A Second Wave: Perspectives on Pandemics Past

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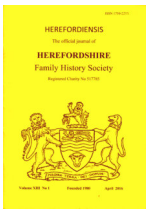


This article first appeared in *Herefordiensis*, Vol XIV, No. 8, pp258-263 (January 2021)

As I write this at the end of September, we are facing a second wave of the COVID-19 pandemic. I thought it would be instructive to research how past pandemics affected our Herefordshire ancestors. I've therefore researched the cholera pandemics of the 19th century and the Spanish flu one of 1918-19.

Cholera

Cholera is a waterborne disease in which bacteria infect the small intestine, resulting in diarrhoea followed by dehydration. Death can occur within 8 hours of infection. The first cholera outbreak was in Bengal in 1817 and since then 7 major pandemics have been recorded. The World Health Organisation estimates that even today between 1.3 - 4 million people are infected each year with 21,000 - 143,000 deaths.

Britain avoided the first pandemic but had epidemics in 1831-2, 1848-9, 1854 and 1865-6. The initial epidemic did not seem to affect Herefordshire, though because general registration of deaths had not yet been established exact figures for deaths, if any, are hard to come by. The *Hereford Times* of 8th September 1832 notes:

> "It has been remarked, that the cholera is pursuing its devastating tract along the banks of the Severn, but that not one case has appeared in any town on the banks of the Wye."

Another report comments "We rejoice to congratulate our fellow citizens on the escape of this City [Hereford] from this dreadful affliction". The most serious of all the epidemics was in 1848-9 where the registrar general reported 55,227 deaths, all but 1,934 of them in 1849. Herefordshire, however, saw only three deaths, two in 1848 and just one in Leominster in 1849. It also fared well in the next two epidemics with only one death in 1854 and two in 1866. In 1848-9 only Radnorshire and Westmorland did better with two and one deaths respectively. Neighbouring counties recorded deaths ranging from 104 (Breconshire) to 1,481 (Gloucestershire, mostly in Bristol). For comparison London had 14,799 deaths and Wales 4,614. Swansea, Cardiff, Merthyr Tydfil and Llanelli suffered the most – sounds familiar?

Of the cholera death in Herefordshire in 1849, the registrar general's report notes "this case of cholera occurred at Bargates, September 30th, a labourer's son, aged 9". In fact, more died of diarrhoea – 28 in total, 11 in Hereford (five in children under 2), 5 in Fownhope, 3 in Kingsland

and others scattered around the county. The absence of cholera in Herefordshire is explained by William Farr[1] as follows:

> "The county lies high up the River Wye; the population is scattered, and engaged in agriculture; it is out of the line of railways. The common drink of the people is cider".

This epidemic had only one wave. Starting in Sunderland it spread initially via port towns and then to the cities and finally more rural regions. It peaked in August and September 1849 and then "its decline was more rapid than its increase", dying out by late December.

Despite escaping directly, cholera certainly had an influence in Herefordshire. Virtually every week the *Hereford Journal* and *Hereford Times* had reports of it from neighbouring counties and beyond, with over 600 articles featuring it in 1848-9. For example:

> "On Tuesday afternoon a rumour was generally circulated that a sudden and fatal case of Asiatic cholera had occurred in this city [Hereford]". The articles goes on in excruciating detail, but reports that a post mortem showed that the death was due to rupture of the aorta and that "the symptoms in some respects had resembled those of cholera". (*Hereford Journal,* 5 Sep 1849)

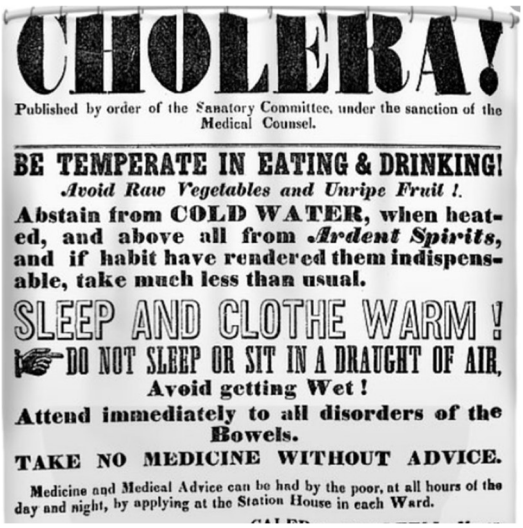
> "Monmouth – This direful disease has happily disappeared, there having been no case since the 18th. Brecon – the disease still lingers in the Union Workhouse of this place. Our Brecon correspondent records two more cases, both fatal, this week." (*Hereford Times,* 30 June 1849)

Hereford families were directly affected. Family notices report the death in London on 7th September of James DEEN whose parents lived in Bridge Street, Hereford, while on the 8th September William POWELL, living in London, but a mason originally from Hereford, also died. He had come to Hereford for his brother's funeral a few weeks earlier.

