

The “Spanish Lady” Invades the Monongahela Valley (1)

The 1918 Influenza Epidemic in Monongahela and Surrounding Areas

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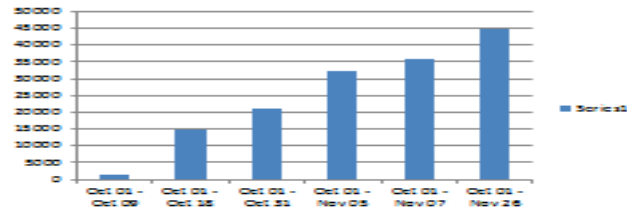
The Influenza Pandemic – by the numbers:

- “Accepted” range of number of deaths 20 – 40 million people worldwide
- “Highest” range of deaths suggested greater than 100 million
- 30 - 50% of world’s population estimated to have been infected
- Mortality rate of 2.5 % of those infected
- HIV/AIDS has killed an estimated 30 million in 30+ years
- 1918 Influenza Pandemic kills more people in less than 6 months
- Comparable in numbers of deaths to the “Black Death” in 14th Century and the Justinian Plague of the 6th century- except Influenza Pandemic deaths occurred over a shorter period of time
- 700,000 Americans died
- 500,000 in PA infected
- Estimated 50,000 die in PA due to influenza
- One author wrote: *The average college graduate knows more about the Black Death of the 14th century than they do about the 1918 influenza pandemic (3)*
- Word “Influenza” first used in Italy in 1357 meaning “influence of the stars”

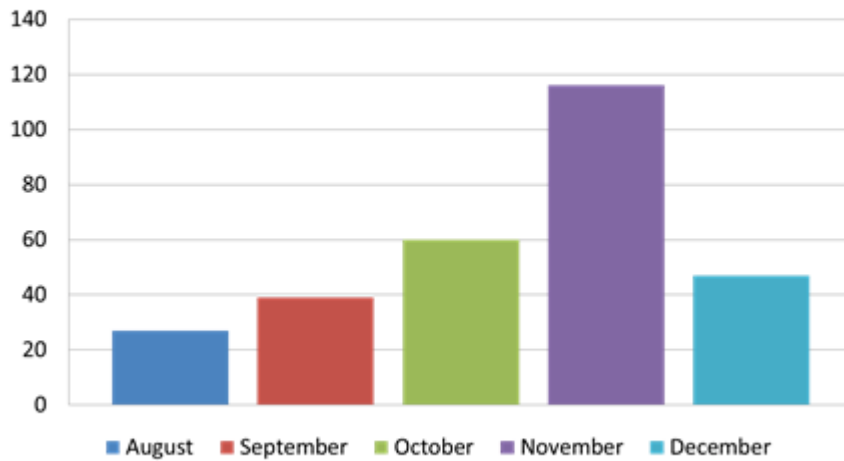
- Irish saying: *The grippe is a sickness you don't get until a month after you've done with it.*
- More people died due to influenza than to WW I fighting
- US Battle deaths in WWI, WWII, Korea, and Vietnam total roughly 423,000 American Influenza deaths roughly 700,00 in 10 months
- Influenza *"killed more humans than any other disease in a period of similar duration in the history of the world" (4)*
- American Indians had a mortality rate of 9% - three times higher than the general population
- 2% of American Indian population died due to epidemic
- Miners and pregnant women were more likely to die than the general population
- During the epidemic the death rate for all causes of death for Black Americans fell below the death rate for White Americans for the only time in American history
- 95% of residents in some areas of Philippines infected
- 4.5% of population of Guam died due to epidemic
- 10% of population died in Tahiti due to epidemic
- 22% of population of Western Samoa died due to epidemic
- 47% of population died in Alaskan village of Teller
- 55% of population died in Alaskan village of Wales
- No record of how many people died in Russia due to epidemic
- President Wilson has influenza in April 1919.
- General Pershing has influenza in October 1918

