St. John’s Fever and Lock Hospital Limerick,
1780-1890
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By

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Fig. 13 is taken from the Atlas of Irish History, Dublin 1997 edited by Seán Duffy, courtesy of Gill & Macmillan Ltd.

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ABSTRACT

This study evaluates the role of St. John’s Hospital in controlling the spread of fever, by admitting fever patients to hospital and isolating them from the rest of the community. In addition, large numbers of the sick poor received advice and medicine from the hospital, and doctors occasionally visited them in their homes. The success of St. John’s in treating fever patients was based on a combination of routine hygienic practices which would have kept contagion to a minimum and aided recovery; the knowledge and ability of Dr. John Geary to distinguish different fevers; the nourishing food given to patients and the less-aggressive nature of their ‘cures’.

This study deals to a large extent with the 1820s, and to a lesser extent with the 1840s a period when admissions to St. John’s hospital peaked. The register of admissions, containing more than 10,000 patients, together with newspaper reports covering the period 1825-1826, provide statistical information to validate anecdotal evidence of this epidemic. The sustained improvement in treatment is evidenced by reductions in the ratio of deaths to admissions between 1822-1826.

When the Cholera epidemic of 1832 arrived in Limerick St. John’s was fitted out in the belief that it would accommodate any number of cases that might arise. Though the epidemic was of short duration, 953 people died of Cholera in Limerick hospitals.

St. John’s Hospital admitted more than 5,000 fever-ridden patients during the outbreak of famine fever in Limerick City in 1845, yet the average rate of mortality was 6.38 per cent. Admissions fell during 1846, but rose in ‘black’ 47. In spite of the moribund condition of some patients admitted with Cholera in 1849, a relatively low mortality rate of 7.75 per cent was maintained. Voluntary and ad hoc responses to epidemics worked in the various crises but were patently inadequate to cope with the volume of fevers in the Great Famine.

1 Bloodletting was going out of fashion.
ST. JOHN’S FEVER AND LOCK HOSPITAL LIMERICK

Before us die our brothers of starvation
Around are cries of famine and despair!
Where is hope for us, or comfort, or salvation -
Where - oh! where?
—Speranza¹

INTRODUCTION

In 1700, hospitals in Britain were few in number, employed few people, were financed mainly on a voluntary basis and treated a very restricted social group of patients for a limited range of complaints. Hospital doctors treated patients without payment out of a sense of philanthropic duty. The growth of towns and social mobility, the increase of middle class philanthropy and professionalization in medicine saw the hospital develop as an institution in the wake of economic and social changes. The enlightenment of the eighteenth century was the beginning of a process which transformed the medieval religious social-service system, but the rise of the hospital to a central position in medicine occurred after the French Revolution.1 ‘A radically new approach was taken to medicine, which placed the hospital at the centre of health care in Europe and North America.’2 The growth of public health corresponded with the rise of centralized government.3

The Utilitarian goal of achieving the greatest happiness of the greatest number was the driving force behind the reform of the social conditions of the poor, acting in accordance with the laws of political economy.4 The legislator’s function was to solve the problems of morals and provide the fruits of good government – subsistence, abundance, security and equality. This enlightened self-interest, the concept of the English political philosopher Jeremy Bentham, (1748-1832), saw the welfare of the poor and the indigent as a necessary obligation of Utilitarian government. When wages were unobtainable, relief of poverty became a duty of government which could not be left to private charity. He had an optimistic belief in the economic value of population growth as he planned for the relief of poverty. Restoring the sick poor to health, and hence, the labour market he saw as essential to the strength of the Mercantilist state (the idea that the strength of the state depended on its productive and trading wealth). Bentham’s concept was a powerful force in the state provision of public health in nineteenth-century Britain.5

‘General’ hospitals were established in London and other British cities in the early-eighteenth-century. Their raison d’être was charity, to take in the ‘deserving’ poor such as labourers, who conscientiously tried to support their families by employment. Criminals, prostitutes and the
destitute were considered to be largely responsible for their own plight and were regarded as ‘undeserving’. Children, fever cases, and incurables were also excluded. The patient population consisted mostly of accident cases or minor medical problems. The middle and upper classes sought treatment at home. In the second half of the eighteenth century a number of new hospitals were set up - the lying-in hospitals for women in childbirth, lunatic asylums, smallpox hospitals and hospitals for venereal disease.6

