic change had accelerated in the aftermath of the famine and continued to intensify in the succeeding decades.²⁸ In 1872, the Local Government Board for Ireland was established. The board replaced Ireland's Poor Law Commissioners, who were regarded as an unsuitable agency for the management of the expanding range of sanitary services that had developed after 1848.²⁹ It assumed central responsibility for a wide range of local services, although, in many rural areas and small towns, boards of guardians continued to remain in charge of sanitary matters.³⁰ The system evolved under Ireland's first Public Health Act in 1874, one of the first measures enacted following the establishment of the Local Government Board.³¹ The act divided the country into rural and urban sanitary districts and conferred wide-ranging powers predominantly aimed at disease prevention.³² However, it did not create a wholly new administrative structure; instead, it largely re-designated existing bodies, and gave them new names.³³ Guardians and commissioners

²⁷ Robins, *The miasma*, p. 230.

²⁸ See, Beckett, and Moody (eds), *Ulster since 1800*; Beckett, *The making of modern Ireland*; Mary Daly, *The social and economic history of Ireland since 1800* (The Educational Company of Ireland Limited, Dublin 1981); Kennedy and Ollerenshaw (eds), *An Economic History of Ulster*.

²⁹ *Ibid.*, p. 23; Richard Haslam, 'The origins of Irish local government' in Mark Callanan and Justin Keogan, *Local government in Ireland: Inside out* (Institute of Public Administration, Dublin, 2003), p. 20.

³⁰ Robins, *The miasma*, p. 230.

³¹ Haslam, 'The origins of Irish local government,' p. 20.

³² Robins, *The miasma*, p. 231.

³³ Haslam, 'The origins of Irish local government,' p. 20.

of towns with populations over 6,000, for example became Urban Sanitary Authorities, however, no new powers were conferred until the Public Health (Ireland) Act of 1878 established a comprehensive and updated code of sanitary law.³⁴ Despite its introduction, Irish public health legislation in this period, as Sean Connolly has argued, still lagged significantly behind the rest of the United Kingdom.³⁵ The first English Public Health Act of 1848, for example, had granted discretionary powers to appoint Medical Officers of Health, whereas in Ireland similar appointments came significantly later. Dublin's first medical officer was not appointed until 1864, and in Belfast the local authority waited until the Acts of 1874 and 1878 compelled it to assume the responsibilities of an urban sanitary authority and in 1880 appointed seventy-one-year-old Samuel Browne as the first Medical Superintendent of Health.³⁶ Browne died while still in office ten years later.³⁷

The Public Health (Ireland) Act of 1878, which consolidated and amended all earlier statutes and defined the framework for public health administration for the remainder of the century, was the first piece of legislation to have any significant impact on health in nineteenth-century Ireland.³⁸ The Act made the provisions of the 1874 Act effectively compulsory and provided a more coherent statutory basis for intervention. Local authorities were granted a range of extended powers, including the ability to destroy unsound food, supervise slaughterhouses (a major source of sanitary problems), and to isolate those suffering from certain identifiable diseases.³⁹ The Act was primarily

³⁴ Ibid.

³⁵ Connolly, 'The rise and fall of a civic culture,' pp. 44-5.

³⁶ Ibid., pp. 44-5; Public Health (Ireland) Act (1874) (37 and 38 Vict., c. 93); (1878) (41 and 42 Vict., c. 52).

³⁷ Maguire, *Belfast*, p. 77.

³⁸ 'Public Health (Ireland) Act' (1878) (41 and 42 Vict., c. 52). For more on the workings of the Act see Haslam, 'The origins of Irish local Government,' pp. 14-40. See also; Marsh, *The effect of the 1918-19 influenza pandemic on Ulster*, p. 31; John Byrne Power, 'The powers and duties of Sanitary Inspectors' *DQJMS*, vol. 96(1) (1893), 96 pp. 44-58.

³⁹ Marsh, *The effect of the 1918-19 influenza pandemic on Ulster* p. 31 and Barrington, *Health, medicine and politics*, p. 12.

designed to secure healthier urban environments, particularly in Ireland's rapidly expanding towns. It also established clearer procedures for abating sanitary issues throughout the country. Sanitary authorities were made responsible for water supplies, sewage disposal and refuse collection, as well as the regular inspections of nuisances and in terms of combatting epidemic or communicable disease, the act also permitted them to build or provide hospital accommodation beyond that which had been afforded under the Poor Law.⁴⁰

In the succeeding years sanitary legislation in Ireland expanded considerably. Among the most important measures was the 'Infectious Diseases (Notification) Act' (1889), while the development of public health provision was further enhanced by the 'Infectious Diseases (Prevention) Act' (1890) and the 'Public Health Amendment Act' (1890).⁴¹ Collectively, these statutes established more regulated responses to infectious disease and enabled authorities to implement preventive measures swiftly by allowing doctors and relatives to notify the presence of infectious illness and by introducing updated powers for disinfection, hospitalisation of patients, and the prompt burial of the dead.⁴²

Public Health Developments in Late-Nineteenth Century Belfast.

The effects of these wider legislative and administrative developments were particularly evident in Belfast during the closing decades of the nineteenth century. As David Owen has observed, 'the last thirty years of the nineteenth century were distinguished by remarkable activity on behalf of the three principal bodies responsible for the public weal - the Town Corporation, the Harbour Board, and the Water Board.'⁴³ While starvation

⁴⁰ Blaney, *Belfast: 100 years of public health*, p. 35.

⁴¹ 'Infectious Diseases (Notification) Act' 1889 (52 and 53 Vict., c. 72); 'Infectious Diseases (Prevention) Act' 1890 (53 and 54 Vict., c. 34); 'Public Health Amendment Act' 1890 (53 and 54 Vict., c. 59).

⁴² Blaney, *Belfast: 100 Years of public health*, p. 35.

⁴³ Owen, *A history of Belfast*, p. 285.

and rural depopulation had dramatically reduced the numbers and social significance of the agricultural labourers and cottiers who had formed the largest group in pre-Famine Irish society, industrialisation by 1870 had increased opportunities within Belfast's expanding urban environment.⁴⁴ Following the opening of the Harland and Wolff shipyard in 1861 employment opportunities improved and once again Belfast's labouring population expanded rapidly. Increasingly populated by migrants from rural Ireland and parts of the United Kingdom the town grew from approximately 121,000 inhabitants in 1861 to over 208,000 by 1881, a rate in excess of seventy per cent.⁴⁵ By the turn of the century Belfast's population had risen to approximately 350,000, yet as few as twenty per cent of its residents had been born in the town.⁴⁶

In the same period the number of homes in Belfast quadrupled as streets of terraced 'kitchen-and-parlour' houses were built to accommodate the workers from the mills, factories, and shipyards.⁴⁷ This rapid pace of house construction also contributed to a marked reduction in overcrowding which had previously been a defining feature of the accommodation occupied by the labouring poor. By 1871, the average number of people per household was 6.3 and by the 1890s this figure was further reduced to just 4.8.⁴⁸ Boosted largely by the pace of building schemes, the borough's valuation had also increased by almost £230,000 to £508,670 in the fifteen years up to 1877.⁴⁹ However, some of this housing stock, which had been constructed by the town's mill owners, was of such a poor standard that they were often little better than the slums common in the

⁴⁴ Myrtle Hill, 'Emancipation, famine and religion: Ireland under the Union, 1815-1870,' in Myrtle Hill and John Lynch (with contributions by Fidelma Maguire), 'Movements for political and social reform, 1870-1914,' http://multitext.ucc.ie/d/Ireland_politics_and_administration_1815ndash1870 (08/12/2011).