PA CUMULATIVE DEATHS

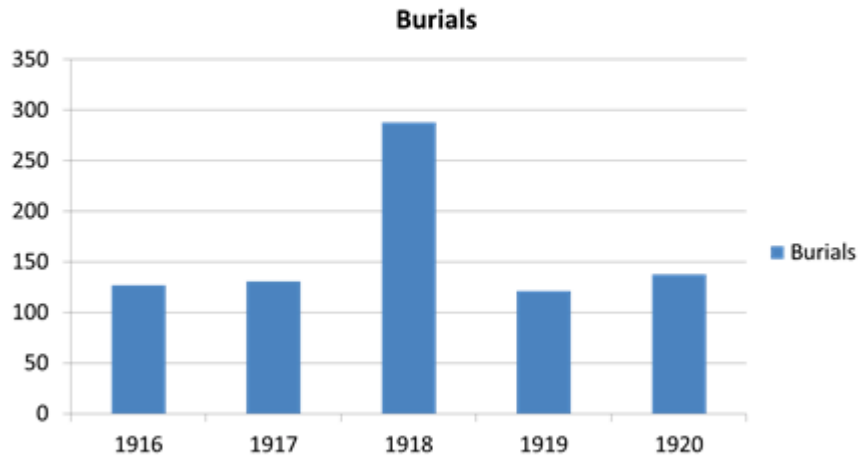
- 10/01 – 11/26



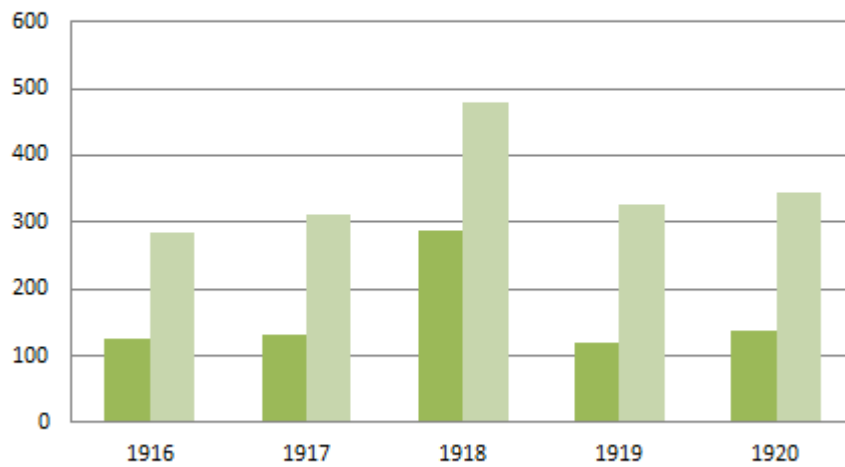
Monongahela Cemetery Monthly Burials Autumn 1918 (s)



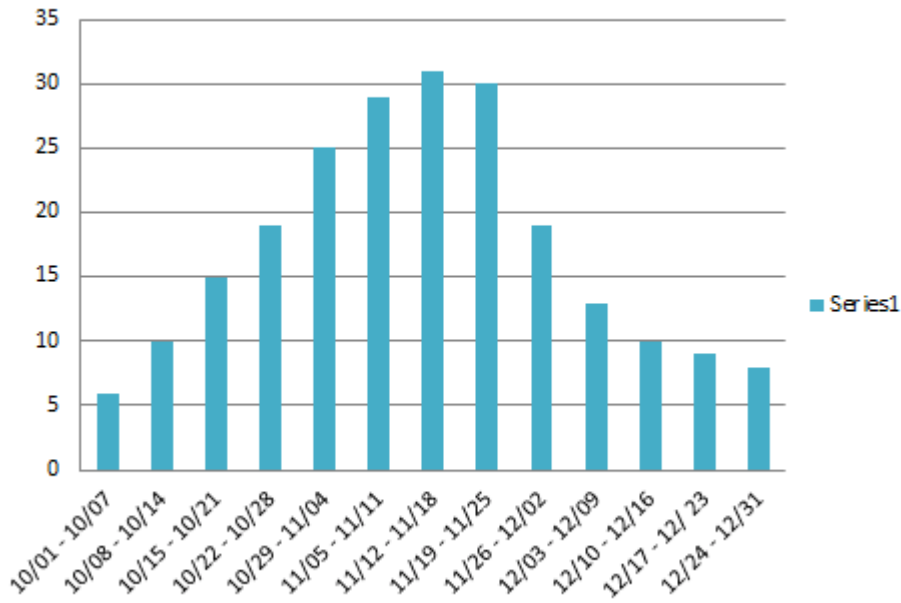
Monongahela Cemetery Burials August 01 – December 31



