

The 1831-1832 Pandemic in Tewkesbury

Pandemic is a word based on ancient Greek roots: *pan* = "across" in the sense of "everywhere" and *demic* is from *demos* = "the people". We still use "pan" in this sense as across many people or all places: e.g. "pan-African". A pandemic was not specifically a disease and it originally implied "vulgar". A "panacea" is an imaginary medicine that works on every disease. A 'pox' is an old word for almost any disease if it has visible signs of infection on the skin, like chicken pox. In earlier times the word "plague" was used for widespread disease, irrespective of the exact nature of the disease or its symptoms. No-one knew what caused disease! Often it was claimed to be an "act of God" - which was a bit unfair on God! The words Epidemic and Pandemic were used interchangeably in the 19th century for any disease that was common or frequent. People did understand that disease could be infectious, transmitted from one person to another, able to travel from place to place, but they did not know how this happened. Often, a disease that was spread by contaminated water or by fleas seemed to be contagious. Our forefathers understood that some diseases could be contained by isolation. They were also aware that diseases spread most easily in poor people who lived in cramped and dirty accommodation.

Then, in the mid-19th century understanding began to emerge. No-one really knew about diseases transmitted by water until 1854 (John Snow). Also in 1854 the cholera bacterium and other micro-organisms were first observed (Pacini and Pasteur). But it took about another 30 years before this understanding passed into general medical and public knowledge. Until about then, people knew about parasites causing illness and about rats spreading disease, but they did not know about bacteria. Exact knowledge of viruses, infectious agents that were much smaller than bacteria, took much longer to mature - they were much harder to see in the microscope! Cholera is caused by infection with the bacterium *vibrio cholerae* and it is characterised by diarrhoea and vomiting. The bacteria are excreted in the faeces and thus the disease is transmitted to others in what we call "insanitary conditions".

So our forefathers felt almost helpless in the face of such illnesses and folk remedies multiplied. We know how they felt!

Vaccination (using live cow-pox to "vaccinate" humans to prevent them getting small-pox) was "discovered" in the west around 1718 - 1722. But it was already known in Africa and in Turkey and this knowledge was brought to Europe by Lady Mary Wortley-Montague whose husband was ambassador to Turkey. People were deliberately infected by a small injection of fluid from the skin of a person who had small-pox and these people then proved to be immune to catching the disease itself. The procedure was uncomfortable and not without risk! Edward Jenner, born 1753 in Berkley (Gloucestershire) learned that people who had worked with cows that had cow-pox did not then catch small-pox at any time later in life, even if exposed to it. But no-one understood how it worked. Infecting humans with cow-pox did not cause small-pox but it did produce a mild fever and it did prevent them from being infected with small pox later. They became "immune". Thus the words 'vaccination' and 'vaccine' came from *vaccus* (= a cow in Latin). The polite term used at the time was variolation. "Immunisation" is a better word as it is more general and not specific to cow-pox or to the method of acquiring immunity. But in the current "pandemic" the words vaccine and vaccination have become those in common use - even though cows are not involved!

At the time of writing it is beginning to become clear that immunisation (vaccination) against Covid 19 virus will be effective in ending the epidemic the virus has caused. It seems to prevent transmission of the disease as well as preventing the immunised person from being infected by the disease. The way that immunisation works is that the injection of small but harmless protein similar to part of the virus, just like the bodily experience of actually having the virus and surviving, causes the body to generate antibodies and other forms of immunity that in turn prevent that person from being infected in future. Thus the population becomes mostly immune and the infectious agent can no longer spread. What is not yet known is whether this virus, or indeed the current vaccines, induce life-long immunity to re-infection. Many vaccines do need to be administered more than once to keep protection current. The influenza virus mutates rapidly and thus last year's immunisation becomes less effective in the following years. Covid 19 also mutates rapidly - new forms of the virus appear in the population. So immunisation will probably need to be kept "up-to-date". Modern DNA technology means that it is relatively easy to update vaccines but they do need to be

administered. We need to remain conscious that in our inter-connected world infections cannot only spread rapidly from country to country across the world but they can also mutate. Already we have seen evolution at work as new, genetically slightly different, forms of the corona virus evolve: for example "the English variant". They are only very slightly different but this may be enough difference that the immune system of a person who has been vaccinated does not recognise this new, slightly different virus. But it can learn to do so via immunisation (vaccination). There will be other infectious organisms in future capable of causing a pandemic.