At the end of the Napoleonic wars, Britain, free of the burden of military expenditure, increasingly directed more of the national budget to its domestic public health policy. A link was established between poverty and morbidity which underpinned the idea of State welfare. The costs to industry and society in general could be reduced by preventing premature mortality of breadwinners caused by epidemic disease. Gradually political measures were adopted to prevent epidemic disease created by rapid urbanization as the pace of industrialization increased.7

The Report of the Poor Law Commission in 1832 concluded that the system of public relief of poverty and destitution, provided by each parish, artificially depressed the price of labour and removed the incentive of the fear of hunger to the poor to help themselves. Edwin Chadwick one of the authors of the report believed that the answer ‘was to deter pauperdom by making it less eligible than the lowest paid labour’8 and this would be achieved by depriving the pauper of his liberty, split up his family and incarcerate them in a workhouse. The new Poor Law was set up under the Poor Law Amendment Act in 1834. Public health reform was widely criticized in the nineteenth-century by the Tory press, who claimed that any interference from the state into the lives of its citizens was gross paternalism which undermined the whole philosophy of individual freedom. Doctors, on the other hand, wanted greater powers of intervention for ‘state medicine’ put into practice. The Victorian state in Britain continued to expand and became increasingly interventionist.9

So to what extent is the history of St. John’s hospital, founded in 1780 part of this wider pattern? St. John’s hospital followed the trend set by hospitals founded in the early eighteenth century England which enlisted the support of a few aristocrats whose names were published prominently to encourage those of lower social standing to make donations. Friends, relatives and other contacts were also tapped for their support. Benefactors became hospital governors, who elected a dozen or so of their number to supervise the hospital.10 However, there were also notable differences. St. John’s was founded before the French revolution to care
for fever patients, who, as we have seen, were excluded from general hospitals. The medical men employed there were paid a salary, nevertheless, their motivation would appear to be the Irish notion of Christian service to the community, as exemplified in the work of Doctors John and William Geary. The Hartstonges, who were of the ruling class, did not need the social status that might be gained by establishing a hospital, and so firmly was it established that it flourished after their deaths.

The Irish gentry didn't lack humanity, according to Ferrar, but they liked the good life. They grumbled about a small tax 'while Englishmen of the same fortune, and in a much dearer country, pay four shillings in the pound on their rents to support a Poor House in every parish'. It was not until 1772 that the Irish House of Commons passed an Act, establishing Poor Houses and Work Houses in every county in the kingdom. Under this Act, in 1773 the County and City grand juries of Limerick presented five hundred pounds for the erection of the House of Industry, to care for, among others, the aged, the feeble poor, helpless infants and lunatics. "A gloomy abode of mingled want, disease, vice and malady, where lunatics were loaded with heavy chains and fallen women bound and logged", is one description of the house. Over the years, as the number of inmates grew, the contributions dwindled. It was pitifully small and harsh but it was a beginning of care for the poor of Limerick.

The first hospital established in Limerick, in 1765, was located outside the City wall, in St. Francis's Abbey on ground given in perpetuity at a peppercorn a year by Edmond Sexton Pery. Fifteen years later St. John's Hospital was founded, in 1780, by his sister, Lady Harstonge, a kind and intelligent woman who, from her visits to comfort the sick poor in their miserable homes, saw the need for an institution which would care for fever patients in a large and populous district. By isolating the fever patient the risk of contagion to other family members was reduced. Cures could be effected through reducing the temperature by bathing, and building up the strength of the patient with nourishing food. Before 1780 there was no provision for the hospital treatment of fever patients "St. John’s being the first building of the kind erected in the empire". They suffered and died in their homes under the combined pressure of poverty and disease. In the eighteenth century the word 'fever' usually encompassed typhoid, typhus and purpura (both confusingly called 'spotted fever'), and relapsing fever, and epidemics were frequent.