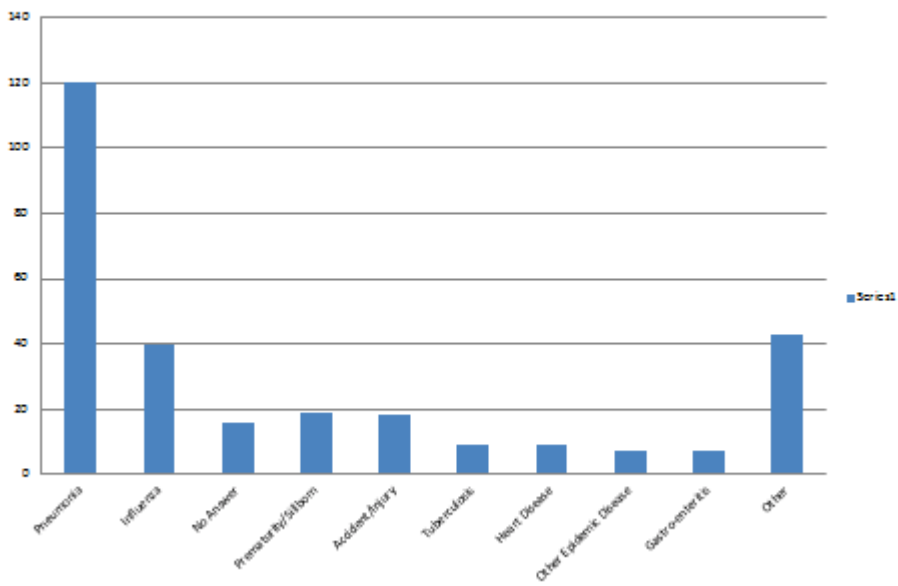
Yearly burials and autumn burials Monongahela Cemetery 1916-1920



Monongahela Cemetery Burials - Weekly - Autumn 1918



Causes of Death - Monongahela Cemetery Burials - September through December 1918



Influenza Time-line - Monongahela and surrounding areas

Primary source: The Daily Republican (6)

- **April 19, 1918**
- First local mention of excess deaths due to disease in American Armed Forces.
- “Pneumonia caused 171 of the 185 deaths among the American troops in training for the week ending April 12 ... National army death rate increased somewhat with 165 deaths as against 129 deaths for the preceding week ... general health conditions are good”
- No further mention of influenza or pneumonia deaths from the remainder of spring through the summer.
- **June 01, 1918**
- 599 soldiers have Tuberculosis in some form.
- **September 1918**
- - 250,000 American troops sent to France
- **September 12, 1918**
- “before the largest crowd ever assembled in this vicinity (sic), the baseball arranged for the benefit of our boys in Company A, was played last evening at Quinn park (Honus Wagner played first base in the game for Monongahela team)
- **September 17, 1918**
- Camp Upton (NY) was ordered closed. 170 cases reported at the camp.
- “The source of the disease has not been determined”
- Boston, MA reports 257 new cases in one day. 20 deaths in six hours.
- 2131 reported cases among naval men stationed in Boston and “hundreds of cases among civilians”
- Camp Devens reports 3,000 with the disease and “scores of sufferers in nearby towns”

- In one school 40 out of the 48 students have influenza.
- “Most deaths are caused by lobar pneumonia”.
- **September 18, 1918**
- First headline warning of the disease: “Health Boards Warn Against New Disease”
- “Health boards in various cities are warning against the coming of the Spanish influenza which is spreading across the country....”
- **September 25, 1918**
- Boston schools now closed due to epidemic
- Other cities and towns in MA taking similar precautions
- Total number of cases reported in the Army now over 23,000
- Public Health officials, War and Navy Departments, and the Red Cross meet to discuss a strategy as disease has now spread to 26 states.
- The disease is reported to be epidemic in New England, where it made its first appearance
- Influenza has spread to the West Coast but is not epidemic yet
- Number of cases reported in the military has increased by over 6,000 in one day
- **September 30, 1918**
- “Uncle Sam’s War Trophy Train” – scheduled to arrive in Monongahela with its “five coaches packed to the doors with guns and other trophies captured on the Western front by the American Soldiers”
- **October 01, 1918**
- “One of the greatest crowds that ever gathered about the local P.R.R. Depot, came together yesterday morning to greet the Trophy train.... Came into Monongahela about one hour late ... more than a thousand people were disappointed at not being able to pass through the coaches and examine the trophies... more than \$13,000 worth of bonds had been subscribed for in the two hours the train was here....
- **October 04, 1918**
- PA State Commissioner of Health Dr. B. F. Royer orders “Every place of public amusement and every saloon in Pennsylvania ... closed ... as a means of preventing further spread of influenza”
- In Monongahela City Controller B. L. Ross received the order and “will be strictly adhered to”
- The decision to close churches and schools will be left to the “discretion of local health authorities”
- Public Amusements were defined as “theatres, poolrooms, dance halls, saloons and the like”
- Surgeon General of the United States Public Health Service issues a publication “dealing with Spanish influenza, which contains all known available information regarding this disease.” Free of charge, send request to Surgeon General.
- **October 05, 1918**

