

WORCESTERSHIRE
and
THE “SPANISH” FLU

THE INFLUENZA PANDEMIC OF
1918-1919

One hundred years ago, the 1918 influenza pandemic wreaked havoc across the globe, affecting the health of about one-fifth of the world's population. It caused the deaths of approximately 50-100 million people worldwide; more than the estimated 16 million lives claimed by the First World War. The first wave of the 'flu appeared in the spring of 1918, followed by a more virulent second wave in the autumn, and a third wave in the spring of 1919. In total, it is estimated that the epidemic claimed around a quarter of a million lives in Britain. Approximately 1663 of these deaths were from the Worcestershire area. Whilst media attention and history books have focused on the victorious end to the War the tragedy of the Spanish 'Flu has been wiped from our collective memory. This booklet tells the story of how Worcestershire was impacted by the deadliest illness the modern world had ever seen.

WHAT CAUSED THE 'FLU ?

The First World War aided the spread of the disease. There was an unprecedented movement of people, via steamboats and trains, to and from war zones across the entire globe. Soldiers lived in communal camps and trenches, helping the influenza to spread effectively. It's likely that soldiers, nurses and doctors coming home on leave brought the disease to Worcestershire. At the time, people were not sure what had caused the outbreak of the 'flu. There were numerous theories, with some people considering that it was a biological weapon used by the enemy, or that the German pharmaceutical company Bayer had introduced influenza bacteria into Aspirin. German physician Richard Pfeiffer had identified a bacterium in the throats of people who had influenza during the epidemic of 1892-93. The bacteria became known as Pfeiffer's bacillus, and it was widely considered to be the cause of the 'flu outbreak in 1918.

The cause, however, was not bacteria at all, but an unrecognised virus, which has since been identified as the H1N1 strain. Today, we know

WHY WAS IT KNOWN AS THE SPANISH FLU?

At the end of May 1918, the newspapers reported on the devastating impact of the 'flu in Spain, where even the King had fallen ill ("ALL Spain Ill." *Daily Mail*, 30 May 1918: 3). As one of the first countries to widely report on the impact of the pandemic, it subsequently became known as the Spanish 'Flu. Similarly, the 1893-94 pandemic was commonly referred to as the Russian 'Flu.

that the virus originates in animals and passes onto humans. The geographical origins of the virus are, however, still unknown; convincing theories include that it spread from migratory birds at the Western Front, birds in China, or a farm in Kansas, USA.



IMAGE FROM AN ADVERTISEMENT FOR "FORMAMINT THE GERM-KILLING THROAT TABLET" SOURCE: ILLUSTRATED LONDON NEWS 9 NOV. 1918: 589

HOW DID THE FLU GET TO WORCESTERSHIRE?

The *Worcester Daily Times* (2 Nov.1918) published a letter from E. O. Hawkshaw, a Major in the army, who stated that there was "little doubt that the cause of it all is brought into the country by our soldiers from our many fronts in the shape of microbes and insects saturated with putrid flesh and the usual unpleasant accompaniments inseparable from camps and battlements." His suggestions for combatting the 'flu included keeping cheerful, lighting bonfires near the house, and disinfecting soldier's clothes by baking them in the oven.

DATA FROM THE EIGHTY-FIRST ANNUAL REPORT TO THE REGISTRAR GENERAL - REPORT ON THE MORTALITY FROM INFLUENZA IN ENGLAND AND WALES DURING THE EPIDEMIC OF 1918-1919. THE SECOND WAVE OF THE OUTBREAK HIT WORCESTERSHIRE THE HARDEST.

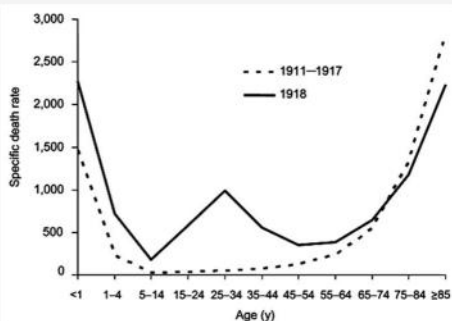
Deaths from influenza in Worcestershire June 1918- April 1919



SOURCE: NJOHNSON, 1918-1919 INFLUENZA PANDEMIC MORTALITY RATE IN ENGLAND AND WALES [DATA COLLECTION, 2001] UK DATA SERVICE <http://doi.org/10.5255/UKDA-94-4350-1>

THE SCIENCE OF 'FLU

Influenza is an infectious disease caused by a virus. Its symptoms include muscle aches, headache, fatigue, sore throat and fever. Another common after-effect of the 'flu is depression. The *Worcester Daily Times* (7 Nov. 1918) reported that following an attack of influenza, a baker in Stowmarket, named Leonard Sitch, murdered his wife and two sons and then committed suicide. He was found hanging in a bedroom and his family were found battered to death in another room.