Smouldering cases of fever were always to be found in the poorer districts of towns. Fever originated among the lower classes, but was not always confined to them. Trying to make sense of epidemics Barker and
Cheyne, two Dublin physicians, who wrote a contemporary account of the recent fever epidemic, (in 1821) said:

That certain classes of disease arise suddenly among a people previously healthy, and having increased for a series of months or years, then gradually decline or altogether disappear is well known to every observer. The causes which render sickness at certain times thus epidemical, are also in some instances sufficiently obvious. ….. But why fever, which is at all times present in countries where many or most of the inhabitants must be susceptible of its attacks, should at particular times become epidemical, does not so easily admit of explanation.  

Before the discovery of microbial pathogens late in the nineteenth century, the prime source of disease was believed to be ‘miasma’; - poisonous gases given off by unhealthy environments such as stagnant water, body odours and rotting animals and vegetable matter. Dr. Bernard Kavanagh, writing in 1863 on the sanitary state of Limerick, quotes Doctor W.J. Cox, an eminent writer on sanitary science:

animal and vegetable emanations are a fruitful source of zymotic disease; that these noxious agents operate as causes in regard to the whole class of epidemics; that what will, in one place, develop the exciting cause of typhus, will, in another, produce scarlatina, smallpox, or cholera: and that the baneful gases which constitute the pablum of zymotic poison, are constantly being generated in places abounding in filth.

Dr Geary, senior physician in St. John’s hospital, likewise, accepted that contagion spreads disease; he also observed on numerous occasions, new outbreaks which he could ultimately trace to the poor. Believing that overcrowding and filth caused disease, he claimed that it began through the ‘concentrated putrid air’. The dwellings of the poor were a source of ‘concentration of the putrid effluvia’, produced as a result of keeping pigs, grains, beer, and a heap of fermenting potato skins in a small room, ‘adding to the impurity of the air’. Walking through the parishes of the old town, or even some of the leading streets of St. Michael's parish, he encountered in each ‘a quantity of concentrated putrid matter, sufficient to impregnate the circumambient air with contagious effluvia, and thus, in an already enfeebled and wretched population, engender and propagate infectious disease’. An outside agent was not always thought necessary as noxious vapours, by reaction, produced fever in the very body they arose from. Dr. Geary believed that famine was an important predisposing factor rather than a ‘cause’ of fever. In medical terms, we now know that the ‘cause’ of typhoid, typhus, dysentery, smallpox, etc., was
quite different in each case but, doubtless, malnourishment was a major predisposing factor.

