Disease Epidemics in Limerick, 1910-1915

by Margaret Buckley

At the beginning of the twentieth century urban centres such as Limerick, suffered immensely from an almost constant stream of epidemics. From the ever present tuberculosis to seemingly less serious infections like influenza, epidemics were common-place. The impact on the people of Limerick city can be tracked using the excellent burial records of Mount Saint Lawrence Cemetery in conjunction with contemporary official reports. Those affected most were the children, especially those aged under 10 years.

During the six years 1910 to 1915 inclusive, no fewer than four separate epidemics affected the children of Limerick city: pertussis (whooping cough); scarlet fever; typhoid fever; in conjunction with dysentery; and the most virulent of all, measles. Many of the vaccinations, taken for granted today, had not yet been discovered. Poverty, overcrowding and at best questionable public sanitation meant that such disastrous epidemics occurred with frightening regularity.

Mount Saint Lawrence Cemetery records provide a unique representation of the people of Limerick through wars, political upheaval and changing policies which directly impacted their lives and on examination of the records the legacy of disease becomes obvious.

During the six years 1910 to 1915 the records show a total of 1,139 burials of children aged under 10 years. The deaths are divided by month of burial in graph 1.1 and the spikes may be attributed to outbreaks of disease in the city. By any standard, it is an appalling rate of child mortality.

Whooping Cough

The first serious onset of infectious disease, which occurred between January 1910 and January 111, was whooping cough and it appears to have occurred in three main waves: the first in January 1910, the second in September 1910 and the third in January 1911. The Sunday Independent published a segment, on 12 January 1913, with a number of epigrams related to diseases, which presumably were meant to be both morbidly humorous while also acting as warnings. One read: ‘Whooping cough is a grave disease’. This black humoured remark was not without foundation. Pertussis is a highly contagious disease that spreads by people breathing and coughing near one another. In adults, the disease presents with the symptoms of a common cold. In children, it begins as a cold which lasts a week or two but the cough steadily increases in severity and in more and more distressing spasms. A coughing spasm may last up to thirty minutes with a second starting within minutes of the first ending. As the infection worsens, the child may turn blue during these spasms and lose consciousness. Patients typically have no appetite and lose weight rapidly. The severe coughing may cause bleeding in the lungs, throat and nose which in turn may cause suffocation. In 1910, whooping cough accounted for a shocking total of 1,257 child deaths in Ireland, with 33 registered deaths accounted for in Limerick city, which was three times the average number of 11 deaths from whooping cough for the preceding and succeeding five years. Given that a vaccination for whooping cough was not available until the 1960s, it is sadly not surprising that so many deaths occurred from this now preventable disease. Even today, with a vaccine available, once the infection is contracted there is no specific cure for the disease. In developed countries today, two percent of those infected die while an additional ten percent have lasting consequences.

Scarlet Fever

Between March and September 1914, scarlet fever, also known as scarlatina, wrought dreadful damage. It spreads in much the same way as whooping cough, through coughing, sneezing or simply breathing. The Sunday Independent ran another black-humoured epigram, this time related to scarlet fever. Scarlatina may not sound as dangerous as scarlet fever, but ask the undertaker. Today, there is still no vaccination for scarlet fever mainly because it is caused by the relatively common streptococcal bacterium. However, it can be successfully treated with antibiotics such as penicillin. The symptoms of infection tend to occur in waves. Firstly a sore throat and fever will last for a few hours to two days. Secondly, the person will experience chills, aches, loss of appetite and nausea. Thirdly, the characteristic ‘scarlet red’ rash begins to appear. The rash itself is caused by the skin’s reaction to toxins secreted by the bacteria. It forms bright red pin size dots on the face and neck before spreading to the rest of the body. The rash then merges to form a more solid red rash which covers the torso and body. The tongue may become red and swollen, as will the tonsils. Being such a serious infection, it was classified as a notifiable disease in late nineteenth and early twentieth century Ireland, meaning that if any outbreaks should occur, the Medical Superintendent of Health should be alerted. From this notification system, we know that in 1914, 101 cases of scarlet fever were reported in Limerick city as opposed to 22 in 1913. Of the 101 reported cases, there were 14 fatalities which was almost five times the average mortality rate which was three. It is possible that not all of the deaths were due to scarlet fever, but can be attributed to a number of complications that may arise from the infection, such as nephritis (inflammation of the kidneys); pneumonia; rheumatic fever and abscesses of the throat, which often followed the disease.