GRAPH SHOWING AGE RANGE OF 'FLU VICTIMS 1911-1918. SOURCE: J.K. TAUBENBERGER AND D. M. MORENS, '1918 INFLUENZA: THE MOTHER OF ALL PANDEMICS' WIKICOMMONS

The most common forms of influenza in humans are type A and B, with the latter usually occurring on a seasonal basis. With type B, the most vulnerable people like the very young, sick or old tend to fall ill. A unique and unexplained aspect of the 1918-19 pandemic was that it predominately targeted healthy young adults. Those aged between 25-34 had the highest rise in mortality compared to previous years of the 'flu. Almost a third of all victims died. Whilst there was no effective vaccine, *The Worcester Daily Times* (4 Nov. 1918) stated that "Practically all the fatal cases have been those in which, after the attack of the influenza, other germs have got the upper hand in the system, resulting in lung trouble, usually pneumonia." These troublesome secondary infections would today be treated with antibiotics.

DID YOU KNOW?

Influenza was also referred to as Epidemic Catarrh, La Grippe, the Sweating Sickness, the Spanish Fever and the Blue Death.

ETYMOLOGY

In the Middle Ages in Italy the term influenza was used to refer to any disease thought to be influenced by the stars.

THE PUBLIC HEALTH RESPONSE

Infectious diseases, like small-pox and tuberculosis, were classed as 'notifiable diseases' meaning that medical practitioners were obliged to notify the government in the event of an outbreak. Whilst influenza was infectious, it was not considered threatening enough to warrant being classified as a notifiable disease, despite some pretty serious outbreaks in the nineteenth century.



THE PREVAILING EPIDEMIC. MR. PUNCH IN FRONT OF A FIRE EATING GRUEL. IT'S NO JOKE BEING FUNNY WITH THE INFLUENZA. SOURCE: ENGRAVING BY J. LEECH, PUNCH MAGAZINE, C.1847. CREDIT: WELLCOME

Britain's public health system had been greatly improved in the late nineteenth century, yet the country was vastly unprepared for the epidemic. The public health response was to control entry to theatres, dance-halls, churches and other places of public-gathering and quarantine those who were ill, which had little impact on the spread of the illness. Across the county Medical Officers of Health (MOH), who were employed by the Local Government Board, were engaged in organising campaigns and enforcing regulations. Dr Fosbrooke, the MOH

for Evesham, Pershore and Feckenham issued a comprehensive list of precautionary measures. He advised that all symptoms related to fever should be regarded as infectious, and to stay at home in bed for a few days, stating that "overcrowding in dwellings, the aggregation of large numbers of persons in one room or in assembly rooms, and places of entertainment, should be avoided." He suggested gargling the throat with Condy's Fluid (a disinfectant), every night and morning, and alerted the reader to the fact that "prolonged mental strain, over fatigue, and alcoholism favour infection" (*Worcester Daily Times*, 31 Oct. 1918).

The Public Health authorities believed that well-ventilated rooms helped to keep the disease at bay. During a meeting of Worcester's Health Committee (20 Nov. 1918) it was proposed that war-time lighting restrictions on cinemas be lifted, to enable managers of cinemas to abstain from using thick dark curtains on the windows, which prevented proper ventilation. Limiting public gatherings was also a priority. In November 1918 the MOH wrote to the manager of four local cinemas suggesting that for two weeks they should not admit children under 14, but the only reply he received was from the Arcade Cinema, agreeing to the proposition. On 4th December they advised that entertainment in public spaces must not be carried on for more than 4 hours consecutively, leaving 30 minutes between any two entertainments to fully ventilate the area. In February 1919, when it seemed that the scourge of the 'flu would never go away, 5000 leaflets and 300 posters were distributed cautioning Worcestershire citizens about the continued menace.

THE FORTY-FIFTH REPORT OF THE MEDICAL OFFICER OF HEALTH,

being that for the year 1918.