Excluding epidemic fevers, tuberculosis was usually the major cause of death in the seventeenth and eighteenth centuries. An ancient disease of humans, it flourished in the crowded and filthy cities of Europe and Asia. It accounted for as many as one-third of all deaths; Bills of Mortality show that 427 out of 2,193 Protestant deaths in Dublin, in 1743 were due to consumption. No figures are available for Catholics, or for Limerick city, but it is probable that they were similarly affected. The colloquial names for tuberculosis, as given in the 1851 Census Report were ‘decline’, ‘decay’ (of youth or manhood), pulmonary consumption, hectic fever, neglected cold, abscess of lung, tubercular consumption, as well as phthisis or consumption. Since none of these terms are mentioned in St. John's Fever Hospital report, can one infer that there were no tubercular patients admitted? Irish folklore suggests that consumptives were kept at home, since people did not know the cause of the infection, or how it was spread. There was also a natural desire of the families affected to conceal the disease, according to Deeny. Tuberculosis caused long-term welfare and economic problems and was normally considered a death sentence. Fever was a symptom of Tuberculosis; other symptoms included night sweats, coughs and difficult breathing, blood-spitting, and loss of weight. Diagnosis was difficult as all symptoms might not be present and none were peculiar to tuberculosis. Continued ill-health was, perhaps, the best indicator of the presence of the disease. It progressed in unpredictable ways. Cases which appeared to be advanced might recover spontaneously while young adults often died very quickly, and for this reason the disease came to be known in the nineteenth century as ‘galloping consumption’. Though it was essentially a young adults disease, it was also found in infants and children – though most died from infantile convulsions, pneumonia, diarrhoea and enteritis. Tuberculosis affects all parts of the body, but pulmonary tuberculosis, in which the lungs are diseased, was most common. Children were more likely to suffer from tuberculosis of the bones and joints which led to crippling, or to tuberculous meningitis which was invariably fatal. The lymph nodes of children were sometimes affected by the disease (formerly known as scrofula), which deformed the features and Lupus which ate away at the face. Alternatively, it could attack the abdomen, the central nervous system, or the skin. Consumption was a disease of the poor who were under-nourished and lived in overcrowded, insanitary conditions. Ingesting infected milk or meat caused the disease and coughing and sneezing spread the infection.
Voluntary hospitals in the nineteenth century generally excluded incurable diseases such as tuberculosis, according to Lynda Bryder, because doctors wanted to show results in terms of cure. This, however, will not explain why the disease is not recorded in the archives of St. John’s Hospital, since it was a Fever and Lock Hospital, and there was no cure for venereal disease at that time. Venereal diseased patients very often remained in the hospital for months, and one patient with a sore leg was kept in the hospital for 313 days. Dr. Geary, writing of the reluctance of the sick to go to hospital in the early days says “the poor of this country are more warmly and affectionately attached to their relatives than those of almost any other”, they preferred to keep the sick members of the family at home and give them personal attention despite contagion.

Contagious disease is that which can be transferred to another person by ordinary social contact, in the home or workplace. All contagious diseases such as measles are infectious, but many infectious diseases, such as typhoid or syphilis, are not contagious (being transmitted by food or water which is contaminated by infected human excreta, or by sexual contact).

The hospital began in a guard house of the citadel of St. John and with just a few beds attempted to prevent the spread of fever by removing patients from their dwellings. In spite of limited funds a decision was taken in 1785 to demolish the guard-house, and erect a new purpose-built hospital. During the rebuilding in the year 1786, the patients were transferred temporarily to a house in the English town by the Abbey River, near Harstonge’s town house, not far from Baal’s Bridge. The present hospital opened for the reception of patients in July 1787. From the outset, large numbers of the sick poor received advice and medicine from St. John’s hospital “and were occasionally visited by the medical officers in their houses, a practice which continued ‘till January, 1797, when a Dispensary was established”. Geary notes from the records that the externs treated were 13,25 to 1 intern or 32,453 to 2,591.

Established primarily as a fever hospital, one ward was set aside for the treatment of women suffering from venereal disease. More commonly called Sexually Transmitted Diseases today, infections are contracted primarily, but not exclusively, by sexual intercourse. Until very recently they were thought to be limited to syphilis, gonorrhoea, chancroid and lymphogranuloma venereum. The latter two are found mainly in tropical countries but St. John’s patients included sailors, soldiers and other travellers, so it is possible that these infections were treated under the generic name of venereal. Herpes is the only named venereal infection.
Syphilis and gonorrhoea were thought to be manifestations of the same infection until 1838 when it was established that they were in fact different diseases. A mother infected with gonorrhoea could transmit the disease to her baby during childbirth. The acquired infection, gonococcal ophthalmia, is a severe inflammation affecting one, or both eyes, but the commonest cause of blindness in children was ophthalmia neonatorum, a non-venereal condition. Children could also contract gonorrhoea by sharing a bed with infected parents.

Syphilis is interesting from a medical and historical point of view. This infectious disease can simulate many diseases in the fields of medicine and surgery; and can be transmitted to children. It has a long incubation period which caused difficulty in diagnosis as a venereal disease, and when the symptoms manifested themselves it was not realized that they were the result of an infection acquired many years previously. It has three stages - primary, secondary and tertiary. Mercury was used to cure syphilis in the sixteenth and seventeenth centuries. Dr. William Wallace of Jervis Street Hospital, introduced potassium iodide to treat the disease in 1835.