What we really need is a vaccine that induces competence in government!!

The 'Tewkesbury Yearly Register'

The 'Tewkesbury Yearly Register' appeared in the years 1830 - 1850 edited by James Bennett. It recorded local events and decisions and meetings of local organisations; it reported appointments and elections to public posts, marriages and deaths of prominent local persons; it recorded visits by important persons such as the Bishop. It reported the decisions of the magistrates courts, crimes committed, sentences imposed, meetings of the Directors of the Poor, accidents that had occurred, charity fund-raising events and a petition against negro slavery which was sent to the House of Commons. Essentially it was a newspaper. But it seems to have been published only once a year.

James Bennett also wrote a "History of Tewkesbury" that was published in 1830. I have an original copy of this that was given to me by an aunt. In its introduction, we can hear James Bennett's voice: Bennett says: *"The following sheets owe their appearance to the numerous applications made to the Editor in his business as a bookseller for a book of this description; finding no other person disposed to undertake the task of writing or the risk of publishing, he was induced to take the responsibility of both upon himself"*. He signs this "March 1830".

It was clear that he is a direct fore-runner of Tewkesbury Historical Society.

In 1850 The Tewkesbury Register and Gazette appeared as a broad-sheet newspaper and so replaced the old annual Register founded by Bennett.

In the 1831 issue of 'Tewkesbury Yearly Register' reported the occurrence of "Cholera Morbus" in Tewkesbury. This was what we now call a pandemic. In October 1831 some sailors landed from a ship in Sunderland and, it was believed, these sailors brought with them a disease that spread rapidly in England. It seems to have started, as far as was known at the time, in Bengal in 1817. By 1823 it had reached Russia and in 1831 Hamburg and then travelled to Sunderland Dock - where it felt quite at home with lots of non-immune subjects to conquer. This is horribly similar to our current corona virus.

Bennett described it as "A singularly painful and fatal disease, called '**Spasmodic or Malignant Cholera**'." Doctors and others realised that this was highly contagious: it spread rapidly from person to person, but its symptoms were rather common: spasms of severe diarrhoea, nausea and vomiting. It was not new but a version of a familiar plague. However it is important to realise that not every case of acute diarrhoeal illness was actually due to *vibrio cholerae* - there was no available test to confirm the diagnosis and there are some other causes.

How "cholera" was and is fatal

It was always known that some died from infectious diseases, but others did not. Some people suffered the disease and survived. Others died very quickly. There were many folk remedies but no effective treatments. Not understood until the 20th century was that the infectious agent of cholera produces toxins that cause diarrhoea and vomiting and these two cause loss of water and salts from the body (sodium, potassium, bicarbonate etc), and hence dehydration and low blood glucose levels and then failure of bodily organs such as the kidneys and heart. The toxins pile up in the body and severe multiple organ failure occurs rapidly. It is the dehydration caused by the toxin that kills, not the infectious agent itself. If you survive the dehydration, you will probably survive the infection - and by then you may have passed the infection on to another person.

What was not known in the west until modern times was that the effective treatment was to drink boiled water with a little salt and sugar (or honey) in it. Our forefathers concentrated on trying to stop the diarrhoea and vomiting with drugs. However the ancient Chinese had known the correct treatment for centuries: they prescribed drinking of rice water - the water with a little salt added that was used to boil rice. The rice water was sterile because it had been boiled and it contained enough carbohydrate (rice fragments) to allow the body to absorb the water and salt and so replace that which had been lost. This treatment, water with salt and sugar in it, is essential and effective in all severe diarrhoeal or vomiting diseases - even mild ones. Modern medicine uses intravenous "aqueous glucose and saline" to achieve re-hydration in a controlled manner. And of course the 'salts' (electrolytes) in the blood are measured and adjusted back to normal - which allows the body to recover and to eliminate the toxins and the micro-organisms that caused the diarrhoea and vomiting. But even the Chinese did not know that it was bacterial toxins that caused the diarrhoea and vomiting of cholera. You can now buy "oral re-hydration salts" from the chemist. These are just as good as rice water.