To the Urban Sanitary Authority of the City and County of Worcester.

Gentlemen,

THE Local Government Board has again requested that the Medical Officer's Annual Report shall be condensed, and that only prominent features of the work shall be recorded. Statistical Tables which were printed in the Reports before 1914 have been prepared each year and filed for comparison with past and future years.

The epidemic of influenza which began in the third week of October and lasted for eight weeks was of a virulent type, and no less than 136 deaths were registered as directly due to it. This caused a serious increase in the death-rate, which rose to 15.4 per 1000, the highest rate recorded since 1908.

There were 800 births and 785 civilian deaths, the natural increase of the population of 51,000 being only 15.

REPORT FROM THE MEDICAL OFFICER OF HEALTH, WORCESTER CITY, REPORT 1918. CREDIT: WELLCOME LIBRARY

SCHOOL CLOSURES

Most of the schools in the region were shut at one time over the course of the three outbreaks 1918-19. There were high levels of absences of children and teachers in the region. At the Coventry Street School in Kidderminster it was reported on 17th October that Miss Pirrie "has been very unwell all the week, but held on, until she was very reluctantly obliged to give in." She returned on the 21st but she was urged to go home again "as it was quite obvious she was not in a fit state to work in school, although she was quite willing to do so." The school was then closed from 22nd October - 18th November. At Crabbs Cross Primary School in Redditch the school log book recorded on 25th October 1918 that the influenza was an epidemic in the district. On 4th November the school was closed for a week by the Medical Officer but, owing to the severity of the epidemic, the period of closure was extended until the 18th. Miss Davies and Miss Sutton, two of the teachers, were still absent when the school was re-opened. Miss Sutton was reported to have paralysis (a complication of acute influenza), and she did not return to school until the end of January. It was reported that Miss Davies was sick (again) during the third outbreak in March.

DOCTORS AND NURSES DURING THE PANDEMIC

At the end of October the shortage of medical practitioners was reported in the local and national press. There was a strain on resources, with many professionals on overseas service or engaged in military hospitals - "many are so over-worked that they scarcely have time to eat a meal from breakfast until they finish for the night." Medical examinations were suspended so that as many doctors as possible were available to treat the victims of influenza.

The *Worcester Daily Times* (29 Oct. 1918) reported that two local doctors were unwell "thus the strain on the remaining medical men is the greater". Hospital records indicate a high influx of patients with influenza, however, newspaper reports, letters and diaries highlight that most cases of the 'flu were dealt with behind closed doors. The *Kidderminster Shuttle* (March 1919) suggested that in households the mother was usually the primary care-giver - the mother "although suffering from the influenza, has had to get about, to the grave danger of her health, to look after her husband and children."

Nurses working in hospitals and infirmaries were chronically over-worked. A case-book from the Malvern Hospital shows that a number of nurses became patients themselves. Frances Boddington (34) died of 'flu on 27th October 1918, and May Jones (18) became an in-patient on the same day. Jones was unlucky to fall ill with

I had a little bird

Its name was Enza

I opened the window

And in—flu—enza

NURSERY RHYME SANG BY
SCHOOL CHILDREN IN 1918-19

the 'flu again at the end of April 1919. Miss Laura Upton (51), the matron of the Corporation Infectious Hospital in Kidderminster, fell victim to the 'flu and died. It was reported in the *Kidderminster Shuttle* (March 1919) in a judgmental tone, that "Not only Miss Upton, but all of the members of the Nursing Staff were seized with the disease, and in her desire to render help to her assistants she exposed herself when she should have been in bed."

"The epidemic of influenza which started in Spain has reached England and men and women are going down like ninepins. We have 145 women down with it and last week I had it myself - running a temperature of 101.2 but I got over it wonderfully quickly. I was well looked after by Mrs Bryant and when I was getting better the SMO sent me a bottle of claret and someone else sent me some port wine - so I was able to drink your health! I came on duty yesterday and found no end of returns waiting to be filled in relating to this epidemic. W. h. a. t. a. l. i. f. e."