Congenital syphilis is an infection acquired during fetal life, from the mother. Unless treatment is given to a pregnant woman in the primary or secondary stage of syphilis, there is little chance that the infant will be born normal and healthy, but ‘this is the disease of exceptions and all kinds of variations are both possible and likely’. Infants who are severely affected by early congenital syphilis have a rash, bone abnormalities, jaundice, enlargement of the liver and spleen, and are very prone to infections such as pneumonia or gastroenteritis. Among other abnormalities which may appear later are deafness, inflammation of the cornea, and peg-shaped teeth.

When Columbus went to America in the fifteenth century members of his crews mixed freely with the local Indian inhabitants, who are believed to be the source of a new infection. By 1521 when Fracastorius wrote his famous poem ‘Syphilis Sive Morbus Gallicus’ and gave the disease its name, it had been spread all over Europe by soldiers and mercenaries returning from America. It was carried by Portuguese sailors to India and the Far East. Syphilis was first recorded as a major epidemic in Europe at the end of the fifteenth century. It raged among the French army. The soldiers returned to their homes, and the disease quickly became known as the ‘French disease’. It was for a time extraordinarily virulent, became milder over time and by the eighteenth century it assumed the form we know today.
Whenever epidemics of fever or dysentery broke out venereally diseased patients were discharged from St. John’s Hospital in order to provide more accommodation for fever patients. The only other Lock hospital in 1841 was in Dublin. Established for females affected with venereal diseases, they were total outcasts from society, and remained and died in the Lock and other hospitals. Because of the moral guilt attached to this disease the census returns would not be accurate and male deaths may have been returned as dying from other causes, such as diarrhoea or dysentery, both of which are frequent symptoms of the latter stages of this disease. Wilde observed a decrease in virulence and fatality in venereal disease between 1820-40.\textsuperscript{36}

Lady Harstonge was the wife of Sir Henry Hartstonge, who was one of the two Limerick County MPs in the Irish Parliament.\textsuperscript{37} To secure permanent revenue for a growing hospital, Sir Henry introduced a bill, which was passed in 1781, making an annual grant of £100.

The hospital was managed by a board of subscribing Governors who appointed from the board a committee of management. In 1850 there were 19 life Governors who originally paid £21 each and 7 annual Governors. While the board was predominantly Protestant ascendancy in composition, the staff, including the hospital doctors, were mainly Catholic. The first Doctor appointed to the hospital in 1780 was Dr. Hassett. He was succeeded by Dr. Crump who contracted typhus fever from one of his patients and died in 1796. Then Dr. Grogan came in 1796 and attended the sick of the hospital until June, 1818. With the increased admissions, convalescent wards were established at his suggestion, to give relief from noise and intrusion and frequency of relapse. To cope with the epidemic of 1801, Dr. John Geary M.D. was appointed as its second physician. The visiting apothecary, Mr. H. W. Baylee, became resident in the hospital and was a member of the Management Committee and treasurer to the hospital. The staff at first consisted of a housekeeper, nursetenders who cared for the fever patients and the victims of venereal disease, and a porter.
Notes

2. Ibid.
4. Ibid. p 116.
5. Ibid. pp 58-61.
8. Ibid. p 117.
9. Ibid. pp 77-78, 112
10. Granshaw, Medicine in Society p 201
12. Ibid. p 223.
17. Ibid. p 24
23. Deeny, Tuberculosis in Ireland p 11
25. Ibid.

Ibid. pp 22-23.

Geary, *A Historical and Medical Report* p 23


Geary, *A Historical and Medical Report* p 15.

Ferrar, *The History of Limerick* p 137 The Swallow Packet, bound for Madras, sailed on February 21, 1781 from the port of Limerick.

Ambrose King and Claude Nicol, *Venereal Disease*, (hereafter King and Nicol, *Venereal Disease*).

King and Nicol, *Venereal Disease* pp 214, 215.


