

“The Spanish Influenza Pandemic of 1918-1919”

Summary

The influenza pandemic of 1918-1919 killed more people, somewhere between 20 and 40 million worldwide, than the total number of fatalities in World War I. It has been cited as the most devastating epidemic in recorded world history. More people died of influenza in a single year than in four years of the bubonic plague, also known as “Black Death,” from 1347 to 1351. Known as “Spanish flu” or “La Grippe,” the influenza of 1918-1919 was a global disaster that affected life in Florida as well.

Objectives

Students will:

- 1.) understand the difference in the words “epidemic” and “pandemic;”
- 2.) identify the factors that allowed the Spanish influenza to spread quickly around the world;
- 3.) discuss how the medical limitations of the time period caused health professionals difficulty in effectively treating the disease;
- 4.) (optional) create an annotated map showing the Spanish flu’s spread around the world in 1918-1919.

U.S. History Event

American entry into World War I and the end of the Great War

Grade Level

This lesson could be used by upper elementary school, middle school, and high school students.

Materials

Overhead Transparency D-4-1, Reading Passages #1 & #2, world atlases (optional), world maps showing national borders (optional), colored pencils or crayons (optional)

Lesson Time

This lesson could be completed in one 30-45 minute period, or could be split into two lessons. If you implement the world map activity, this lesson will take longer than 45 minutes, especially for elementary students.

Lesson Procedures

Picture D-4-1



Procedures

- 1) As students enter the classroom, project Picture D-4-1 (<http://www.theledger.com/apps/pbcs.dll/article?AID=/20030610/NEWS/306100301>) from an overhead transparency projector or from a scan converter hooked up to your TV. Have students answer the following questions in their notebook for their **Preview** assignment: "What do you see in this picture? How large do you think this room is? Can you see how the room is cooled (open windows, fans in the background mounted to walls)? Why are all of these people lying in bed? Who is taking care of them?" Encourage students to only answer the first question in terms of what they can actually see in the picture, not inferences (i.e., beds, lots of people, wooden structure, etc.)
- 2) As students are finishing their **Preview** assignment, explain to them that this is a picture taken of an Army hospital at Camp Funston in Kansas in 1918. It is filled with the first victims of the Spanish influenza epidemic that eventually would kill at least 50 million worldwide.
- 3) At several military bases around the United States towards the close of the Great War, this scene was being duplicated. Read the following letter from a young Army doctor at a base near Boston, MA, to your students so that they may have a clear understanding as to the severity of this particular outbreak of influenza (found at <http://web.uct.ac.za/depts/mmi/jmoodie/influen2.html>):

Camp Devens, Mass.
Surgical Ward #16
29 September 1918
(Base Hospital)

Burt-

It is more than likely that you would be interested in the news of this place, for there is a possibility that you will be assigned here for duty, so having a minute between rounds I will try to tell you a little about the situation here as I have seen it in the last week.

Camp Devens is near Boston, and has about 50,000 men, or did have before this epidemic broke loose. This epidemic started about four weeks ago, and has developed so rapidly that the camp is demoralized and all ordinary work is held up till it has passed. All assemblages of soldiers (are) taboo.

These men start with what appears to be an ordinary attack of "La Grippe," or influenza, and when brought to the hospital they very rapidly develop the most vicious type of pneumonia that has ever been seen. Two hours after admission they have the mahogany spots over the cheek bones, and a few hours later you can begin to see the Cyanosis [a bluish discoloration of the skin and mucous membranes resulting from inadequate oxygenation of the blood] extending from their ears and spreading all over the face, until it is hard to distinguish the colored men from the white. It is only a matter of a few hours then until death comes, and it is simply a struggle for air until they suffocate. It is horrible. One can stand it to see one, two or twenty men die, but to see these poor devils dropping like flies sort of gets on your nerves. We have been averaging about 100 deaths per day, and still keeping it up. There is no doubt in my mind that there is a new mixed infection here, but what I don't know.