-Extract of letter from a local nurse, Amelia Constable, working at Bulford Camp on Salisbury Plain to her fiancé, Cyril Sladden, a soldier in 9th Worcesters, 13th Division, 3 July 1918. Full transcription: <https://www.badseysociety.uk/sladden-archive>

REMEDIES

Due to the unknown origin of the 'flu, doctors were essentially powerless to combat it, leading to a reliance on commercial remedies. During the third wave of the outbreak *The Times* (14 May 1919) highlighted that many announcements of 'cures' of the disease had been made, but "the public should realize that probably upwards of 80 per cent of all cases of uncomplicated influenza in this epidemic have got well by themselves." During the pandemic it was certainly the case that health care and home products suddenly obtained the ability to combat the 'flu. An advertisement for Chymol in the *Kidderminster Shuttle* told the reader to "Build yourself up to-day with Chymol. Have Chymol at or between your ordinary meals, and immediately you will get your strength coming back. You will quickly and sturdily build up; strong to resist repetition of Influenza or any of its dangerous after-effects." Horlicks Malted Milk was recommended as the diet "before and after Influenza" and a Kidderminster chemist, E. G. Trevethick, advertised his 'Talora' Influenza Mixture, claiming that it "KILLS THE GERM, AND CURES YOU AT ONCE."

Kidderminster Shuttle readers were told to "Keep nose and throat germ-proof and healthy with 'Nostraline' Nasal specific" and to "Use this scientific means to banish Influenza, Nasal Catarrh, Head Colds and Sore Throats." It seems 'flu remedies were in demand; in the *Worcester Daily Times* (22 Nov. 1918) an advertisement reported on the shortage of Bovril - "It is suggested that those consumers who have

stock of Bovril should avoid purchasing at present, and thus leave the available Bovril for those who have more pressing need of it at this critical time." Whilst these products did not have any effect on curing or preventing the 'flu they did provide relief from its symptoms.



PREVENTION WAS CONSIDERED BETTER THAN CURE IN A SOCIETY THAT LACKED ANTIBIOTICS. DISINFECTANTS WERE THE FIRST LINE OF DEFENCE, PARTICULARLY AS THE INFLUENZA WAS CONSIDERED TO BE BACTERIAL SOURCE. *BERRIOW'S JOURNAL*, 23 NOVEMBER 1918.

An advertisement for Newman's Fort-Reviver Tonic. The title 'Colds, Chills, & Influenza' is at the top. The text describes the tonic as a pure, wholesome beverage with medicinal properties, made from concentrated fruit food. It is a highly concentrated fruit food containing all the nutritive strengthening elements and the natural sweets of the choicest selected fruits. There is also a small illustration of a glass filled with fruit. At the bottom, the product name 'NEWMAN'S FORT-REVIVER LIQUEUR TONIC' is prominently displayed in a stylized font. Below the name, there is a small block of text providing details about the product's availability and contact information.

NEWMAN'S FORT-REVIVER, A LIQUEUR TONIC, WAS ADVERTISED FOR COLDS, CHILLS AND INFLUENZA. SOURCE: *BERRIOW'S JOURNAL*, 18 DECEMBER 1918.

DID YOU KNOW?

In the mid-Victorian period Lea and Perrin's Worcestershire Sauce was acknowledged to aid health with its digestive properties and, according to advertisements, was used and recommended by doctors. The sauce was included in many home recipe books for the 'flu. Interestingly active compounds found in anti-virals like Tamiflu are derived from Asafoetida, an ingredient in Worcestershire sauce.

THE PEOPLE OF WORCESTERSHIRE AND THE 'FLU

In the midst of the second wave of the 'flu The *Worcester Daily Times*, on 2nd November, reported on the number of deaths in the city of Worcester, a total of 43 in the past 12 days. It was reported that Mrs William Sandford of Badsey had died as a result of the 'flu. Before she was properly recovered she had attended a wedding in Evesham and caught pneumonia. Her husband was left with nine children. The Badsey Society tells us that in the closing months of the War, Private John Sydney Cull of Badsey, near Evesham, was serving in the Worcester Yeomanry in Mesopotamia. He had written a letter to his family on 9th October informing them of fatal incidences of the 'flu in his battalion – fortunately, he told them, he was in the best of health. On 11th November his family should have been celebrating news of his homecoming, but instead they received a letter notifying them of his death – not from fighting, but from the deadly Spanish 'Flu. He died aged 27. On the same day the *Worcester Daily Times* informed readers that Miss Lilian Basford (23) died of pneumonia following an attack of the 'flu. She "had a bright and loveable nature" and had spent time entertaining wounded soldiers. It was also stated that Mrs Mabel Teresa Rippington, the wife of a soldier, died of pneumonia. Her husband had been home on Leave because of her ill-health, but he had returned to the Front the previous week, Unfortunately "he could not return home, even for the funeral."