- Reported 35 soldiers died at Camp Lee “from complications, principally pneumonia that set in ... bringing the total deaths in less than weeks to 167”.
- 50,000 cases of “Spanish flu” reported in PA
- Royer further clarifies the “closing order” – “fairs that are in progress this week” are allowed to finish the week but “are not to be held next week”.
- Lodges and other social organizations are considered under the meeting prohibitions.
- Department of Public Health issues following “Don’ts” against influenza
- Don’t congregate in crowded places. When riding in streetcars see that the ventilators are open.
- Don’t use common towels or drinking cups.
- Don’t fail to wear clothing according to the temperature of the day. Avoid exposure to wet.
- Don’t allow yourself to become fatigued.
- Don’t sleep with the windows closed.
- Don’t cough or sneeze without using a handkerchief.
- Don’t work among others when you have a severe cold.
- Don’t treat a cold yourself.
- **October 10, 1918**
- PA reports 1,429 deaths in the last 7 days “directly due to influenza or complications” and 769 deaths due to pneumonia.
- 15% infection rate reported in some areas, death rate of 5%.
- James S. Crall – Superintendent of the Department of Public Safety in and for Monongahela City – issues the following notices:
 - All theatres, moving picture establishments, saloons, and dance hall closed.
 - All meetings of people are prohibited. No more than 4 persons can meet at a private home.
 - All schools closed.
 - All churches and Sunday schools closed.
 - All public gatherings prohibited.
 - Each physician must report the name of influenza victims, where they live, and date of discovery.
 - All houses of victims are to be “placarded” as well as homes of any visitors to the sick. The placard shall remain in place 7 days after the last case has recovered.
 - All funerals shall be private and only attended by adult members of the family and pall bearers. Regardless of cause.
 - Visiting the sick is prohibited except to immediate family, physicians, nurses, and assistants
 - Any known violations are to be reported to Superintendent Crall.
- **October 12, 1918**
- New data released reports 12,321 new cases of influenza, 2979 new cases of pneumonia and 889 deaths in military. No data available on civilian rates.

- Letter to newspaper states: “Personally, I regard the flushing of streets as of far more importance than the collection of garbage, for while I cannot see the great disease menace in garbage ... there is a distinct menace in the dust that now blows around our streets with every wind.”
- **October 15, 1918**
- Headline reads: “New Influenza Cases Show Decrease”
- Military influenza cases for past 48 hours 15,152. Pneumonia cases 4,780. Deaths 1,642.
- Public Health Service announces new headquarters in Baltimore, MD, Columbus, OH, Richmond, VA, and Columbia, S.C.
- **October 17, 1918**
- 300,000 influenza cases in PA
- October 19, 1918
- Donora School Board announces teachers will be paid their full salary even though schools closed due to influenza epidemic. The School Board asks the teachers to devote 5 hours a day to the Red Cross – “which was happily accepted by all”.
- **October 22, 1918**
- Washington County Golf and Country Club Board of Directors turned the club over to the Washington County Chapter of the Red Cross for use as an emergency hospital during the epidemic. Described as “ideal” since the club has “gas, electricity, and city water ... large porch is glass enclosed, making it available for the outdoor treatment ... spacious grounds for the erection of tents ... (will) take cases from Meadowlands where the disease is very prevalent and ... overflow cases from the Washington hospitals.
- PA cases estimated at 350,000 with 150,000 in Philadelphia. First 18 days of October 14,805 deaths in PA.
- Military influenza cases since September 13, - 290,447. Pneumonia 46,055 and 15,072 dead.
- **October 23, 1918**
- Newspaper reports: “...the disease is really not increasing on the whole, in Monongahela. However, with hundreds of cases raging in Monessen, Donora, and Elizabeth, and with a large number in New Eagle, it behooves us to stand in readiness for an epidemic.”
- **October 24, 1918**
- Headline: “Flu” Ban To Be Lifted Very Soon – Governor Brumbaugh said “I am going to see the ban lifted early through local authorities...”
- Reports received of spread of deaths in Allegheny County and the coal regions.
- Over 20,000 deaths feared for October in PA.
- Monessen reports “no flu cases” but “... there is considerable sickness in that town, from various ailments... the Elks home ... will be utilized as an emergency hospital, if it becomes necessary”..
- Monongahela teachers were to receive their full salary during the closure
- **October 25, 1918**