In 1831-2 the *underlying* causes of the pandemic deaths were poor sanitation, poor hygiene, crowded tiny houses and an ignorance of the mechanism of the disease - it was a pandemic that spread rapidly via poor hygiene and cramped living conditions.

What is extraordinary in our modern time is the fact that prominent men have boosted quack remedies such as injecting domestic bleach to kill a virus in the body. Even more extraordinary is that some apparently sane people believed and propagated this idea. But they did not try this treatment themselves!

Our current pandemic is caused by a virus of the type "corona-virus" not by a bacterium. But there are other factors also such as international travel and commuting in crowds that have aided its rapid spread.

The origin and spread of the current Covid Virus has been exhaustively described in the modern press. We all know it is a virus, not a bacterium; we all know it is spread by virus particles emitted in the breath of infected people and ingested by the unwary. We know that, like other diseases, some individuals are affected more than others. We know that a pandemic had been forecast for some years and we know about the influenza pandemics of the past. We also know that the treatment is to assist breathing until the body is able to recover and eliminate the virus - plus maintenance of normal hydration and normal electrolyte and glucose levels. And we are all glad of the scientific expertise that produced a vaccine in a very few months and tested its effectiveness in another few months. This was done by scientists at Oxford University and they took the additional step of working with a drug company capable of manufacturing the vaccine on a large scale. The University also obtained an agreement with the company to sell this vaccine at cost to poorer countries once it had recovered its investment in the research. Other drug companies and universities internationally have also devised and made new vaccines equally rapidly. Some are hoping to profit hugely. The study of immunology and infectious diseases gave the basic understanding and then DNA technology provided the scientific tools that made possible the design and creation of a working vaccine in just a few months. But it was the industrial-scale manufacturing capacity that allowed enough vaccine to be produced that it can end a pandemic.

The Pandemic in Tewkesbury 1831-1832

The Tewkesbury Register for 1831 (published in 1832) reported:

"A meeting was convened at Tewkesbury on November 7th 1831. Directives were issued by Her Majesty's Government. The disease gradually spread during the winter. By Spring 1832 "it assumed such a threatening aspect as to create throughout the kingdom the utmost consternation and dismay." A public meeting was held at Tewkesbury Town Hall on 3rd March 1832 at which it was determined, "With a view to secure a healthier and more cleanly state of the streets, lanes and alleys, that the town should be divided into sections and that each section should be placed under the superintendance of one or more respectable inhabitants." You can see from this wording that they were doing their best but without knowledge of what would be really effective. Few thought that simply having a cheap supply of purified water and dealing with human and animal waste by an effective sewer system across the whole town was the real answer.

The Register says, "High Street was divided into seven sections, Church Street into six and the Oldbury into two. Thirty-six superintendants were appointed and were required to visit every alley and court in their respective sections for the purpose of seeing that the whole were kept perfectly clean, taking care that all mixens and the blood and filth from slaughter houses, with every nuisance which could induce contagion were removed. And to ascertain whether or not the cottages had been recently white-washed and were such a state generally as might be necessary to promote the health of the inhabitants." (A 'mixen' is a dialect word for a dung-hill or midden).

"July 24 1832: Dr Lambe reported to the Board of Health that a case of spasmodic cholera had occurred at the bottom of Barton Street and that the patient, whose name was Daniel Wilson age 15 and who lived behind The Plough, was dead. The body was ordered to be interred at eleven o'clock the same night and the house was immediately fumigated, whitewashed and cleansed. Another fatal case was reported to have occurred 2 days later at the Mythe. This was Thomas Salt aged 23. Both these young men worked at the Mythe Brickworks.

August 20 1832: "The disease having increased to an alarming extent, every measure which could be devised to diminish its influence was constantly resorted to: Large fires were nightly made in various parts of the town; pitch barrels were burned in the neighbourhood of the places where it most prevailed; the poor were freely supplied with chloride of lime for purifying their dwellings."

(There is much more well-intentioned but ineffective work that was reported).

"August 22 1832: At night, seven corpses were accordingly conveyed to the garden of the house of industry, graves having been previously made, the funeral service was performed over the remains of the unfortunate persons at midnight by Rev Robert Hepworth."

"August 25th 1832: A large house in the open part of Oldbury Field with a cottage and buildings attached was taken (i.e. rented) by the Board of Health for three years from 29th August at £35 per annum for the purposes of a cholera hospital."