During the closing weeks of the War the Gibbs family from Lower Moor, Fladbury nearly all fell ill from the 'flu. Alice (19) and her brother Walter (17) both fell ill during the week victory was announced. Mr Smith, a Pershore chemist, told her father to keep her in bed for a few days on a 'sloppy diet'. The pandemic meant that people were tentative about joining in victory celebrations. A Guide leader in Fladbury planned to take her troop of guides into Evesham to join the Grand Victory Parade on 18th November, but was concerned they would catch the 'flu germ' if they travelled by train. Instead the disappointed girls had to walk in. A week later, despite her precautions, nearly all her guides had gone down with the 'flu.



On 19th September 1918 Sergeant Mason, "a keen soldier, respected and liked by all", died of influenza in a hospital in France. Before the War he was employed as a gardener in Greenhill, Kidderminster. He left a wife and two children.

SOURCE: KIDDERMINSTER SHUTTLE[NOV. 1918]



Gunner S. Powell spent the last two weeks of the War on leave from France, visiting his parents in Kidderminster. Whilst he was home he contracted influenza, which was followed by pneumonia, and this proved fatal. Powell died on 24th November 1918, just thirteen days after the War ended.

SOURCE: KIDDERMINSTER SHUTTLE[NOV. 1918]



William Leefe Robinson, a soldier in the Worcestershire Regiment, became the first pilot to shoot down a German airship over Britain. He received the Victoria Cross for his efforts and became Britain's most famous pilot. Tragically he died from the 'flu on 31st December 1918, after months of being in a prisoner of war camp in Germany.

Leafe Robinson, 2nd Lieutenant (December 1914), 5th (Militia) Worcestershire Regiment. CREDIT: <http://www.worcestershireregiment.com>

The end of the war provided no relief from the ravages of the 'flu. The people of Worcestershire continued to fall victim during the third wave of the pandemic in Spring 1919. Ellen Gibbs noted that nearly every home in Moor was affected and wrote in her diary, "when will it end?" The *Kidderminster Shuttle* (March 1919) reported that five children from the Tyler family died in Tenbury from the influenza; three of which died on the same day. A single funeral was held for the departed, but sadly the parents and two other siblings could not attend, due to sickness. The local vicar was also ill with the 'flu, so the rector from the neighbouring parish had to conduct the service. On 13th April 1919 the *Evesham Journal* reported the sudden death of Lance Corporal Arthur Salisbury (25) of Shipston-on-Stour. Before the outbreak of the War he was a porter for the Great Western Railway as well as a signalman at Henley. Arthur joined the Royal Engineers in April 1915 and went through the War without being wounded. On 15th March 1919 his company were demobilised but on disembarkation from the ship in Southampton he was immediately taken to the hospital with influenza. His parents were sent for on the 20th and he died seven days later. He was buried in Shipston-on-Stour cemetery.

During May the pandemic finally abated, and the people of Worcestershire could start rebuilding their lives.

THE FUTURE: PANDEMIC PREPAREDNESS

The 1918-19 influenza pandemic was a global natural disaster. Studying the 1918-19 outbreak helps us to understand how pandemic influenzas emerge and inform us about the management of public health risks. There have been subsequent influenza pandemics in the twentieth century including the Asian Flu (1957-1958), the Hong Kong Flu (1968-1969), and the Russian Flu (1977-1978), all caused by variant types.

In 1933 an effective influenza vaccine was developed, however today, with ever-emerging strains of 'flu and the declining effectiveness of antibiotics, there are fears that a new 'flu pandemic could cause widespread havoc across the globe. The World Health Organisation (WHO) recognises that influenza is a threat to the modern world due to urbanisation, mass migration, developments in biological weapons, global transport and trade. It is not a matter of 'if' but 'when'. WHO's precautionary steps include washing hands, covering the mouth and nose when coughing and sneezing, isolation, and avoiding contact with sick people.



'A-TICH-OOI! GOOD EVENING IN THE NEW INFLUENZA!' SOURCE: E. NOBLE, C1918. CREDIT: WELLCOME COLLECTION

ACKNOWLEDGMENTS AND KEY REFERENCES

This booklet has been researched and authored by Laura Mainwaring, British Society for the History of Science Engagement Fellow at the George Marshall Medical Museum.

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