⁴⁵ See, Census of Ireland (1881), p. 141.

⁴⁶ Maguire, *Belfast*, p. 70.

⁴⁷ Maguire, *Belfast*, p. 71; Royle, '*Clanging Belfast*,' p. 28.

⁴⁸ Blaney, *Belfast: 100 years of public health*, p. 19.

⁴⁹ *Taxation of Towns Inquiry Commission* (1877), p. 1.

preceding decades.⁵⁰ From 1878 however, stricter building regulations discouraged employer-led housing provision, but the standards enforced considerably benefitted Belfast's residents as they prevented the proliferation of cellar dwellings and back-to-backs that characterised other rapidly industrialising areas.⁵¹

After 1873, the Belfast Corporation also acquired additional powers under a series of late-nineteenth century statutes which gave them control of the Gas Light Company and Urban planning and continued borough wide improvement.⁵² This facilitated large-scale urban development, including the demolition of the narrow and notoriously unhygienic Hercules Street, which had formerly housed a large number of butchers' shops, to make way for the construction of Royal Avenue.⁵³ Butchery was thereafter largely confined to a modern and efficiently regulated slaughterhouse on McAuley Street, based on a Parisian abattoir visited by corporation officials in 1869.⁵⁴ Administrative structures were similarly reshaped under the authority of the Local Government Board. The staff of sanitary officers was reorganised into a formal hierarchy of consulting and executive sanitary officers, supported by nine sanitary officers and six sub-sanitary officers. Samuel Browne, acting as consulting officer, advised and co-operated with the executive, attended meetings of the sanitary committee and produced weekly reports on public health.⁵⁵ He also prepared monthly returns on zymotic disease morbidity and mortality as well as a quarterly summary of the town's health. Sanitary officers, in turn, submitted

⁵⁰ Maguire, *Belfast*, p. 70.

⁵¹ Maguire, *Belfast*, p. 70 and 72, See also P.G. Clery, *Spatial expansion and urban ecological change in Belfast with special reference to the role of local transportation* (Unpublished PhD Thesis, Queen's University Belfast, 1979), pp. 285-339.

⁵² Owen, *A history of Belfast*, p. 287.

⁵³ Completed between 1880 and 81, the scheme required the rehousing of some 4,000 people. See, Patton 'Central Belfast: An historical gazetteer,' p. 282; Marsh, *The effect of the 1918-19 influenza pandemic on Ulster*, p. 31; Barrington, *Health, medicine and politics*, p. 12.

⁵⁴ Owen, *A history of Belfast*, p. 287.

⁵⁵ See Minute Book of the Belfast Sanitary Committee 7 Feb. 1865 - 13 Nov. 1873.

daily reports on infectious disease and reported nuisances which they had inspected directly to the executive officer.⁵⁶

While the methods for monitoring the condition of Belfast had changed little from the mid-nineteenth century, the marked increase in staff numbers and the continuation of daily inspections indicates how important constant sanitary vigilance had become in the town. Yet, there were still many areas of Belfast where sanitary conditions had barely improved. Browne, was clearly anxious to effect significant upgrades and later enforced 'The Artisans and Labourers Dwellings Improvement Act (1875).'⁵⁷ Its provisions, implemented on relatively small scale in an area between Hercules Street and Smithfield, essentially allowed him to conduct an experiment aimed at providing the corporation with a sense of how the legislation would work in practice.⁵⁸ Commenting on the proposal, Browne stated that he hoped that the statute's regulations would later extend to other similarly unhealthy areas and that great improvements would be effected as a result.⁵⁹ However, the scheme did not progress on a larger scale until a small slum clearance scheme began in 1917.⁶⁰

Towards the end of the century, Belfast still experienced many of the problems of the preceding decades. Few houses had water closets, and as refuse continued to be deposited in ashpits, middens and communal privies, the removal of the accumulated waste remained a serious sanitary challenge. Thousands of houses still lacked rear accommodation, meaning that refuse often had to be carried through homes and into the

⁵⁶ Ibid.

⁵⁷ (1875) (38 and 39 Vict., c. 63).

⁵⁸ The areas covered under the scheme comprised those of Smithfield Court- Smithfield Place, Ritchies Place and Hudson's Court and Entry. The rear of Hercules Street was also included alongside, the rear of Barry Street and Torren's Row. All of these streets had been sights of cholera fever and other infectious illness at various points during the century. See, Statement of Dr Samuel Browne in *Taxation of Towns Inquiry Commission* (1877), p. 210.

⁵⁹ *Taxation of Towns Inquiry Commission* (1877), p. 209.

⁶⁰ Connolly, 'The rise and fall of a civic culture,' p. 44.

street to await collection.⁶¹ Evidence given to a public health enquiry in 1896 by the assistant town surveyor confirms that public officials were aware that sanitary conditions in Belfast were far from satisfactory. One site on the Shore Road, he observed, was, ‘an enormous dunghill,’ composed of ‘horse manure, cow manure, human excrement; everything of the most abominable character.’ His comments succinctly highlight the continued inadequacy of sanitary provision, particularly in districts beyond the town’s principal thoroughfares. To visit the area in question, he added curtly, ‘you would have to go on stilts.’⁶²

Although cholera had disappeared as a recurrent epidemic threat after 1878, intermittent outbreaks of other diseases linked to Belfast’s environmental conditions continued to be problematic for the town’s civic bodies. In 1898 for example, an epidemic of typhoid, largely attributed to the consumption of shellfish gathered from the polluted shores of Belfast Lough, resulted in some 6,500 cases and 662 deaths.⁶³ Taken together, such evidence might suggest minimal sanitary improvement had been effected in inner Belfast or in the protection of its inhabitants from the almost constant scourge of endemic and epidemic disease. However, this interpretation requires qualification. In practice, improvements in public health provision advanced slowly, arguably due to the drawn-out evolution of administrative structures, the increasing centralisation of sanitary authority, and the reordering of the bodies responsible for public health. This was by no means unique to Belfast; indeed, the same problems were common throughout Ireland. Nevertheless, the legacy of previous decades left Ireland’s central public health authority, the Local Government Board, increasingly confident in its ability to cope with future

⁶¹ Upwards of 20,000 houses were recorded as having no back passages in 1896. Maguire, *Belfast*, p. 76.