Typhoid Fever and Dysentery

There was clearly a very serious epidemic in August 1911. Unlike outbreaks in other diseases the high death rate was not as easily attributable to a single cause. Through examining the reports of the Registrar General, it became apparent that it was not one particular infection but two: typhoid fever and dysentery. Both of these diseases are contracted through contact with bacteria found in sewage. In essence, these deaths were a direct result of inadequate public sanitation, bad housing conditions and poor hygiene. Typhoid fever is also known as enteric fever as it occurs in the intestine. Outbreaks of the disease still occur in parts of Asia, Africa and South America. The symptoms include fever, headache, tiredness, cough, sore throat, abdominal pains and constipation. After a day or two, the constipation gives way to diarrhea. Complications of the infection include intestinal bleeding and intestinal...
Graph 1.1 -
Burials of children
under 10 years, in Mount Saint Lawrence Cemetery
(1910-15)
perforation. In severe cases, the infection has been known to spread to the lungs, kidneys, brain and gall bladder. There is a vaccination available today but it is by no means a permanent solution as it only gives three years protection. Treatment involves intravenous fluids and antibiotics. Luckily, in Ireland today, typhoid fever is rare in the extreme. Dysentery (also known up until the nineteenth century as the ‘bloody flux’) is similar to typhoid fever in that it is also contracted via contact with bacteria found in sewage and that it also affects the intestines. The bacteria penetrate the lining of the intestine causing swelling, ulcerations and severe diarrhea which contains blood and pus. While the main symptom is diarrhea, other symptoms in children include fever, nausea, abdominal cramps and vomiting. The vomiting coupled with severe diarrhea serve to rapidly dehydrate the victim, which leads to shock and death if untreated. Other complications include delirium, convulsions and coma. Even today, young children (most commonly aged between one and four) living in acute poverty around the world are likely to contract dysentery. Treatment includes antibiotics and fluid replacement.

While fluid replacement would have been practised in cases of both typhoid fever and dysentery in Limerick in 1911, antibiotics were not readily available. Penicillin was not available for medical purposes for another twenty years. In August 1911, 16 deaths of children were attributed to typhoid fever (which was only 3 above the average) and 37 deaths were attributed to dysentery (more than twice the average). Given that this minor epidemic occurred during the summer, the source of contamination may have been drinking water.

Measles

The fourth, and by far the largest epidemic which occurred in Limerick city between 1910 and 1915, was measles. The Sunday Independent had yet another epigram concerning measles: ‘If you let the child have measles when he is young, you may save a doctor’s bill later on, but you may have to pay the undertaker now.’

Much like whooping cough and scarlet fever, measles is spread via coughing, sneezing or simply breathing. The disease is so contagious that if someone is infected, 90 percent of those in contact with them will also become infected if they are not already immune. Unlike the previous epidemics, measles is caused by a virus rather than bacteria. For the first week or so after infection, the patient exhibits no symptoms. After the incubation period, the symptoms are coughing; fever; runny nose and redness around the eyes. Two days after the initial symptoms appear, red spots appear on the inside of the mouth and two days after that red blotches appear behind the ears, on the forehead and face which then spread to the rest of the body. Unlike many infections, measles continues to be contagious for the duration of the illness. Complications of the disease include pneumonia, ear infections, hepatitis, appendixitis and encephalits (infection of the brain). Once infected, the treatment is symptomatic due to the fact that the disease is caused by a virus rather than bacteria. Unfortunately, modern drug treatment was not available in 1912. Paracetamol did not come into widespread use until the 1950s and ibuprofen became widely available in the 1960s.