- Charleroi Board of Health closes schools, all soda fountains closed, ice cream to be sold in bulk only, “pop and soft drinks must be taken from the bottle direct and not poured into a glass”. 85 cases to date and 2 deaths.
- Dr. B. Franklin Royer, State Commissioner of Health, refuses to adjust the closing regulations for PA. Philadelphia residents had hoped to be able to relax the rules against church attendance.
- Washington and Warren Counties reporting increases in cases.
- Red Cross makes influenza masks available at drug stores – free of charge
- The Blaine mine, near Elizabeth reports of over 100 men out with the flu. “As a consequence the output of the mine is greatly reduced”.
- Monongahela physicians reported these cases:
 - Influenza 70
 - Diphtheria 3, Scarlett Fever 1, Pneumonia 1
 - Quarantines lifted and homes fumigated 18
 - Deaths 3
- **October 26, 1918**
- Schools to remain closed indefinitely
- **October 28, 1918**
- After visiting all homes from Axelton to Sunnyside 350 cases of influenza reported.
- Washington wishes to canvass all homes in the city to determine the level of infection.
- State Department of health reports disease is spreading into new areas and is increasing rapidly in some counties. Allegheny County and Pittsburgh are reportedly hard hit and the “entire Pittsburgh mill district is in the grip of the epidemic”.
- Report from NYC: “A steam shovel was used in one of New York’s cemeteries today to dig a trench in which to inter temporarily the bodies of victims of influenza.”
- The Armory on Jackson Street is turned into an influenza hospital in the city. 10 patients reported today.
- **October 29, 1918**
- Health Officer Report – 90 cases of influenza, 10 new cases today, 2 quarantines lifted, 30 houses fumigated.
- Mayor A. L. McVicker cancels Halloween for 1918.
- **October 30, 1918**
- PA reports 1,788 deaths from influenza on October 28th.
- No relaxing in current “anti-gathering” rules
- **October 31, 1918**
- People are urged to “... remain in their homes, not to visit, not to hold social gatherings, and to avoid crowds.”
- PA reports 1,312 deaths due to influenza in past 24 hours.
- Total reported deaths due to influenza and pneumonia in October 28,790
- Monongahela reports 9 new cases today
- **November 01, 1918**
- “The epidemic in Webster is still raging and many are suffering from the dread disease”.

- 16 influenza dead reported at Webster morgue
- Since October 01 PA reports 28,906 deaths due to influenza and pneumonia
- Banks are reporting falling behind in their activities as their workers are suffering from influenza
- **November 02, 1918**
- Operations of the Armory Hospital is taken over by State Health Department
- **November 04, 1918**
- Dr. Royer announces the “gathering ban” will be lifted in 19 counties immediately and another 34 counties are under review. No definite announcement made regarding Allegheny, Washington
- **November 04, 1918**
- With arrival of cooler weather, it is expected the epidemic has begun to subside. Conditions in Donora are reported to be “clearing up”. 49 deaths were reported in the previous week in Donora.
- There were reports of theaters and saloons planning to re-open for business before the lifting of the “gathering ban”. The State Health Department will prosecute any owner in violation of the ban.
- **November 05, 1918**
- State Health Commissioner Royer reports the epidemic has passed its crest and is on the decline. Since 10/01 there were 32, 437 deaths due to the epidemic in PA.
- Superintendent of Public Safety Crall reports 126 cases of influenza and diphtheria in Monongahela in October with 47 deaths reported.
- **November 06, 1918**
- “Closing Ban” to be lifted November 09, 1918 for Fayette and Washington Counties. Restrictions on theaters, moving picture establishments, dance halls, meetings, and sale of alcoholic beverages end at 12:00 noon 11/09/18. Funerals must remain private for one additional week – until 11/16/18.
- **November 07, 1918**
- There were 204 emergency hospitals in operation throughout the state to care for influenza sufferers.
- **November 18, 1918**
- Monongahela Schools reopen. “All non-resident pupils” had to show a certificate of being free of influenza. Resident students whose homes were quarantined had to be out of quarantine at least one week before returning to school. Parents are asked to keep a child home who appears to be sick, teachers will send sick students home.
- **November 19, 1918**
- Influenza still rampant along “upper river”. Crucible, Vestaburg, Fredericktown, Rices Landing, and others report several hundred cases in their communities.
- West Brownsville reports many deaths and a serious outbreak. There are reports of a casket shortage and carpenters at some of the mining settlements are making caskets to meet the demand.
- **November 20, 1918**