⁶² Quoted in Maguire, *Belfast*, p. 74 and Charles Edward Bainbridge Brett, *Housing a divided community* (Institute of Public Administration, Dublin, 1986), p. 20.

⁶³ Blaney, *Belfast: 100 years of public health*, p. 29; Maguire, *Belfast*, p. 77.

outbreaks of infectious disease. When cholera threatened Ireland once more in 1893, the Board issued guidelines to its medical inspectors advising them to deal with the threat ‘without panic or confusion.’⁶⁴ The epidemic fortunately failed to materialise, but the fact that cholera could be approached without the acute anxiety of previous outbreaks is indicative of how far, albeit slowly, the development of public health in Ireland had progressed.

Conclusion

For the first time in Belfast’s historiography, this thesis has examined in depth both the nature of the preparations made in order to combat Asiatic cholera and the impact and aftermath of its epidemics from 1832 to 1878. It has also considered cholera’s influence on the development of public health provision in the town in the same period. While the nineteenth century can be seen as a period of major advancements in public health, the pace of progress in towns like Belfast, as the preceding chapters have shown, was often slow and uneven. However, it is clear that over the course of the century medical men and civic administrative bodies increasingly began to make highly important connections, most significantly, the realisation and acceptance that filth, contaminated water and disease were strongly associated. Consequently, the growing emphasis on cleanliness in towns and cities, and among their inhabitants, profoundly shaped the future development of public health provision from the mid-nineteenth century onwards, although this process remained incremental rather than transformative.

Cholera, as Chapter One has argued, was just one of several diseases which brought these concerns to the fore. It had also served to highlight the problems caused by poor hygiene,

⁶⁴ Barrington, *Health, medicine and politics*, p. 12; Robins, *The miasma*, p. 241.

sanitation, and the lack of centralised models of public health provision, arguably for the first time. While cholera alone cannot be credited with driving sanitary reform, it undoubtedly stimulated support for measures aimed at improving public health provision, particularly, though not exclusively, in the rapidly expanding urban centres of Britain and Ireland, such as Belfast.

As Ireland's only industrialised town, the first significant developments in nineteenth century public health in Belfast emerged in response to social issues caused by industrialisation. Rapid population growth and urbanisation in the early decades of the nineteenth century exacerbated overcrowding, poor sanitation, and limited access to adequate supplies of clean water. As a result, the town's residents, particularly the poor, were peculiarly exposed to outbreaks of epidemic diseases, of which cholera was arguably the most frightening. A central theme of this thesis has been that, while the experience of cholera was by no means unique to Belfast, the combined efforts of its municipal authorities, philanthropists, and sanitary reformers produced a relatively successful response to the disease when compared with similar towns and cities in Britain and Ireland. However, these outcomes were comparatively effective only in limited periods and remained structurally inconsistent over time.

Chapter Two has shown that the measures implemented in Belfast in preparation for cholera in 1831 broadly mirrored central guidance issued in both Britain and Ireland. However, unlike other towns, where action was only taken when the disease was already present, anticipatory programmes of street cleaning and nuisance removal were clearly executed well in advance of the arrival of cholera in Belfast. Nevertheless, the early formation of a Local Board of Health, a move which went against the recommendations of Dublin's Central Board of Health, arguably had the most significant impact on cholera response in the town. By organising medical provision and by working in conjunction

with those responsible for Belfast's sanitary arrangements to coordinate street cleaning, as well as arranging for the town to be split into a manageable number of medical districts overseen by board members and visitors, the board clearly made an invaluable contribution to reducing mortality rates.

However, additional factors also helped Belfast's avoidance of the high mortality rates experienced elsewhere. For instance, the often violent popular disturbances that disrupted the efforts of medical men in other towns and cities, were largely avoided by the members of the Belfast Board of Health. In addition, there appears to have been less resistance to hospital admission than was evident elsewhere; and while the treatments favoured by the cholera hospital's chief physician, Dr Henry McCormac, were in some cases little more than a form of benevolent homicide, it was his policy of segregating cholera patients and their families that did more to deter mortality in the institution than almost any other course of action.

The principal limitation of the emergency measures introduced during the early 1830s however, was that they were not continually enforced once the immediate threat of diseases like cholera and fever had receded. As Chapter Three has argued, following the end of the 1831/33 epidemic, cholera largely passed from public concern. Yet, as fears regarding the combined issues of poverty, dirt and disease intensified, it became increasingly apparent that these issues required a more centralised response. The solution, an Irish Poor Law, regardless of its flaws, developed into an embryonic system of public health provision which delivered institutional care to the sick poor. In Belfast, which was arguably more progressive than other Poor Law Unions, in that it provided beds for the sick from the outset, the opening of the workhouse marked the beginning of a new phase in managing the increasing numbers of the town's poor and reshaped the delivery of medical provision in the decades that followed.

Another major change in Belfast was the reform of municipal legislation at a local level. ‘The Municipal Corporations (Ireland) Act’ (1840) significantly altered the structure of local government administration and had important consequences for the future composition of Belfast’s corporation and the development of public health provision.⁶⁵ A raft of local improvement acts introduced by the reformed corporation in the mid-1840s also reshaped aspects of the town’s development, including the organisation of public health services. However, while these measures did result in notable improvements to Belfast’s urban environment they largely failed to address some of the town’s most acute sanitary and public health issues that had intensified as a consequence of the rapid pace of industrialisation and urbanisation. By the mid-1840s these problems escalated as inward migration, resulting from the impact of the famine and by the repatriation of paupers from Poor Law authorities in England and Scotland placed additional stress on Belfast’s already overstretched municipal authorities.

The main failures of the corporation in this period can also be closely linked to cholera mortality. The problems caused by the notoriously unhygienic Blackstaff River, for example, despite repeated complaints from the local community, were not addressed until the 1880s. In the associated areas of sanitation and waste disposal, traditional unsanitary practices, such as the continued use of communal privies, middens or dung heaps further increased the risk of disease transmission, while health was further endangered by the fact that domestic refuse often had to be carried through homes and into the street. The corporation largely failed to fundamentally resolve the problem of managing the waste created by a rapidly growing population. Both domestic and industrial sewage, for example, was routinely discharged into the town’s main watercourses, thereby contaminating the water supply, and it was not until the end of the century that a main

⁶⁵ (3 and 4 Vict., c. 108).

drainage system partially mitigated the problem of sewage disposal.⁶⁶ The consequence of these and other sanitary failures, measured in terms of cholera mortality in Chapter Four, were nevertheless, not as severe as might have been expected, with death rates in Belfast during 1848/49 notably lower than Ireland's other major towns and cities.