W. R. Wilde, Esq. Reports of the Commissioners appointed to take the Census of Ireland for the year 1841, p xxiv,

Prior to the Act of Union.
Plan of the city of Limerick 1787 Ferrar.
CHAPTER ONE

POVERTY AND PUBLIC HEALTH - LIMERICK 1750 - 1800

From the Treaty of Limerick to the insurrection of 1798 Ireland enjoyed a period of relative internal peace, troubled only by local, though sometimes serious, agrarian disorder. After the siege of Limerick, the inhabitants, who numbered about 11,000, reconstructed their houses and for sixty years a strict discipline was observed in the garrison. Strong walls and seventeen gates, which were locked nightly and every Sunday, encompassed the medieval city, preventing a free circulation of air through its narrow alleys. The city consisted of two towns joined by Baal’s Bridge, which spanned the Abbey River. The Englishtown on King’s Island, with 218 houses, covered an area about twice the size of the Irishtown, which had 111 houses, predominantly stone built or ‘cagework’ (timber-framed houses filled with wattle and daub) structures, interspersed with thatched cabins. One street, with each section known by a different name, ran the entire length of the city from St. John’s Hospital to King John’s Castle. They were John Street and Broad Lane (now Broad Street), Baal’s Bridge and Mary Street. The oldest part of the city was the Englishtown (a c.1589 map shows the walled circuit of the Irishtown enclosing many gardens and orchards) and the newest Newtown Pery. In general, the older parts of the city had the most decrepit housing, decaying into densely packed warrens of the swarming poor.

Between 1731 and 1773 Philip Roche, one of the richest merchants in Munster, built a great many warehouses which transformed the Mardike (now Maradyke), and the slobland surrounding it, into Maradyke and Assembly, (now part of Charlotte’s Quay), and Custom House and Arthur’s Quays. He also built houses on Patrick Street and Rutland Street, while Patrick Arthur, built a uniform row of houses along Arthur’s Quay. A new bridge linking the Englishtown to the quays was constructed in 1761, and was replaced by Mathew Bridge in 1846. The city wall between Baal’s Bridge and Quay Lane now Bridge Street was removed,
creating George's Quay, and in 1764 the quay was extended to the canal. A plan for raising the new city of Newtown Pery, at South Prior’s Land, was formed and the population of Limerick started to grow more rapidly from this point on.

The following graph may, in fact, have significantly underestimated the city’s population. A well-informed contemporary like Geary could plausibly maintain that the population of the city was 100,000 in 1820; more than three times the census figure! What matters here is not the absolute figure but the trends suggested by the data of rapid increase, tapering off somewhat by the 1820s and 1830s.

![Population of Limerick](image)

**Fig. 1**

The leases granted by Pery reveal that the area by the river was first developed, followed by the turnpike road leading south from Mungret gate. The overall Newtown Pery development was completed around 1830. The new town would in the course of a few years replace the old. It was advantageous to trade outside the city walls where the corporation could not levy taxes, but it was detrimental to the medieval city and led ultimately to its decay. This decay was compounded by high tolls which,
apparently, deterred many producers from selling corn in the city; Mr. Richard Parsons, a local landlord writing in 1761, complained of the “Corporation vampires”

in short, they have made me tired of farming, for I can assure you on oath, that these twenty years back except the last two years, that I sent into Limerick upwards of five hundred barrels of corn, but I was so oppressed with the usage I got in Limerick that I would not be any longer in their power, and have entirely quit tillage, nor have I sent one barrel of corn into Limerick those two years past, or ever will till the times alter.

The Mayor, Sir Christopher Knight, in 1786, tried to improve the older city. It was paved and lighted with globe lamps. The ancient projecting windows, pent houses and signs were taken down, and streets named and signs fixed at street corners.