"October 13th 1832: No case of cholera having occurred in the parish for upwards of three weeks, the bailiffs of the Borough appointed this day as a day of thanksgiving to Almighty God for their deliverance from a pestilence so truly afflicting."

Fatal cases of cholera that occurred in Tewkesbury in 1831:

A list of 76 names is given, with their age, residence and the employment of the head of household. Nearly all these were "workers" or "families of workers"; none were "shopkeepers" or "gentlefolk"; one was a fruit-seller; 17 were "stocking-makers"; 9 were "labourers"; their ages of those who died ranged from 1½ to 79 years. No evidence on how the bacterium arrived in Tewkesbury was reported in The Register. With hindsight we can see that the two young men who worked at the Mythe brickworks caught the disease, we do not know how, and unknowingly transmitted it. All the other 74 deceased died in the month of August or September 1831. In a number of cases, two or more of the same family died: parent and child, husband and wife, a pair of young sisters..... Susanna Jeynes aged 28 died only 5 days after her wedding.

"In some cases the disease exhibited itself most awfully sudden and carried off its victims in a few hours". It affected the young and the old and all in between. There is no record of how many had symptoms but survived. The last to die was Margaret Jones aged 23 who was listed as "a prostitute."

"This frightful disease was principally confined to the humbler classes of society though individuals of every rank were occasionally subjected to its baneful influence." (Bennett)

The Tewkesbury Register's table of the names of those who died is given below. It seems respectful to re-print the table here in their memory. What is not given is any estimate of the number who were infected but survived. We still seem to have things to learn about how to manage a pandemic.

The whole Register is available on line: <https://books.google.co.uk/books?id=LPgHAAAQAAJ>

The following fatal cases of cholera occurred in Tewkesbury :