Chapter Five has shown that from the 1850s sweeping changes to the medical administration of public health authorities made a significant difference to the general wellbeing of the Irish population. The Medical Charities Act (1851), by introducing a rationally administered nationwide system of dispensaries, ensured that state intervention in public health emergencies was, on the whole, more effective in Ireland than elsewhere in the United Kingdom over the succeeding two decades.⁶⁷ Under the act, boards of guardians became responsible for medical provision and disease prevention in their respective unions and the arrival of cholera in 1853 helped to accelerate the process of effecting sanitary improvements throughout much of the country. In towns like Belfast, the state regulation of the dispensary system was certainly a factor that prevented cholera mortality from being much more severe. Nevertheless, a number of locally specific developments also complicated efforts to prepare for cholera's arrival in this period. Urban histories of Belfast emphasise civic pride and a commitment to improvement as defining features of mid-nineteenth-century municipal ideology.⁶⁸ Yet, although the guardians and corporation attempted to cooperate, relations between them were often characterised by persistent tension. A more effective civic response to cholera in the mid-

⁶⁶ Bill Luckin, 'Pollution in the city' in Daunton (ed.), *The Cambridge urban history of Britain*, pp. 214-5.

⁶⁷ 'Medical Charities (Ireland) Act 1851' (14 and 15 Vict., c. 68); Cassell, *Medical charities, medical politics*, p. 86.

⁶⁸ Civic pride is a central theme of the following works, Connolly, 'The rise and fall of a civic culture' and Johnson, *Middle class culture and civic identity*.

1850s was therefore, as this chapter has additionally argued, undermined by repeated disputes over sanitary responsibility and by the corporation's fragile financial position.

In addition to the obvious sense of civic pride, there was a growing desire and realisation in Belfast of the necessity to effect significant improvements in the health of its inhabitants. However, this was often driven, by the efforts of a select band of medical men rather than by the civic authorities themselves. As the growth of urban development in Belfast, driven by industrial progression, continued apace, it further exacerbated the town's existing social and environmental problems. The increasing number of factories and mills, for instance, dependant on water for steam production, limited the availability of fresh water for domestic use. They also contributed to pollution by discharging their wastewater into unhygienic cesspools or directly into the town's main watercourses. Industrialisation also stimulated rapid housing and although new building standards introduced after the mid-1840s led to some improvement in construction, most of the housing stock for the labouring poor remained small, overcrowded, and insanitary. conditions highly conducive to the spread of infectious disease.

In Chapter Six the morbidity and mortality statistics for cholera in Belfast, compiled from the minutes of the board of guardians, and also published in the *Newsletter*, have been used for the first time in conjunction with those of the Poor Law Commissioners to challenge the long held view that cholera was relatively insignificant in the latter half of the nineteenth century.⁶⁹ While it is true that, partly because of Belfast's rapidly rising population, cholera had a lesser demographic impact in the mid-1850s, this chapter has shown that its relative mortality actually increased. This occurred despite improvements in medical provision and the best efforts of sanitarians, philanthropists, and the town's

⁶⁹ See, Creighton, *A history of epidemics in Britain* and Robins, *The miasma*, p. 204.

civic authorities. Although Belfast appeared better prepared for this outbreak than ever before, no single municipal body seemed willing to assume overall control of the arrangements necessary for an effective response to sanitation, hygiene, and cholera. As a result, morbidity and mortality rates were arguably higher than might reasonably have been expected.

Cholera returned to Ireland for the last time in July 1866, although, as Chapter Seven shows, sporadic cases had already been reported in Ulster towns as early as March. Belfast, however, escaped this outbreak almost entirely. For this reason, much of the chapter focuses on the changes to national legislation introduced as the threat of cholera grew in the spring and early summer of 1866. The new powers, conferred under the ‘Diseases Prevention Act’ (1855) and the new ‘Sanitary Act’ (1866), coincided with the arrival of cholera in Ireland.⁷⁰ While these measures undoubtedly placed additional pressure on the resources of boards of guardians across the country, they also represented an important shift in the management of epidemic outbreaks. For the first time, guardians and sanitary authorities were officially empowered to implement the necessary measures without prior approval from the Poor Law Commissioners. This change enabled preemptive action to be taken at the discretion of individual unions, significantly accelerating the response to cholera. Moreover, the dispensary system was now more developed and better equipped to deal with the disease than in previous outbreaks. Consequently, the relatively low mortality rates recorded in Ireland during 1866 can largely be attributed to the early adoption and implementation of these measures.

⁷⁰ For the Orders of the Sanitary Act and Diseases Prevention Act see *Twentieth report PLC* (1867), Appendix C, Orders and circulars of instruction issued under the ‘Medical Charities Act’ and ‘The Sanitary Act’ and correspondence, pp. 151-68.

The significance of the often uneven distribution of cholera outbreaks, however, should not be overlooked, and Belfast's experience in 1866, as Chapter Seven demonstrates, provides a striking example of the disease's unpredictable nature. While conditions in much of late-Victorian Belfast, particularly in districts beyond the impressive facades of the principal thoroughfares, remained highly insanitary and conducive to the spread of epidemic disease, the town nevertheless avoided a major epidemic of cholera. This was despite the fact that the town's authorities, particularly the corporation, which was experiencing acute financial difficulties following the outcome of John Rea's suit in Dublin's Court of Chancery, were largely overwhelmed by the problems of nuisance removal, waste disposal, and water supply. The situation deteriorated further from the middle of 1865 when the town faced an acute water shortage which raised fears of the return of both fever and cholera in epidemic form. Although there was a sharp outbreak of fever, the approach of cholera in comparison to previous outbreaks, as this chapter has shown, failed to provoke the same level of alarm among Belfast's administrators. While the corporation and guardians continued to enforce sanitary legislation, their methods had not significantly evolved from those which they had previously employed, while uncertainty regarding the division of civic responsibility remained a persistent feature of sanitary response, thus, neither the guardians nor the corporation approached their sanitary duties with vigour. The negligible morbidity and mortality experienced in 1866 should not therefore be interpreted as evidence of a fully effective or comprehensive system of sanitary reform. Rather, Belfast's experience suggests that the town benefited, at least in part, from the often inconsistent and erratic manner in which cholera epidemics manifested themselves during the nineteenth century.

Overall, cholera claimed the lives of more than 2,000 people in Belfast between 1832 and 1866. One of the central questions this thesis has sought to address is whether cholera

mortality in this period was a significant factor in the development of public health provision in nineteenth-century Belfast. The answer, quite simply, is yes. Cholera did much to expose the town's extensive sanitary deficiencies and helped to advance recognition of the importance of cleanliness in relation to disease transmission. In this respect, Belfast's experience differed little from that of many comparable towns and cities across Europe during the same period. Although cleanliness gradually became a mainstay of worldwide social reform throughout the century, the pace of sanitary progress remained painfully slow. While cholera cannot solely be credited with bringing about the wholesale legislative and sanitary reforms which eventually evolved into the modern public health system, it is clear, in Belfast, as everywhere, cholera had a profound social impact that far exceeded its actual mortality.