The relative peace and stability provided conditions for the growth of commerce and it flourished by 1740, trading with England, Holland, France, Spain, and the West Indies. The meat trade was enormous. Cattle were bought at Ballinasloe Fair, slaughtered in Limerick and the meat salted. It was then exported, supplying naval contracts and the West Indies. Other exports in 1776 included pork, butter exported in casks, hides and rape-seed. With such a trade in meat there must have been a good deal of offal available to the lower classes. The price of food items noted by Young (in 1776-78) are as follows; trout and eels sold at 2d. a pound and salmon at 1 1/2d.; wheat, 1s. 1d. a stone; barley and oats, 5 3/4d. to 6d. a stone. A 20 tons boat load of turf, cost 45s. A labourer would earn about 8d. per day. Even the moderately well-off could afford servants and keep a carriage and there were seventy privately owned carriages in Limerick by 1770. There was work for two coach-builders and a coach spring maker, for several victuallers and of course many labourers to load and off-load ship’s cargo. Males and females, in great numbers, were employed in J.N. Russell’s linen factory on the North Strand.

During the latter part of the eighteenth century, for want of other quantitative information, the health of the army may serve as an indication of the health of the community at large. Limerick was the headquarters of the south-western military district, and had four army barracks - the Castle barracks in the Englishtown, the New barrack beyond Newtown-Pery, the Artillery barrack, in the Irishtown, and an Infantry barrack, in St. John’s Square. Between them they could quarter 64 officers, 1,285 infantry and cavalry, and 158 horses. The hospitals could accommodate 124 patients and a military prison, in the new barrack, has 6 cells. Until the
commencement of the Crimean War in 1853 the garrison consisted of three regiments of infantry.\textsuperscript{10} Exact numbers are not available as the strength of each company varied considerably. By keeping strengths low the government could maintain the maximum number of battalions at the lowest cost. In time of war, it was simpler to expand existing battalions than to create them from scratch.\textsuperscript{11} Several regiments were stationed in Limerick where the markets were well supplied, and provisions cheaper than in other Irish cities.\textsuperscript{12} In 1757, for the first time since the siege, English regiments enlisted Catholic soldiers in Limerick.\textsuperscript{13} Three years later, Limerick was declared to be no longer a fortress and work on dismantling its walls and other defenses began.\textsuperscript{14} The pace of expansion outside the medieval boundary quickened. The troops were generally in billets or temporary barracks, and consequently mixed more with the poorer classes from whom they contracted fevers and venereal diseases. English and Scots soldiers frequently suffered greatly from fever or dysentery, during the greater part of their first year’s residence in Ireland.\textsuperscript{15} Married soldiers lived out of barracks with their families, in the poorer parts of town, prey to whatever disease stalked the lanes and alleys of Limerick.

On 27 of December 1739 an intense frost accompanied by a piercing East wind set in and continued with little interruption for forty days. It was followed by unparalleled miseries. The Great Frost played havoc with the potato crop, and the ripened potatoes left in the fields were rendered inedible as a direct result of being frozen.\textsuperscript{16} Food was so scarce that the following summer wheat sold for just over 2 shillings a stone or more than double the normal price. While food prices doubled other prices plummeted. Land and wool prices tumbled, while a boat load of best turf could be had for 14s. 1740 saw the onset of famine, which continued into 1741 when fever, which had been frequent, became epidemical and raged throughout the country. 400,000 people are reported to have died of famine and disease in Ireland\textsuperscript{17}. The mortality was greatest in Munster where the poor were even less-well provisioned than elsewhere. St. Mary’s cathedral Parish in Limerick recorded burial levels at this period greater than four times the 1737-39 average, peaking between February and July 1741\textsuperscript{18}. In Limerick:

A man might walk from John’s gate to Thomond bridge without meeting six persons then. When the victims of cold and its attendant starvation became so numerous, that coffins could not be provided in sufficient quantities or with sufficient quickness, a bottomless coffin was provided,
from which the corpse was thrown into the grave, and hundreds of the
dead were interred in this way.\textsuperscript{19}