The normal number of resident doctors here is about 25 and that has been increased to over 250, all of whom (of course excepting me) have temporary orders-"Return to your proper station on completion of work"...We have lost an outrageous number of nurses and doctors, and the little town of Ayer is a sight. It takes special trains to carry away the dead. For several days there were no coffins and the bodies piled up something fierce, we used to go down to the morgue (which is just back of my ward) and look at the boys laid out in long rows. It beats any sight they ever had in France after a battle. An extra long barracks has been vacated for the use of the morgue, and it would make any man sit up and take notice to walk down the long lines of dead soldiers all dressed and laid out in double rows. We have no relief here, you get up in the morning at 5:30 and work steady till about 9:30 P.M., sleep, then go at it again. Some of the men of course have been here all the time, and they are **TIRED**.

- 4.) Ask your students if they have ever experienced anything, or heard of anything like the preceding account before. Most likely, none of them has. Ask them if it sounds a little hard to believe that so many people

could be affected so severely at one time by something like the flu. Then, assure them that it is true and pass out "**Reading Passage #1: Outbreak of the Spanish Influenza Pandemic of 1918-1919**" and the **discussion questions** to them. Instruct students to read the passage and answer the discussion questions. Allow 15-20 minutes, then pass out "**Reading Passage #2: The Spanish Flu's Impact on Florida**" and corresponding discussion questions.

- 5.) (Optional) Find a map of the world that shows individual countries. Give each student (or pair of students) a world atlas. While reading the first passage, have students label where and when the virus originated (most likely China). Students should then color that area one color. Then instruct students to draw an arrow to the next place where and when the outbreak continued (USA), and color that area another color. Then students should repeat the process with the other geographic locations mentioned in Reading Passage #1.

Activities



1. What do you see in this picture?
2. How large do you think this room is?
3. Can you see how the room is cooled?
4. Why are all of these people lying in bed? Who is taking care of them?

Reading Passage #1: Outbreak of the Spanish Influenza Pandemic of 1918-1919

In the end, almost no place was spared. When the Spanish influenza virus circled the world between 1918 and 1919, nearly every place that man had occupied prior to that was affected, with some of the exceptions being islands in the Bering Sea, the northern coast of Iceland, and American Samoa.

Some experts today believe that the virus originated in China—the birthplace of many flu strains. It appears that the virus passed from birds to pigs and then to humans. Its first true victim has been lost to history. What is known is that on March 11, 1918, an Army cook named Albert Mitchell reported to the infirmary of Camp Funston, Kansas. He had typical flu-like symptoms—a low-grade fever, mild sore throat, slight headache, and muscle aches. He was ordered to rest in bed. By noon of the same day, 107 soldiers at the base were sick with similar symptoms. Within two days, 522 people were sick. Military posts have always been fertile ground for outbreaks of contagious disease. Barracks bring people from many regions into close quarters under high stress. So it wasn't a surprise that ground zero of this epidemic was a military installation, or that the disease was next reported, on March 18, at several Army camps in Georgia. The symptoms were mild, with few deaths. But the numbers of ill were high -- 2,900 cases out of 28,586 troops at the Georgia camps.

The epidemic then hop-scotched from one military post to another in the eastern and southern United States, spilled into the civilian population, and reached the West Coast in late April, where an outbreak was recorded at San Quentin Prison. Influenza hit large cities exceptionally hard: in Philadelphia, 158 out of 1,000 people died; 148 out of 1,000 in Baltimore; and 109 out of 1,000 in the nation's capital. The good news (if there was any) was that the disease peaked within two to three weeks after appearing in a given city. By then, however, it had already made a bigger and more fateful leap, across the Atlantic Ocean with hundreds of thousands of American soldiers going to join the Great War. Outbreaks were noted at an Army camp in Bordeaux, France, and in the port city of Brest in early April. By the end of the month it was at the Western Front, in the American, British, French and German armies. In May it arrived in England with troops returning from France. That month saw an outbreak in Madrid and Seville that caused a total death rate about twice normal for that time of year. This epidemic, with roots in Asia and the United States, had become a pandemic (an epidemic that is spread worldwide).

Spain was a neutral country during World War I. Because its news reports were uncensored, the Spanish outbreak received wide publicity, ultimately lending its name to both the pathogen and the pandemic itself. Even at the time, however, experts realized the name "Spanish flu" was entirely misleading as an indicator of the germ's origin.