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Appendix 1

Chronology of Belfast Hospitals¹

- 1774 The Poor House with its infirmary opens to the North of Belfast.
- 1792 The Belfast Dispensary opens.
- 1797 The Belfast Dispensary and Fever Hospital opens in a house in Factory Row. However, it was forced to close after a few months due to lack of funds.
- 1799 The Belfast Dispensary and Fever Hospital reopens in three houses in West Street.
- 1817 The Belfast Dispensary and Fever Hospital moves to a new, purpose-built hospital building in Frederick Street.
- 1829 Belfast Lunatic Asylum opens to the west of the town on the Falls Road.
- 1841 The Workhouse and Union Hospital or Infirmary (Later to become the Belfast City Hospital) opens to the South of Belfast.
- 1846 A new Fever Hospital, known as the Union Fever Hospital, opens in the grounds of the workhouse.
- 1847 The Belfast Fever Hospital on Frederick Street is refurbished and enlarged and renamed the Belfast General Hospital.
- 1874 The Throne Hospital opens on the north-east outskirts of Belfast to cater for long-stay children and, in 1877, adults. (A consumptive unit opens in 1885).
- 1875 The Belfast General Hospital is granted a royal charter and is renamed the Belfast Royal Hospital. (Renamed the Royal Victoria Hospital in 1899).

¹ Source, Richard Clarke, *The Royal Victoria Hospital, Belfast: A History 1797-1997* (Blackstaff Press, Belfast, 1997).

Appendix 2

Belfast Board of Health Notices, Instructions and Copy of Final Cholera Toll in Belfast²

- 1 Board Of Health Notice: 'Epidemic Cholera.'
- 2 Board of Health Notice: Appointment of a Medical Inspector.
- 3 Board of Health Notice: Cholera – Wakes and Funerals.
- 4 Board of Health Notice: Nuisance Removal.
- 5 Board of Health Notice: Division of Belfast into Medical Districts.
- 6 Board of Health Notice: Directions to be Taken before being seen by doctors.
- 7 Confirmation of Appointment to Position of Medical Visitor.
- 8 Letter to Lord Lieutenant Dated Belfast 13 March 1832.
- 9 Cholera: Return of Cases and Deaths to Central Board of Health. N.B. Belfast is second from the top.

² Sources, (NAI) CSOCP/1832/33; Bound volume of cuttings relating to cholera in Belfast, Royal College of Physicians Ireland, (RCPI), BMS/19.

Board of Health, BELFAST.

Epidemic Cholera.

IN the end of October, 1831, Cholera appeared in Sunderland. Upon the 17th December, it reached Haddington, in Scotland, and at this date, has appeared both in Glasgow and Paisley. Between these places and Belfast the intercourse is so constant, that we have reason to expect, that within a short period it may reach us, in spite of every precaution. THE BOARD OF HEALTH therefore deem it necessary to address their fellow-townsmen, for the purpose of stating what has been done, what they purpose to do, and what they would advise, with a view either to avert or mitigate the disease.

1. The Town has for several years been divided into six Dispensary Districts, with two Medical Gentlemen to each; but should Cholera appear, there will be an immediate increase of medical appointments, according to the exigency of the case.
2. Each District is placed under the superintendance of Two Members of the Board, each District is again sub-divided, and each Division is placed under Visitors resident in the neighbourhood.
3. The Visitors are engaged in the examination of the Streets, Lanes, Courts, Yards, and Houses; and are endeavouring by

means of the active and zealous co-operation of the Commissioners and Committee of Police to promote the cleanliness of the Town.

4. The Superintendants and Visitors will, wherever necessary, have the houses of the Poor whitewashed, and will furnish a supply of fresh straw for their beds; and be ready to attend to any other matters of precaution or relief, that circumstances may demand.

5. The Quarantine Laws, according to directions received from Government, will be strictly enforced upon all vessels from infected ports.

THE BOARD OF HEALTH beg leave to address to the Public the following suggestions, which, they believe, may, under Divine Providence, contribute to the protection of society in general, and particularly of the poor, who, from a variety of circumstances, may be chiefly exposed to contagion:—

1. Do every thing in your power to maintain cleanliness of person and clothes.
2. To guard against sudden changes of temperature, wear a flannel shirt next the skin, or at least a belt eighteen inches broad round the bowels.
3. As much as possible avoid getting the feet wet, or sitting in wet clothes.
4. Avoid unnecessary and fatiguing journeys.
5. Avoid late hours, and all parties in small close rooms. The ordinary practice of sitting all night at Wakes, is most particularly dangerous.
6. After rising in the morning, let *all bed clothes be hung up on a rail or line.*
7. Sweep frequently under beds.
8. Keep windows open during the day, whenever the weather is dry. Wherever it can be done, *raise one sash, and draw down the other a few inches.* Particularly keep open the *upper windows of stair-cases, lobbies, &c.*
9. Remove from yards, or near the doors, all gatherings of sweepings, dung, &c. causing offensive smells, and drain of all stagnant water.
10. Damp earthen floors being exceedingly prejudicial to health, do all that can be done by drains, or otherwise, to keep them dry.
11. Wash boarded floors frequently, and dry them well, by ventilation and fires.

12. Let SERVANTS and all others keep as much as possible at home, and avoid visiting sick persons, unless where absolute duty requires.

13. As it is not improbable that Dogs, by frequenting infected houses, are often the means of conveying infection to other places, let them be tied up.

14. *Be Temperate.* If Ardent Spirit be used, let it only be in moderate quantity after dinner, and largely diluted with water. Of the tendency of intemperance to produce Cholera, we have a striking example, by which it appears that in consequence of drinking on Christmas-day, (25th December last,) *thirty-nine* persons were seized with Cholera at Gateshead, upon the 26th; and *fifty-nine*, upon the 27th: of whom *ten* died on the 26th, *thirty-two* on the 27th, and *thirteen* on the 28th December; whereas the *greatest number* of deaths upon any other day was only *nine*, and the ordinary average *five*. Persons whose business calls them to fairs and markets, are often accustomed to drink spirits after their journey, and in the evening when fatigued with business and weakened by long fasting, a practice at all times injurious to health, and peculiarly calculated to prepare the way for the attack of CHOLERA.

15. A mind at peace is always the best preservative of health. Therefore let all ranks, trusting in the grace of our Lord and Saviour, turn to God with all their hearts. It may be, that listening to prayer, God will defend us from this scourge; or should he send it amongst us, the visitation will be converted to good.