Finally, near the end of the national outbreak the *Hereford Journal* of 19th December reported:

> "great blessings to the poor of generally of the county of Hereford in their preservation from the ravages of the cholera."

[1] William Farr was employed by the General Register Office and was responsible for collating all medical statistics for England and Wales. He is the principle author of the mentioned report.



CHOLERA!

Published by order of the Sanatory Committee, under the sanction of the Medical Counsel.

BE TEMPERATE IN EATING & DRINKING!

Avoid Raw Vegetables and Unripe Fruit !.

Abstain from COLD WATER, when heated, and above all from *Ardent Spirits*, and if habit have rendered them indispensable, take much less than usual.

SLEEP AND CLOTHE WARM !

DO NOT SLEEP OR SIT IN A DRAUGHT OF AIR.

Avoid getting Wet !

Attend immediately to all disorders of the Bowels.

TAKE NO MEDICINE WITHOUT ADVICE.

Medicine and Medical Advice can be had by the poor, at all hours of the day and night, by applying at the Station House in each Ward.

At the time no one knew exactly how cholera spread, but it was generally felt that living in overcrowded neighbourhoods with poor sanitary conditions affected the spread. Advice from the newly formed Board of Health in London included "avoid irregularities in diet, guard carefully against cold, exposure to wet, especially wet feet". A key message was "temperance, sobriety and cleanliness". In the next epidemic it was "temperance, cleanliness and ventilation". As well as Health Board messages, there was no shortage of advice or 'cures', many emanating from medical professionals. One piece of advice was "avoid above all things, overloading the stomach". 'Cures' included:

- 3 drops of croton oil on sugar
- 15 grains of musk rubbed into sugar with cold water
- One drachm[2] of nitrous (not nitric) acid, one ounce of peppermint water and 40 drops of tincture of opium
- A drip into the blood stream of salt solution and albumen – administered in hospital.

At the time there were many theories as to the cause of spreading. As well as the commonly accepted belief that is was through airborne contagion, other theories included volcanic activity, fungi in drinking water, sexual intercourse and even electricity in the air (the wrong sort of ions; similar to claims that radiation from 5G mobile phone masts causes COVID19!). Alongside these theories was that of surgeon John Snow published in August 1849. He argued that water polluted with faecal matter was the cause. It was only in 1854 that this was verified, when he traced a major eruption in London to users of a specific water pump in Soho.

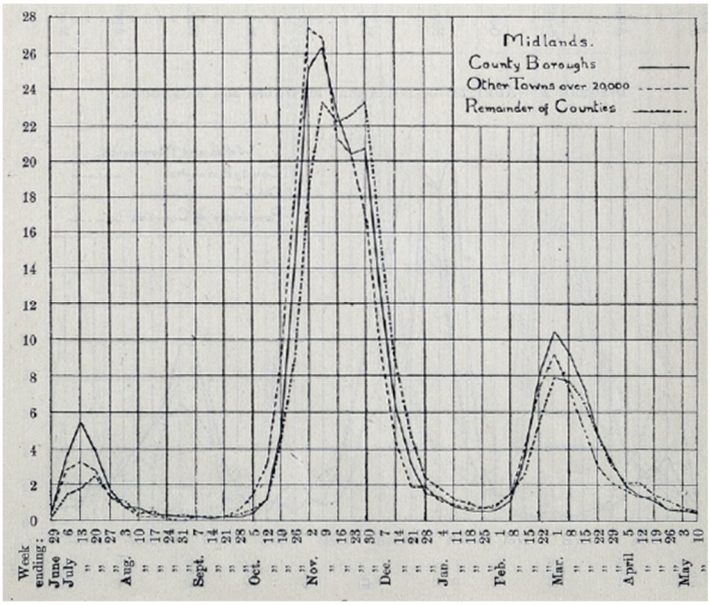
The Spanish Flu

To call it Spanish flu was a bit of a misnomer since the first case was recorded in March 1918 at the army base of Fort Haskill in Kansas. But because of war censorship it was only in neutral Spain that it was first widely reported. It had crossed the Atlantic in troop ships. This flu caused a 3-day fever, headaches, fatigue and aching joints. It was originally thought to be a modification of the bacillus (a class of bacteria) responsible for the plague and it was not until 1933 that it was recognised as a virus. A person contracting it could be dead within hours. Overall there are estimates that 20-50 million people died worldwide, 2-3% of the total population, many more than were casualties of WW1. The death toll in England and Wales was around 185,000 compared to 53,227 for the 1848-9 cholera epidemic.[3]

[2] A drachm is a pharmacist's measure of one eight of an ounce

[3] The figure for Spanish flu is imprecise since it is difficult to separate out seasonal flu and where there were multiple causes of death.