The epidemic continued to move north and east, getting as far as Scandinavia and Poland. This "spring wave" reached India, arriving in Bombay on May 31 with a troop transport. Puerto Rico, part of the Brazilian coast, Indonesia, Australia and New Zealand experienced outbreaks in June.

Influenza tends to be seasonal, as the virus survives longest in cool, dry air and is most easily spread when people are crowded together -- all conditions favored by winter. It was unusual for the first wave of the 1918 pandemic to last as long as it did, and not surprising when things slowed down in August. Then something happened...

Becoming More Deadly

Microbes often adapt and change behavior while epidemics are under way. When slightly different strains are passing from person to person, a strain that kills its victims quickly, before they have time to infect others, may tend to disappear and be replaced by a strain that keeps its victims alive -- and transmitting disease -- for a longer time. There also can be evolutionary pressure for microbes to become more potent, if the change makes their hosts more infectious by, say, loading their mucus with germs or stimulating coughs and sneezes.

In late August 1918 a new outbreak of flu -- the "fall wave" -- began. The virus was as contagious as ever, but now more than 10 times as deadly. Between Aug. 22 and 27, the more potent strain appeared on three continents -- Europe, Africa and North America. The three places -- Sierra Leone's capital, Freetown; Brest, France; and Boston -- were each ports crowded with people coming from distant lands. Of the 2 million American soldiers who went to France in the war, 791,000 landed in Brest. Boston had a shipyard, naval hospital and many agencies shipping war materiel. Freetown was the main coaling station for steamships going from Europe to southern Africa. From these coastal cities the new wave of infection raced to both uninfected territory, such as Africa, and to areas only recently recovered from the spring wave, including Europe and America.

“You Got the Flu”

From Boston, the fall wave spread across the United States in six weeks. In Philadelphia, 10,959 people died of influenza in October. Military outposts were again hot spots. Between Sept. 12 and Oct. 11, thirty-seven Army installations suffered outbreaks.

Stanley Lane, who'd given a false birth date on his enlistment papers, was five days shy of his 17th birthday when influenza struck Camp McClellan in Alabama on Sept. 26. "All I remember about it was I got a little temperature, and I went on sick call and the doctor said, 'Go to the hospital, you got the flu,' " he recalled recently at his home in Silver Spring, Maryland. "When I walked in there the nurse says, 'That's your bed over there.' So I went over and sat down. And the greetings I got was from all these other GIs around there telling me: 'Hey, the guy who just left that bed died,' " Lane, now 101, said with a slight chuckle. "It didn't bother me. I went to bed."

He doesn't recall his illness as being especially severe. In any case, he recovered and went on to spend 32 years in the Army, retiring as a lieutenant colonel. The Spanish flu had an unusual and unexplained preference for young adults, whom it killed in greater numbers than either children or the elderly. Many of Lane's fellow soldiers weren't as lucky as he. About 20,000 died in nine weeks in the United States that fall.

Troops in Europe were rapidly infected as well. The American Expeditionary Forces recorded 37,000 cases of influenza in September -- and 16,000 more in the first week of October. No army was immune. "Influenza gummed up the German supply lines and made it harder to advance and harder to retreat," historian Crosby wrote. "It made running impossible, walking difficult, and simply lying in the mud and breathing burdensome. From the point of view of the generals, it had a worse effect on the fighting qualities of an army than death itself."

Deaths by the Millions

Around the world, wide and cruel variations in mortality were the rule. Poor and marginally nourished people, not surprisingly, fared worst. India lost about 18.5 million people, just less than 6 percent of its population. In the United States, 28% of the population became infected, and 675,000 people died, about 0.7 percent of the population and a figure greater than the amount of American lives lost in all of the 20th-century's wars. In northern Nigeria, mortality among the general population of white Europeans was 19 per 1,000; among Nigerians, it was 32 per 1,000. Some aboriginal populations were decimated. Mortality in Alaska was horrifying. In one settlement, Brevig Mission, 72 out of 80 natives died in five days, leaving only children and teenagers. The flu was most deadly for young people between the ages of 20 and 40. Worldwide, it is estimated that anywhere between 20 million and 40 million died.