(Signed by order of the Board,)

Belfast, 18th Feb. 1832.

CHARLES TREVOR,
SECRETARY.

Let this paper be pasted up in Factories, Schools, and Dwelling-houses.

Board of Health.

THE Public are hereby informed,
that DR. KIDLEY, of No. 58 DONE-
GALL-STREET, has been appointed MEDICAL
INSPECTOR for CHOLERA CASES, and that
he will be at all times ready to act when called
upon.

By order of the Commissioners,

Charles Trevor,

Belfast, 18th March, 1832.

Secretary.

Clark, Printer, Pottinger's-Entry, Belfast.

BOARD OF HEALTH.

CHOLERA having now manifested itself in town, the Board deem it advisable to address the following observations to the Inhabitants in general; but particularly to the poorer classes, who are most immediately liable to its attacks.

The disease consists in frequent purging and vomiting, attended with cramps of different parts of the body, great coldness, and sudden weakness; often carrying off the patient in the space of from 12 to 30 hours. It is of the utmost consequence to have Medical Advice at the commencement, as by proper remedies, speedily applied, many lives may be saved, which, by the delay of a few hours, must get beyond the power of medicine.

In order to enable the poor to obtain Advice and Medicines without delay, Medical Inspectors have been selected to superintend each of the six Dispensary Districts into which the town is divided; of these, one has been already placed on duty by the Board, and farther appointments will be made, whenever the extension of the disease may require. These Gentlemen will be ready to visit persons attacked as above described, at any hour of the day or night.

It may be useful to state, that the actual attack of Cholera is often preceded for a day or two by some looseness of the bowels; wherefore, all persons so affected, are earnestly recommended to lose no time in getting advice; there being great reason to believe that if taken in this early stage, the disorder may generally be either prevented or cured.

The disease appears to be certainly infectious: let all, then, whom God may visit with it, be ready, for the sake of their families and neighbours, to go into the New Hospital provided for them, and now open. By so doing, they will also have the fairest prospect of saving their own lives. They will be under the charge of able Physicians, and have every care and every comfort possible; and it may please the Almighty to bless to their recovery, the means there used, which could neither be obtained nor applied in their own houses.

The BOARD take this opportunity of again urging, in the most solemn manner, the necessity of strict sobriety. Let all, as they would avoid this awful visitation, beware of drunkenness, or even of any approach to it! Drunkards are ten to one most liable to the disease, and seldom or never recover.

WAKES AND FUNERALS.

Attendance upon WAKES and FUNERALS of persons who have died of infectious disorders, is a practice in all cases dangerous, particularly in cases of CHOLERA. The BOARD, therefore, however unwilling to interfere with the habits of the people, feel compelled, by a sense of duty, to PROHIBIT, during the continuance of the present epidemic, all WAKES, and unnecessary gatherings at the FUNERALS, of persons who have died of disorders which their Medical Attendants have pronounced infectious; and hereby give NOTICE, that all persons so offending, will be proceeded against, as the Law directs.

STEPHEN MAY, *Chairman.*
JAS. M'DONNELL, M. D.
S. S. THOMSON, M. D.
W. M. WILSON, M. D.
WM. CLARKE.
WM. CAIRNS.
W. CROLLY, D. D.

H. COOKE, D. D.
THOS. HINCKS.
F. COULSON.
R. F. GORDON.
R. TENNENT.
CHARLES TREVOR, *Secretary.*

Belfast, 20th March, 1832.

Clark, Printer, Dublin.

Board of Health

NOTICE is hereby given, that all Inhabitants of Belfast who keep **PIGS** within their Dwelling-Houses, or in such confined and filthy Yards as may be deemed Nuisances in their neighbourhoods, and injurious to the Public Health, do remove the same within **ONE WEEK** from this date. Should this notice be neglected, the Board will take immediate measures to enforce this Regulation.

All Slaughter-Houses and Yards

And must be cleaned out three times a Week; otherwise the **POLICE** have instructions to remove all offensive matters collected therein.

By order of the Board,

C. TREVOR, Secretary.

Belfast, 17th February, 1832.

Donaldson, Printer.

BOARD OF HEALTH.

To facilitate the operations of the Board in the care of the public health, the Town of Belfast has been divided into Six Districts, and each District has been committed to the superintendence of Two Members of the Board, who are to be aided by Visitors in specified Divisions of their District.

No. 1.—Bounded by High-street, (Bridge-street, inclusive), Donegall-street, York-street.
 Superintendents.—Rev. Thomas Hincks, Adelaide-Place; Robert Gordon, Esq. Castle-Place.
 Visitors.—

Dispensary Medical Attendants.—Dr. Kidley, Donegall-street; Surgeon Coffey, Donegall-street.

No. 2.—Bounded by York-street, (inclusive), Donegall-street, New Antrim Road, (inclusive).
 Superintendents.—Right Rev. Dr. Crolly, Dr. Wilson.
 Visitors.—

Dispensary Medical Attendants.—Dr. Mattier, York-street; Dr. Bryson, High-street.

No. 3.—Bounded by Peter's-Hill, North-street, Donegall-street, (all inclusive), New Antrim Road.
 Superintendents.—Wm. Clarke, Esq. Donegall-Place; Robert Tennent, Esq. Hercules-Place.
 Visitors.—

Dispensary Medical Attendants.—Dr. M'Cormac, Arthur-street; Surgeon Officer, North-street.

No. 4.—Bounded by Falls Road, Mill-street, Castle-street, Castle-Place, High-street, Bridge-street, North-street, Peter's-Hill.
 Superintendents.—William Cairns, Esq. Donegall-Square, South; Dr. Thomson, Castle-street.
 Visitors.—

Dispensary Medical Attendants.—Dr. W. Magee, Arthur-street, Surgeon Moore, Castle-Place.

No. 5.—Bounded by Falls Road, Mill-street, King-street, College-Square, East, New Dublin Road, (all inclusive).
 Superintendents.—Colonel Coulson, College-Square, North; Dr. M'Donnel, Donegall-Place.
 Visitors.—

Dispensary Medical Attendants.—Dr. Scott, King-street; Surgeon M'Burney, High-street.

No. 6.—Bounded by High-street, Castle-Place, Castle-street, (all inclusive), Mill-street, King-street, College-Square, East, New Dublin Road.
 Superintendents.—Charles Trevor, Esq. Fisherwick-Place; Rev. Dr. Cooke, Brunswick-Place.
 Visitors.—

Dispensary Medical Attendants.—Dr. Burden, Alfred-street; Surgeon Arrott, High-street.

The following is an outline of the duties to which the Board beg to direct the attention of the Visitors, fully relying upon their humane and zealous co-operation in the public service:—

I.—Examine all streets, lanes, entries, courts, yards, &c. in their Division, and report, to one of the Superintendents of the District, all such places as require to be cleansed, paved, grated or ventilated; and particularly observe whether the sewers be sufficient.