- Brownsville is reported to be the hardest hit place of its size in the US. Estimates report over 200 deaths thus far.
- Brownsville, South Brownsville, and North Brownsville report more than 50 deaths in the last week, 7 in the last 24 hours. The gathering ban is re-instated for those areas.
- **December 01, 1918**
- Charleroi schools will reopen on December 30.
- **December 06, 1918**
- Dr. Royer advises doing Christmas shopping early to avoid crowds and prevent a resurgence of influenza. He advises store owners to help out by “beginning at once to display the special holiday goods.”
- **December 13, 1918**
- US Surgeon General reminds population that influenza is still serious and take all possible precautions against a resurgence.
- **January 10, 1919**
- Estimates claim 6 million people died of influenza in previous 12 weeks. “The Worst World Plague Since the Terrible Black Death Swept Civilization”.
- PA Death Rate for 1918 ---- 21.6 per 1000
- PA Death Rate for 1917 ---- 14.8 per 1000

What Caused the Influenza Pandemic in 1918?

- The short answer to that question - We still do not know for certain. It remains an enigma. (7)
- Recent research (2000 – 2011) has raised some possible ideas. In samples drawn from the lung tissue of soldiers who died during the epidemic, an Inuit woman dug up from the permafrost, and 2 samples from Royal London Hospital.
- Two widely “accepted” theories – avian and/or swine.:
- The genetic sequence of the 1918 samples rule out an avian cause: “the 1918 ... is much less avian-like and, while probably novel to humans in 1918, does not appear to have been derived directly from an avian strain” (Taubenberger, 2003).
- The possibility of a swine cause seems remote: “swine influenza was first recognized as a clinical entity in that species in the autumn of 1918 During the fall and winter of 1918-1919, severe influenza-like outbreaks were noted not only in swine in the USA but also in Europe and China It seems probable ... the direct transmission was from humans to pigs.” (Taubenberger, 2003)
- “Sequencing of more avian H1 strains, and research into alternative intermediate hosts than swine, such as poultry or horses, may shed further light on the origins of the 1918 pandemic.” (Taubenberger, 2003)