The numbers of deaths in Limerick due to measles are quite apparent in graph 1.2. The numbers of burials of children under ten, in Mount Saint Lawrence Cemetery during these same years are depicted in graph 1.3 and mirror the official reports.

A monthly analysis for 1912 reveals a high rate of child deaths, and the autumn was the season in which measles struck, specifically the month of October. As illustrated in Graph 1.4, the number of burials of children aged between one and five began to rise steadily in July, with a sizable peak in October and the rate of burials did not return to ‘normal’ standards until December. There is also a small but still noticeable rise and subsequent decrease in the number of babies under the age of one year buried during this timeframe.

Graph 1.5 reveals the ages most affected by the measles epidemic were children under four years. The consistently high rate of infant mortality from 1910 to 1915 is apparent in Graph 1.5. The total number of children under the age of ten who were buried in Mount Saint Lawrence Cemetery in 1912 is 286. The average for the preceding and succeeding three years is 170. This gives an approximation of 116 children who died of measles and were buried there in 1912.

Deaths From Measles

<table>
<thead>
<tr>
<th>Year</th>
<th>Measles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910</td>
<td>16</td>
</tr>
<tr>
<td>1911</td>
<td>13</td>
</tr>
<tr>
<td>1912</td>
<td>42</td>
</tr>
<tr>
<td>1913</td>
<td>23</td>
</tr>
<tr>
<td>1914</td>
<td>35</td>
</tr>
<tr>
<td>1915</td>
<td>12</td>
</tr>
</tbody>
</table>

Graph 1.2 - Number of deaths in Limerick due to measles (1908-1915)
(Data extracted from Register General reports, 1910 - 1915)
Graph 1.3 – Number of burials of children aged under ten (1910-1915)
(Data extracted from Mount Saint Lawrence burial records)

Graph 1.4 – Burials of children in MSL in 1912 by age cohort and month. (Data extracted from Mount Saint Lawrence burial records)
**Burials of Children by Age**

Graph 1.5 – Burials by age in MSL, 1910-1915. (Data extracted from Mount Saint Lawrence burial records)

Each column represents years 1910-1915

### Contemporary Accounts

Unfortunately, given that there were so many epidemics in Ireland at this time measles was relatively under reported, with the more virulent diseases, such as tuberculosis taking precedence. According to an article in the _Irish Independent_ on 22 September 1913, the measles epidemic accounted for 3.29 deaths per thousand of the population of Limerick. It was also speculated that it accounted for the increased death rate in the city generally of 20.4 per thousand, in comparison to 16.4 in 1911. The Medical Superintendent Officer for Limerick, Dr. Michael McGrath, states in the same article that 127 children died in Limerick as a result of the disease (which corresponds with the increased burials in Mount Saint Lawrence Cemetery). In November 1912, the _Limerick Leader_ published an article dedicated to the epidemic which summed up the effect on the city.

The juvenile population of Limerick has been sadly decimated during the past few months, an unusually bad epidemic of measles having; it is understood, accounted for the deaths of no fewer than some 100 children within that period. The citizens had become painfully familiar with the pathetic spectacle of as many as eight or ten funerals wending their way to the New Cemetery. The number has now happily decreased and there are grounds for hoping that the disastrous malady has run its course in the city.

The under-reporting of the measles epidemic in both national and local newspapers can be accounted for by the sad reality that child deaths in Ireland during this time were so commonplace that many went unregistered. Non-registration may be attributed to both the frequency of child and infant deaths and the widespread poverty at the time (it cost a shilling to register a birth or death).