II.—Visit the houses of the poor in their Division, and observe and report on the following queries:—1. Is the floor damp or dry? 2. Does the house need whitewashing or ventilation? 3. Do the windows lift or open? 4. Are there bedsteads? 5. Is there good straw in the beds?—[Whenever *fresh* straw shall have been furnished, the Visitors are requested to take care that the *old* straw be *burned*.] 6. Are the inmates of the house clean? 7. Are any sick?—[In cases of contagious disease the Visitor is not expected to enter the houses.] 8. Is there any yard, or use of a yard in common with other houses? Is the yard on a higher level than the floor of the house?

The Visitors will please note the foregoing, together with any other particulars that their own judgment may suggest, as calculated to give information to the Board.

III.—When they find the houses of the poor in a condition that they deem injurious to health, the Visitors will endeavour to ascertain the names and residences of the landlords, and will, in the most earnest manner, impress upon them the humanity and justice of putting the tenements into a state of comfortable repair. Something has already been effected in this way, and the Board confidently anticipate much more. Where the Visitors do not think it advisable to make such application personally, they will please report the case to one of the Superintendents of the District.

IV.—In visiting the houses of the poor, the Visitors will, in the most conciliatory manner, explain the objects of the Board, and the importance of every exertion to guard against the introduction of contagious diseases. They will impress upon them the importance of keeping their floors dry and clean, of having their windows frequently and freely open, of clearing away all accumulations of rubbish from beneath their beds, &c. and especially direct their attention to personal cleanliness. As far as possible, they will induce the poor to effect these objects by their own exertions. Where absolutely necessary, they will report the cases to one of the Superintendents, that they may be recommended to one of those Public Charities, in whose kind and zealous co-operation, to the utmost limit of their means, the Board have the fullest confidence.—The Board will take measures for providing for any cases to which the Public Charities cannot extend.

V.—The Visitors will take every reasonable opportunity, where they deem it necessary, to show how much, under Providence, the preservation of health depends upon temperance and regular habits of life, and to warn the poor against drunkenness, either habitual or occasional, as the most certain inlet to all contagious diseases, and more especially SPASMODIC CHOLERA, as has been fatally exemplified at Sunderland, Newcastle, and other places in England.

VI.—The Visitors will have the goodness to renew the examination of their divisions, as often as circumstances may render necessary, and report to one of the Superintendents of their District, so that they may be enabled to report weekly, or oftener, all matters that they may deem it necessary to recommend to the consideration of the Board.

Police - **Division of the Town.**

DISTRICT, No. 1.—Includes *Donegall-street, Carrickfergus-street, Academy-street, Robert-street, Edward-street, Nelson-street*, and all the *Streets, Lanes and Entries* within these bounds ; comprehending *York-street, &c.*

Superintended by

DISTRICT, No. 2.—Includes *Mary-street, Grattan-street, Green-street, James-street, and Corporation-street*, with all the *Streets, Lanes and Entries* on the West side of them as far as *Nelson and Edward-streets* ;—*Tomb-street, Tomb's-quay, Donegall-quay*, and all the *Streets, Lanes and Entries* within these bounds.

Superintended by

DISTRICT, No. 3.—Includes *Talbot-street, Hill-street, Commercial and Elliott-Courts, Gordon-street, Cotton-Court, Bridge-street, Waring-street*, with the *Streets and Entries* on the South side of it, leading into *High-street* ;—*Chichester and Merchants'-quay, Lime-Kiln-Dock*, and all the *Streets and Entries* within these bounds.

Superintended by

DISTRICT, No. 4.—Includes *North-street*, with all the *Streets and Entries* leading from it into *Donegall-street* ; *Peter's-hill, Lodge lane, and Carrick-hill*, with the *Streets and Entries* on both sides of it.

Superintended by

DISTRICT, No. 5.—Includes *Rosemary-street*, with the *Lanes and Entries* leading from it into *High-street*,—*Hercules-street, Bank lane, Chapel-lane, Ferguson's-entry, Mill-field, Brown-square*, with all the *Streets and Entries* leading from *Peter's-hill and North-street* into *Brown-square and Smithfield* ;—*Round-Entry*, and all the *Streets, Lanes and Entries* within these bounds ; comprehending *Smithfield, &c.*

Superintended by

DISTRICT, No. 6.—Includes *Castle-street, Mill-street, and Falls Road*, with all the *Streets, Lanes and Entries* lying to the South side of them :—*Corn-Market, Arthur-square, Upper and Lower Arthur-street*, with the *Streets, Lanes and Entries* within these bounds ; comprising *Donegall-place, and squares, &c.*

Superintended by

DISTRICT, No. 7.—Includes *High street*, with all the *Streets, Lanes and Entries* lying to the South of it,—*Custom house and Hanover Quays, Cromac street, Chichester street*, as far as *Arthur street*,—*William street South*, and the *Streets, Lanes and Entries* within these bounds ; comprising *Ann street, Great Edward street, &c.*

Superintended by

DIRECTIONS to be followed by the Friends
of a Patient ill of Cholera, before he is seen
by a Medical Practitioner.



THE violent form of the disease is known by sudden weakness, a contracted, ghastly countenance, blueness of the lips, and general coldness, with vomiting, purging, and cramps. In such cases, give a table-spoonful of the *Mixture*, with 60 drops of *laudanum*, in half a wine-glassful of *cold* water. Follow this with a table-spoonful of warm spirits and water, or strongly spiced wine, every fifteen or twenty minutes. Repeat two tea-spoonfuls of the *Mixture*, with 30 drops of laudanum, every hour, if the first dose fail to relieve.—If the mixture be vomited, then give two *Pills*, and repeat one every hour, if the first two fail to relieve, or be vomited. But after the vomiting and cramps cease, the *Mixture* or *Pills* must not be repeated without medical advice.—[N. B. The doses of the *Mixture*, *Laudanum*, and *Pills*, must not be exceeded. For children of fourteen half the doses mentioned, and for children of seven one-fourth is sufficient.]—Apply dry heat over the whole body in any shape, such as by hot blankets and hot bricks, sand, salt, or bottles of hot water, and rub the whole body carefully and forcibly with hot dry cloths, or with flannel, wrung out of hot water, and then soaked in oil of turpentine. Apply *Mustard Poultices* as soon as possible, over the belly and on the soles and calves, and keep them on till the patient complains of the smarting. These are made by spreading powdered mustard over porridge poultices.

*These directions apply to Medicines prepared by
the Edinburgh Medical Board.*

BREAST, 18th March, 1832.