No.	Name.	Age.	Residence.	Employment.	Died.
1	Daniel Wilson	15	Behind the Plough	Brickmaker	July 24
2	Thomas Salt	22	Mythe Brick-works	Ditto	26
3	Samuel Hawkins	54	Crooked Alley, B.S.	Stocking-maker	Aug. 1
4	Ann Hawkins	49	Ditto	Washerwoman	3
5	Caroline King	44	Thomas's Alley, B.S.	Stocking-maker	3
6	Mary Bajdwyn	74	Townsend's Alley, H.S.	Labourer	6
7	James Farmer	40	Crooked Alley, B.S.	Rope-maker	Aug. 13
8	Joseph Wiltshire	45	Double Alley, H.S.	Stocking-maker	14
9	Richard Underwood	50	St. Mary's Lane	Ditto	14
10	Julia Symonds	28	Rigby's Row, Oldbury	Waterman	14
11	Hannah Rice	8	Back of High-Street	Owner	17
12	Simon Woolcott	32	St. Mary's Lane	Stocking-maker	17
13	Henry Woodward	5	Ditto	Ditto	17
14	Lacy King	37	Thomas's Alley, B.S.	Ditto	18
15	Susannah Jaynes	28	Dobbin's Alley, H.S.	Labourer	18
16	Mary Wilkins	36	St. Mary's Lane	Stocking-maker	18
17	William Hawkins	5	Church-Street	Hay-trusser	18
18	John Vosper	43	St. Mary's Lane	Stocking-maker	19
19	Alfred Howes	24	Church-Street	Hostler	20
20	Ann Webb	52	Bank Alley, C.S.	Washerwoman	20
21	Hester Morse	30	Nelson Alley, B.S.	Stocking-maker	21
22	Ann Russell	94	Smith's Lane	Waterman	21
23	Ann Beale	60	Worcester Row	Stocking-maker	21
24	Elizabeth Hughes	4	St. Mary's Lane	Ditto	21
25	William Mann	24	High-Street	Waterman	22
26	Frederick Burns	6	Thomas's Alley, B.S.	Stocking-maker	22
27	Mary Birchley	4	Nelson Alley, B.S.	Labourer	22
28	Hester Darke	34	Oldbury	Nurse	22
29	Elizabeth Allen	50	Red Lion Alley, H.S.	Labourer	22
30	William Birchley	26	Nelson Alley, B.S.	Ditto	23
31	Thomas Butt	75	Mill Bank	Hay-trusser	23
32	Thomas Haynes	14	Ditto	Stocking-maker	23
33	Thomas Cooke	35	Nelson Alley, B.S.	Labourer	23
34	Hester Parker	61	St. Mary's Lane	Nurse	24
35	Ann Davis	36	Oldbury	Stocking-maker	24
36	Eliza Finch	9	Warder's Alley, H.S.	Tailor	24
37	John Greenfield	53	Nailor's Square	Nailor	24
38	Henry Tandy	69	Oldbury	Labourer	25
39	Sarah Laing	29	Nelson Alley, B.S.	Nurse	25
40	Ann Morse	6	Ditto	Stocking-maker	25
41	Thomas Painter	34	Boulter's Alley, C.S.	Ditto	26
42	Ann Painter	40	Ditto	Ditto	26
43	Ann Preece	60	Warder's Alley, H.S.	Ditto	26
44	Elizabeth Hancock	53	St. Mary's Lane	Seamstress	26
45	Lovewell Fleetwood	24	Nelson Alley, B.S.	Hatter	27
46	William Parker	57	St. Mary's Lane	Carrier	27
47	Harriet Haynes	22	Mill Bank	Stocking-maker	28
48	Charlotte Hodges	9	Smith's Lane	Waterman	28
49	John Cullis	10	Tolzey Lane	Chimney-sweeper	29
50	Henry Hughes	44	St. Mary's Lane	Stocking-maker	29
51	Sarah Butt	75	Mill Bank	Hay-trusser	29
52	Martha Finch	10	Warder's Alley, H.S.	Tailor	29
53	Sarah Wood	35	Oldbury	Stocking-maker	29
54	Thomas Burns	15	Nelson Alley, B.S.	Sawyer	30
55	Maria Huntley	30	Warder's Alley, H.S.	A Prostitute	30
56	Alice Parker	54	St. Mary's Lane	Stocking-maker	30
57	William Wood	32	Oldbury	Labourer	31
58	Elizabeth Jones	64	Tolzey Lane	Washerwoman	Aug. 31
59	William Court	76	St. Mary's Lane	Labourer	31
60	Ambrose Pitman	5	Smith's Lane	Stocking-maker	Sept. 1
61	William Kinson	2	St. Mary's Lane	Ditto	1
62	Hester Vosper	12	Ditto	Ditto	1
63	Ann Weaver	6	Crooked Alley, B.S.	Shoe-binder	1
64	Elizabeth Edgewick	65	Ditto	Fortune-teller	2
65	Sarah Weaver	50	Ditto	Shoe-binder	2
66	Margaret Webb	55	House of Industry	Washerwoman	4
67	Joseph Ricketts	79	Ditto	Labourer	4
68	William Smith	32	Tolzey Lane	Nailor	5
69	Sarah Hook	11	Ditto	Stocking-maker	5
70	Maria Jones	2	Bank Lane, C.S.	Labourer	6
71	Comfort Grimmett	60	Smith's Lane	Fruit-seller	11
72	William Pardoe	40	Ditto	Labourer	12
73	James Stallard	2	Tolzey Lane	Ditto	13
74	Thomas Cossam	60	St. Mary's Lane	Carpenter	16
75	William Ricketts	53	Ditto	Labourer	16
76	Margaret Jones	23	Double Alley, H.S.	A Prostitute	25

In the residence column, in the foregoing list, the letters H.S., C.S. and B.S. mean High, Church, or Barton-Street; and in the employment column, in the case of children or females, the employment given is that of the parent or husband. The first twenty-two persons in the list were buried in the church-yard, near the transept, on a spot which has since been paved in; and the remainder were all buried in the south-east corner of the garden attached to the house of industry.

The population of Tewkesbury is also reported in the Tewkesbury Register:

In 1830 the population of Tewkesbury town was 5780*; there were 144 baptisms, 86 burials, and 44 marriages in that year. Thus the death of 76 persons from the pandemic was proportionately quite large and frightening: about the usual number of deaths occurring in a whole year occurred within a six-week period and included many younger people.

* These population figures exclude the neighbouring villages of Ashchurch, Aston-on-Carron, Pamington, Fiddington, Natton, and Northway Newton which together account for a further 649 persons. But The Register did not report any data of cholera deaths in these villages.