Given that an effective measles vaccine was not available until the 1960s, holistic and home remedies were commonplace. Advice was given in the _Donegal News_ that the inside of the child's mouth should be washed with antiseptic, Vaseline should be rubbed on the skin and the child should be bathed in borax solution and that 'medical treatment is purely symptomatic'. It is astonishing that during an epidemic such as this, medical intervention was of little help.

The annual reports of the Registrar General are illuminating when it comes to epidemics and prevalent diseases. According to the annual report for 1912, Limerick had the dubious honour of having the highest rate of infant mortality nationally. Likewise, in regard to the measles epidemic, Limerick was second only to Dublin in the number of children who died from the disease that year, as 16.73 percent of all of the measles deaths in Ireland occurred in Limerick city.

On a more localised front, the _Annual Report on the Health and Sanitary Condition of the City of Limerick_ in 1912 allows for a more in-depth look at this epidemic in Limerick. Regarding the substantial infant mortality rate mentioned in the report of the Registrar General, Dr. Michael McGrath writes that the causes are two-fold. Firstly, the increase can be attributed to the measles epidemic.
and secondly he postulates that the giving up of breast feeding before the age of one year coupled with the lack of instruction given to young working class mothers may account for the large infant mortality rate. Interestingly, he suggests the establishment of a 'Baby's Club' in Limerick to address the issues. He also states that the high number of deaths occurring from measles could be attributed to complications arising from secondary infections leading to bronchopneumonia. He goes on to state that complications such as this usually arise where the necessary nursing care cannot be provided and that it is more marked in the poorer classes 'amongst whom the disease proved most fatal'.

Geographic Analysis

Leading on from Dr. McGrath's speculation that higher rates of mortality occurred during the measles epidemic in poorer areas of the city, Graph 1.6 shows the number of children buried during 1912 by Ward and includes hospitals, the workhouse and institutions. It would seem that Ward 6 (Irishtown) was worst affected by the epidemic. According to the 1911 census, the main occupations listed for Irishtown were labourer, factory hand and servant.

It is of little surprise that Ward 6 (Irishtown) bore the brunt of the epidemic given the chronic overcrowded living conditions in the area. Table 1.1 shows the housing situation in each of the eight Wards in Limerick city at the time. Irishtown was the most densely populated with 89.57 people per acre. (Source: see endnote 12)

This breakdown gives a total of 3,054 people living in tenements in Limerick city and an average of three people per room. In such conditions, it is not surprising that disease and infection were rife.

As to the city itself, in 1912 there were 11,842 cartloads of manure and 23,075 cartloads of mud removed from the streets of Limerick, and an additional 8,405 loads of water were brought to the city during the summer to keep down the dust. The mud and manure coupled with a lack of 'public conveniences', bins and the continued use of ash pits meant that many of the streets of Limerick were filthy and unsanitary. Limerick City Council did try to clean the streets, and hired people to do so, however, until the people of Limerick had access to facilities, disease and infection would continue. Dr. McGrath notes that there were no public wash houses or bathing facilities except those at the Island Bank (which could only be used in summer), he states: '...no community can be said to be properly equipped from a public health point of view, so long as it does not possess such means of securing personal cleanliness'.

The epidemics which struck Limerick city from 1910 to 1915, and especially the measles epidemic of 1912, were catastrophic events for the city. It is difficult to imagine in the contemporary world of vaccination, healthcare and sanitation that diseases which are now preventable would be responsible for the deaths of so many children. However, when one realises what life was like in a world of widespread abject poverty, when housing, sanitation and facilities, such as plumbing, were luxuries enjoyed by the few, it is less surprising that so many epidemics occurred.

The knowledge that medical treatment was ineffectual in the face of measles rampaging through the city must have left the people of Limerick feeling impotent and powerless.