• Other Possible Causes Identified

- ***“Strep Throat Infection”*** (Chapman 2009) – “A strep throat infection may have been the deadly culprit affecting people during the 1918 pandemic ... Available information about the pandemic indicates that people who became sick during this time died within 7 to 11 days, which is more indicative of a bacterial infection than a viral infection like the flu” (8)
- ***“Bacteria were the real killers in 1918 flu pandemic”*** (Callaway 2008) – “Although a nasty strain of flu virus swept around the world, bacterial pneumonia that came on the heels of mostly mild cases of flu killed the majority of the 20 to 100 million victims of the so-called Spanish flu.... That pneumonia causes most deaths in an influenza outbreak is well known ... The bottom line is we think the influenza virus itself was necessary – but not sufficient – to cause most deaths” (9)
- ***“Tuberculosis Caused Most 1918 Flu Pandemic Deaths”*** (Stevenson 2009) – “A close study of that worldwide pandemic shows that the real culprit was probably pandemic tuberculosis. Influenza, while certainly not a disease to be taken lightly, can best be viewed as the straw that broke the camel’s back... For at least 12 years after the 1918 pandemic, the tuberculosis death rate was less than expected, which would tend to imply that many, if not most, of the deaths attributed to influenza actually succumbed as a result of being weakened by tuberculosis.” (10)
- ***New Look at 1918/1919 El Nino Suggests Link to Flu Pandemic*** (National Oceanic and Atmospheric Administration 2009) - “...the 1918/1919 El Nino’s central Pacific location links it more closely to drought in India... The drought coincided with a flu pandemic that was sweeping the globe at that time ... There was a famine and lack of potable water, thus a compromised population ... The influenza pandemic killed an estimated 18 million people in India.” (11)
- ***Astrological Causes*** (Brand 2009) – “Authorities associate influenza with Uranus and difficult aspects to it from the other slow moving planets ... When the first wave of flu began in early 1918, Saturn was 11 degrees from the exact opposition with Uranus but, when the pandemic reached its second and most lethal wave in the US, Saturn was in very close opposition to Uranus! ... In 1918-1919, transiting Saturn was opposite and Uranus was conjunct with the Moon (the public, families, homes) in the U.S. birth chart, so most families and homes in the U.S. were affected...” (12)
- ***Other Causes*** (Garrett 1994) – “Nakedness, fish contaminated by Germans, dirt, dust, unclean pajamas, Chinese people, open windows, closed windows, old books, ‘some cosmic influence’” (13)
- ***“Was The ‘Spanish Flu’ Epidemic Man-Made”*** (Makow 2006) - “in 1948 Heinrich Mueller, the former head of the Gestapo, told his CIA interrogator that the most devastating plague in human history was man-made.... (Mueller said) At a 1944 Nazi bacteriological warfare conference in Berlin, General Walter Schreiber ... told Mueller that he had spent two months in

the US in 1927 conferring with his counterparts. They told him that the (Spanish flu) was developed and used during the 1914 war ... But it got out of control..." (14)

- **Jump Rope Rhyme during the epidemic**

I had a little bird
Its name was enza
I opened the window
And in-flu-enza

References

- 1. Title adapted from Thompson – The Historian’s Office, Town of DeKalb NY
- 2. Influenza Pandemic By the Numbers adapted from Crosby (1989) *America’s Forgotten Pandemic: The Influenza of 1918*. Cambridge University Press.
- 3. Crosby (1989)
- 4. Crosby (1989)
- 5. All Monongahela Cemetery Data from Monongahela City Cemetery records
- 6. Time Line adapted from page 1 (1918 – 1919) The Daily Republican, Hazard Publishing Co. Monongahela PA.
- 7. “Taubenberger references” from Reid Ann H. and Jeffery K. Tauberger (2003) “The Origin of the 1918 pandemic influenza; a continuing enigma”. *Journal of General Virology* 84, 2285-2292.
- 8. Chapman (2009) “Strep Infections were the Biggest Killer in the 1918 Flu Pandemic, New Study Suggests”. www.findingdulcinea.com/news/health/2009.
- 9. Callaway (2008) “Bacteria were the real killers in 1918 flu pandemic”. www.newscientist.com/article/dnl4458
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- 11. NOAA (2009) New Look at 1918/1919 El Nino Suggests Link to Flu Pandemic. www.elnino.noaa.gov/pandemic_1918_1919.html
- 12. Brand (2009) “2009-2010 Swine Flu Pandemic”. <http://garybrandastrology.com/srticles/echo/2009FluPandemic6-9-2009.html>
- 13. Garrett, Laurie (1994) *The Coming Plague: Newly Emerging Diseases in a World Out of Balance*. Farrar, Straus, Giroux, New York.
- 14. Makow, Henry (2006) “Was The ‘Spanish Flu’ Epidemic Man-Made? Sixty Millions Dead in 1918-19. <http://educated-yourself.org/cn/makowspanishflu1918manmande02dec06.html>
- 15. List of Epidemics adapted from Adams “Timeline: World History of Viral Pandemics: 412BC to 2009. www.naturalnews.com/z026178_flu_pandemic_bird.html

Suggested Readings

- Barry, John L. (2004) *The Great Influenza: The Story of the Deadliest Pandemic in History*. Penguin Books, New York.
- Crosby, Alfred W. (1989) *America's Forgotten Pandemic: The Influenza of 1918*. Cambridge University Press.
- Kolata, Gina (1999) *FLU: The Story of the Great Influenza Pandemic of 1918 and the search for the virus that caused it*. Farrar, Strauss, Giroux, New York.