Again a Registrar General's Report (1920) provides incredible detail on the spread of the epidemic by town, week, age and other factors. In Herefordshire there were three waves peaking in the weeks of 20th July 1918, 30th November 1918 and 22nd March 1919, generally 2-3 weeks later than the peak elsewhere. The chart below from this report highlights the peaks for all counties in the Midlands.



The figures are the weekly mortality rates per 1,000 of living population per annum. Looking at each wave the table below compares Herefordshire rates with the whole of England and Wales and the neighbouring counties with the lowest and highest deaths. Note that the figures are for the whole period of each wave which varied in length – 12 weeks for the first, 19 for the second and 15 for the third – and so mortality rates are not directly comparable with the weekly rates in the above chart.

Table – Deaths and Mortality Rates Influenza 1918-19

Area	1st Wave	2nd Wave	3rd Wave
England & Wales deaths	17,500	162,000	4,500
mortality	2.1	12.3	0.4
Herefordshire deaths	16	261	90
mortality	0.6	6.3	2.7
Radnorshire deaths	-	41	14
Gloucestershire deaths	34	845	281

So unlike cholera, Herefordshire was not immune to the Spanish flu, though it generally fared better than the rest of the country. Other than the first wave where the borough of Hereford recorded 10 of the 16 deaths, the county town fared much better than the rest of the county. Of towns in the country of more than 20,000 population (excluding county boroughs) the city's rank in the mortality charts was 159th out of 161 towns for the second wave, slightly higher for the third (139th) and 56th in the first.

Parallels

There are several interesting parallels with the current COVD-19 crisis but also some stark differences. Obviously more and faster global connections today means that COVID-19 has spread from country to country more quickly. Cholera generally spread more slowly but the Spanish flu spread fast, not least because of infected soldiers returning home.

In all epidemics we see good and bad responses from the authorities. The messages were not always clear. In particular there was much conflicting advice given for cholera. Throughout all epidemics there was an emphasis on cleanliness, whether it was disinfecting houses or washing hands. There was also a belief in avoiding contact with sufferers, which today we call 'social distancing'. A study of the 1918 flu at the time showed that social distancing was indeed they key to "flattening the curve". Unlike today it was not enforced in the earlier cholera epidemics (there was no welfare state to fall back on, though collections for the poor were often organised locally). However authorities were more pro-active with the Spanish Flu by enforcing closures of places where people met. (Figure: Social Distancing Victorian Style).

The table below summarises some of the key parameters, then and now.

	Cholera	**Spanish Flu**	**COVID-19**
First occurence	Aug 1817 – Bengal	Mar 1918 - Kansas	Dec 2019 - Wuhan
Arrival in Herefordshire	Unknown[4]	Jul 1918	Mar 2020
Cause confirmed	1854 – faesces in water	1930 – a virus rather than a bacterium	2020 – probably mutation from bat virus
Key messages	"Temperance, cleanliness, ventilation"	"Don't talk to anyone, don't go near anyone, and you are safe!"	"Wash Hands, Cover Face, Make Space"
Deaths - Herefordshire	6	367	127 (to 30 Sep)
Annual mortality per 1,000 population	<0.05	3.61	1.14 (to 30 Sep)

Newspaper reports give some informative insights into how our ancestors coped. However, they tended to focus on the deliberations of councils and health boards rather than the perspectives of ordinary folk. Personal diaries would add this dimension. My own mother's diary does not mention this influenza at all, but she does mention her contracting scarlet fever

[4] Although Herefordshire probably escaped the 1832 epidemic, cholera cases were reported throughout the country in the intervening years before the 1848-9 epidemic. It is therefore quite likely that there was the rare case in Herefordshire before the first recorded death in the summer of 1848.

around this time. She was put into isolation hospital alongside those with diphtheria, and the family home was fumigated.

So it would be good if any readers can share insights from diaries of their ancestors which add this important human dimension to the earlier pandemics. And of course you are recording your experiences during this pandemic for future generations aren't you?

So as we weather the second wave, will a vaccine come in time to prevent a third as happened with the Spanish flu?

Sources

Report on the mortality of cholera in England 1848-9, W. Farr, HMSO (1852). A similar report was published in 1868.

Report on the mortality from influenza in England and Wales during the epidemic of 1918-19, HMSO (1920).

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