SIR,

I am desired by the Board of Health, to transmit, for your information, the Resolutions which have been adopted to provide Medical Inspectors for the attendance on the poor, in Cholera, in the event of its appearance in this town; and I request to know, with as little delay as possible, whether you are willing to undertake the duty on the terms prescribed, subject to the sanction of His Excellency the Lord Lieutenant.

I am, Sir,

Your obedient servant,

To

RESOLVED,

“THAT in order to prepare against the contemplated introduction of Cholera, it is expedient that Medical Appointments be forthwith provisionally made. No salary to be paid, in any case, until Cholera actually appears, and a specific order be issued from this Board to that effect.”

“That there be a Medical Inspector appointed to each of the Six Districts, at a Salary of Three Guineas a week; and that such Inspector shall consider himself under the direction of the Board, and be required:

- 1st.—“To be at all times ready, by day or night, to attend any call from the Poor who may be seized with Cholera.”
- 2d.—“To send such Patients to the Hospital without delay.”
- 3d.—“Should the removal be inexpedient, the Patient is to be taken charge of, and attended in his own house by the Inspector.”
- 4th.—“To report daily, or as often as may be required, to the Board of Health, the state of his District, or other part of the town which may be placed under his charge.”

“That the Dispensary Physician in each District, shall be appointed, by this Board, Medical Inspector thereof; and if he decline the appointment, then the Surgeon.”

“That if these appointments cannot be so filled up, the Board will call on the Physician and Surgeon attending daily at the Dispensary, before resorting to the profession at large.”

“That in the event of Cholera manifesting itself in town, the Medical Inspector of the District where it may appear, shall be the first called on duty, and such Inspector will be required to attend to all cases occurring throughout the town, until the extension of the disease shall appear to the Board to require additional appointments; in which case the Inspectors of the Districts where the disease may prevail most shall be called on duty in succession.”

Cholera Return of Cases & Deaths up to 21 Dec 1832 inclus.

Places	Cases	Deaths	Places	Cases	Deaths
<u>County of Dublin</u>			<u>County of Cavan</u>		
Dublin	91	44	Belturbet	✓	✓
Belfast	2833	418	Castletown	✓	2
Ballymena	59	21	Kingscourt	✓	✓
Ballymoney	44	18	Tomregan	4 letters ✓	15
Glenamo & Haroulough	✓	✓	Swandinbar	4 letters ✓	No cholera
Lisburn	4	1	Milledanora		9
Larne	✓	✓	Winnifred & Annagalliff	4 letters ✓	4
Petrolone	4 letters ✓	No cholera	or Cavan town		4
Quinnstown	4 letters ✓	18			4
Ramoin & Cullinstown	175	54	<u>County Donegal</u>		
Milled & Glenary	✓	✓	Ramilton	4 letters ✓	7
Highhill	4 letters ✓	12			5
Portrush	4 letters ✓	No cholera	Kilbarney & Innis mac saint		385
Lockgill	4 letters ✓	No cholera			136
Whitehouse	36	2	Drumholm & Ardaraugh	4 letters ✓	2
Rathlin Island	4 letters ✓	No cholera			1
Whitehouse	21	1	Stranorlar		32
Downock & Berrykeigan	✓	✓			12
Billy	4 letters ✓	No cholera	Buncrana		8
Connor & Kells	17	2			4
Carrickfergus	37	12	Clonaborky	4 letters ✓	No cholera
<u>County of Antrim</u>			Clontarf		3
Charlemont	✓	✓	<u>County Down</u>		
Newry	340	159	Ballymacarrett		354
Londrigan	2	2			40
Bomborough	11	7	Rangor		190
Lurgan	109	29			35
Armagh City	82	28	Banbridge & Waringstown		30
<u>Co. Down continued</u>			Warrenpoint & Clonallon		28
Kilcoo or Castlewellan	✓	✓			13
Grey Abbey	7	6	Donaghadee		160
Marlin	19	9			56
Saul	88	23	Downmore		106
Ballycotton	4 letters ✓	1			31
			Killeshin	4 letters ✓	1
					-
			Killybegs	4 letters ✓	3
					-
			Portaferry		161
					69
			Strangford	4 letters ✓	No cholera
			Downpatrick		218
					79
			Newtonards	4 letters ✓	3
					1
			Hollywood		69
					26
			St. Andrews		26
					5
			Knockree		22
					4
			Andross		39
					10
			omitted banks		

Appendix 3

Maps

Map 1 Map of Belfast Showing River Blackstaff 1832

Map 2 Map of Belfast Showing River Blackstaff 1858

Map 3 Andrew Malcolm Plan of Belfast and the Blackstaff Nuisance 1849

Map 4 Andrew Malcolm Map of Cholera Locations Belfast 1832 and 1849

Map 5 Andrew Malcolm Plan of Overcrowded Localities in Belfast 1849



Andrew Malcolm plan of Belfast and the Blackstaff Nuisance 1849



Andrew Malcolm Map of Cholera Locations Belfast 1832



Andrew Malcolm Plan of Overcrowded Localities in Belfast 1849

Appendix 4

Medical Officers' Report of Cholera in Belfast's Dispensary Districts 1866

82

and the fact report that no cases of cholera had occurred in this
 respective districts since last meeting.

The following is the result of the reports of the Medical Officers
 of the several Dispensary Districts as regards the cholera cases
 occurring in said Districts.

Date	Name	Residence	Condition	Result
Sept 24	John Thomas Russell	Belmont Road		at home hospital
" 11	James Grayson	do		" 11
" "	James Grayson	do	hospital	
" "	James McDonnell	Victoria Road		" 11
" 17	Margaret Sinclair	41 Wilsons Entry		hospital
" 21	Mathew Wilson	104 Carnock Hill	Recovered	
" "	Mary Macdonald	144 " "	do	
" 30	Mary Macdonald	17 " "	do	
Sept 11	Patrick Wilson	6 Bown Street		at home hospital
Oct 9	Rose McCullagh	9 Belle Lane		hospital
" 14	John Coakley	14 Andersons Entry		do
" 18	John Coakley	18 Mullin's Road		at home hospital
" 20	John Henderson	6 " "		" 11
Nov 2	Jough Hendri	Southfield Court		at home hospital
" 4	Francis Hendri	Do		hospital " 5 1/2
" "	Mary Hendri	do		" " 5 1/2
" "	Sam Madden	Shields Court		" " 5 1/2
" "	Wm G. Meade	22 Cultrough Road		" " 5 1/2
" "	Michael Campbell	25 " "	Under treatment	
" "	Patrick Hawey	Bayard Street		"
" "	Sarah French	Back Shop Street	Recovered	
" "	Wm C. Clarke	William Street	do	
" "	Patrick McLaughlin	Bayard Street		Oct 10 11
" "	Mary Glass	Bayard Entry		
" "	John Coulant	15 King Street		
" "	Robert Johnson			

28 Cases 5 recovered 18 deaths 4 result not reported

Robert Boyd Clarke