According to Lenihan, the poor ate anything that would sustain them,
including cats, dogs, mice, carrion, putrid meat, and nettles, and when they
died of starvation their bodies lay unburied in the public streets. By the
beginning of 1741, the accumulation of months of bad food, malnourishment
and insanitary living conditions produced a number of epidemic diseases.
John Rutty, an English-born Quaker doctor, identified four - smallpox,
‘bloody Flux’ (dysentery), malignant or spotted fever (i.e. typhus), and
intermittent fever (relapsing fever) - each with a distinctive pattern or
symptoms.\textsuperscript{20} The first was an outbreak of smallpox following the long
drought of the spring of 1740, when a surge in vagrancy accelerated the
spread of the infection. Death by smallpox, was sometimes double,
sometimes even triple that of fever in Dublin in 1740.\textsuperscript{21} Smallpox, a
highly infectious viral disease, transmitted from person to person was
characterized by an illness resembling influenza and a rash that spread
over the body and eventually developed into pus-filled blisters. The
blisters became crusted and would sometimes leave deeply pitted scars.
Complications included blindness, pneumonia and kidney damage. There
was no effective treatment for the disease which killed up to 40 per cent of
its victims.\textsuperscript{22}

In the south of Ireland, Dysentery, ‘the bloody flux’, (so-called because
of the frequent passage of bloody stools) was the primary scourge, first
among the poor, then among other classes. The disease is caused by the
dysentery bacillus and the infection is spread by flies, attracted by the
stagnant pools for making dung-pits beside their doors, and by
contaminated food or water. The disease would last from a few days to a
fortnight, bringing with it extreme nausea, aching limbs, fever, colic,
extremely painful intestinal ulceration and possibly internal gangrene, and
bloody diarrhoea.

‘Continuous’ fever appeared in the final months of 1740; this may have
been typhoid fever, and there were outbreaks of relapsing fever. The
principal killer fever of 1741 was typhus. Both typhus and relapsing fever
are caused by the infected faeces of human body lice, which breed in the
squalid and over-crowded conditions of the cold and hungry poor. The
typhus infection can enter the body through scratches on the skin or by
inhalation, while relapsing fever is generally contracted through the skin.
Typhus symptoms include under-skin haemorrhages and a prominent rash,
high temperatures, bloodshot eyes and delirium. The immediate cause of
death was usually heart failure. High temperature, generalised aches and
pains, nausea, vomiting, nose bleeding and jaundice are features of relapsing fever. The fever ends after five or six days with a sharp crisis attended by profuse sweating and exhaustion. The symptoms return after about a week and there may be several such relapses before the disease runs its course. The official response to the crisis was to advocate public works which could employ all that would work, (since charity encouraged idleness), and clear the country of vagrants. This was a cruel response to the enormous food shortage, as most of those in need were too sick and debilitated to work. From the poor the fever spread to the rich and the Mayor of Limerick, Joseph Roche, Esq., was one of its victims. The first attack was usually mild and thought to be merely a common cold, with a slightly faster pulse rate during the first six or seven days. As the disease advanced most of the patients exhibited petechia; and later still delirium or even frenzy, followed by coma. Symptomatic sweats produced no relief in this fever.

The ulcerated sore throat - which came to be known as Diphtheria, was very malignant and fatal to children in 1743, particularly in the countryside. Diphtheria is an acute bacterial illness that causes a sore throat, fever, and sometimes more serious or even fatal complications. It was a major cause of childhood death worldwide until the first half of last century. It was necessary to cut the windpipe and insert a tube through which the child could breathe until the terrible infection passed, though even then the child frequently died.

There was a marked increase of fever which began in the summer of 1771 and peaked towards the end of 1772. It resembled continued fever except that it was accompanied by a tremor of the whole body, incessant delirium, clammy and foetid sweats, and the petechiae were almost black. That this was associated with privation is suggested by the fact that a riot broke out in Limerick on May 12, 1772, when a famished crowd attacked the lock mill looking for bread. The Mayor, Mr. Christopher Carr, called out soldiers who shot dead three rioters. The following day, rioting brought the 24th regiment into the main street of the Irishtown where three more people were killed.

During 1786-87 and again 1791-92, a deadly ‘putrid fever’, as it was called, was widespread in Limerick, among all classes of society. According to Geary, this was typhoid, and was endemic in the city. The first symptom is usually severe headache, followed by fever, loss of appetite, malaise, abdominal tenderness, constipation, and often delirium. If treatment were delayed, severe or even fatal, complications developed. Typhoid is infectious but not contagious, being spread by contamination of