The burial records of Mount Saint Lawrence are a constant reminder to us of a horrific era and conditions which hopefully are in the past. It must be remembered that of the 3,846 people buried during this timeframe, 30.6 percent of the total were children, and most died of preventable causes. Even less comprehensible is the fact that many of these
children's deaths could have been prevented by better infrastructure, healthcare, housing and welfare structures. It was not until the late 1950s when the maternity hospital and the general hospital opened that infant and child mortality figures dropped dramatically. The pain experienced in Limerick from 1,139 child deaths between 1910 and 1915 can only be guessed at and is in sharp contrast to a total of 51 children under the age of 10 that died from all causes in Limerick city between 1995 and 2000.16

Table 1.1 – Population and overcrowding arranged by Ward

<table>
<thead>
<tr>
<th>Ward</th>
<th>Ward Number</th>
<th>Population</th>
<th>Inhabited Houses</th>
<th>Average number of people per house</th>
<th>Average number of people per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbey Ward</td>
<td>1</td>
<td>5,085</td>
<td>776</td>
<td>6.55</td>
<td>6.17</td>
</tr>
<tr>
<td>Castle Ward</td>
<td>2</td>
<td>5,179</td>
<td>901</td>
<td>5.74</td>
<td>7.28</td>
</tr>
<tr>
<td>Custom House Ward</td>
<td>3</td>
<td>3,264</td>
<td>359</td>
<td>9.09</td>
<td>64</td>
</tr>
<tr>
<td>Dock Ward</td>
<td>4</td>
<td>8,125</td>
<td>1,244</td>
<td>6.5</td>
<td>18.42</td>
</tr>
<tr>
<td>Gelligworth Ward</td>
<td>5</td>
<td>4,489</td>
<td>779</td>
<td>5.7</td>
<td>27.04</td>
</tr>
<tr>
<td>Irishtown Ward</td>
<td>6</td>
<td>5,643</td>
<td>849</td>
<td>6.04</td>
<td>89.57</td>
</tr>
<tr>
<td>Market Ward</td>
<td>7</td>
<td>3,219</td>
<td>415</td>
<td>7.75</td>
<td>43.5</td>
</tr>
<tr>
<td>Shannon Ward</td>
<td>8</td>
<td>3,514</td>
<td>484</td>
<td>7.2</td>
<td>61.64</td>
</tr>
</tbody>
</table>

(Source: see endnote 11)

To understand the possible contributory factors to epidemics, such as measles, living conditions in Limerick at the time must be studied. Tenements were commonplace in the city. In 1912, Dr McGrath compiled a table to publicise the number of families living in one-room tenements in Limerick. Table 1.2 is a recreation of this table:

Table 1.2 – People living in One Room Tenements by family size

<table>
<thead>
<tr>
<th>Total number in the city: 1,005</th>
<th>1 Person</th>
<th>2 People</th>
<th>3 People</th>
<th>4 People</th>
<th>5 People</th>
<th>6 People</th>
<th>7 People</th>
<th>8 People</th>
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<td></td>
<td>247</td>
<td>243</td>
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<td>28</td>
<td>19</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Endnotes:

1. Victoria J. Fraser, Laurence Bad, Elizabeth Liebser, Gregg Y. Lipschik, C. Matthew Peterson, Diseases and Disorders (New York, 2007)
2. Sunday Independent, 12 January 1913.
3. Fraser et al., op. cit.
4. Ibid.
5. Ibid.
7. Fraser et al., op. cit.
8. Figures taken from the Registrar Generals reports, from 1910 to 1915.
9. Limerick Leader, 15 November 1912.

Margaret Buckley is an Irish Research Council postgraduate scholar in UCC. Her family has roots in Limerick city since the early 1800s, so she naturally looked to Limerick for her undergraduate research topic – Spanish Influenza 1918-19. The richness of data in Mount Saint Lawrence Cemetery led her to her current Ph.D. study, considering the impact of social policy development on people of middle age and older in the formative period from 1875 to 1925. She is interested in all aspects of social history, especially epidemiology, housing, healthcare and poverty.