As with SARS today, quarantine was the main tool against Spanish flu. There were no effective medicines. In fact, it wasn't even known that a virus caused the disease. That wouldn't be discovered until 1933. In general, quarantine worked poorly as it took just one infected person breaking isolation to spread disease. But in one place it worked famously. The Samoan Islands in the Pacific Ocean were split between the United States, which controlled the eastern islands, and New Zealand, which had seized the western islands from Germany at the start of the war. On Nov. 7, 1918, the steamship *Talune*, from New Zealand, anchored at Apia, the capital of Western Samoa. It carried people ill with flu. "Before the end of that year, a matter of less than two months, 7,542 died of influenza and its complications in Western Samoa, approximately 20 percent of the total population," Crosby writes.

Without orders from the government but based on what he learned from a radio news service, the governor of American Samoa, Navy Cmdr. John Poyer, instituted a quarantine policy. When he heard of the outbreak on Western Samoa, he banned travel to or from the neighboring islands, which were about 40 miles apart. When Western Samoa sent a mail boat to American Samoa, Poyer refused even to allow the bags to be transferred. Poyer persuaded the island's natives to mount a shore patrol to prevent illegal landings. People who disembarked from ships sailing from the American mainland were kept under house arrest for a specified period, or examined daily. Aspects of the quarantine continued into mid-1920, and as a result, were no influenza deaths on American Samoa. Meanwhile, between 80-90% of the Western Samoan population was infected, with many of the afflicted starving to death simply because they were too weak to even feed themselves.

A third wave of Spanish flu began in January 1919, circulating intensively for two months. Although that wave, too, caused many deaths, the virus was running out of victims. The winter of 1920 again saw flu with relatively high death rates. At some point, on a day as lost to history as the one of its emergence, Spanish flu made a final human being ill and then disappeared.

Reading Passage #2: The Spanish Flu's Impact on Florida

The year was 1918. The Great War was waging overseas, and on the home front, Florida schoolchildren were asked to knit socks for American soldiers abroad. Five cents would get you an ice cream cone or a bag of hard candy to share with your friends. The streets were made of lime and were empty enough for children to play marbles or baseball without dodging traffic.

That fall, John Olson's father went to Jacksonville for a carpentry job but picked up more than he bargained for. A busy hub for U.S. servicemen, Jacksonville became inundated with cases of the Spanish influenza, the lethal virus that would kill between 20 million and 40 million people worldwide in one year.

Like many metropolitan areas overrun with the flu, Jacksonville enacted a citywide quarantine. Despite the use of gauze masks, health elixirs, and folk remedies, the flu spread from person to person like wildfire. The only way to stop its spread was to cut off human contact.

Olson's father was trapped in the city and longed to return to his wife and four children in Ocala. He managed to slip past the officers enforcing the quarantine and catch a train back home, bringing the deadly virus with him. Within days of her father's return, Olson, then eight years old, came down with the flu. Feverish and unable to keep any food down, Olson spent most of her sickness sleeping in bed. "I remember I was lying in bed and Father was lying in bed and we were both pretty sick," she said. "I don't remember much other than that." Olson was one of the Ocalans to come down with the flu. She was also one of the lucky ones—she made a full recovery.

As the virus spread throughout the city, schools and churches were closed. Marion County, then with a population of about 25,000, lost a number of residents, though there are no records documenting the extent of the death toll. Throughout the country and across the globe, cities fell to the epidemic. All it took was one infected person—in some instances, the mailman—to bring the virus into even the most remote communities. In some adults who came down with the flu, the virus caused hemorrhaging that filled the lungs with a bloody fluid. These flu sufferers sometimes drowned in their own fluids before the onset of the secondary infections, like pneumonia, that are the usual cause of death for flu patients.

On the 80th anniversary of the Spanish flu pandemic, Olson looked back on her illness. "It didn't frighten me at that time," she said. "It wasn't until I was older that I was frightened about what had happened. Children don't realize that it is such a bad thing because they can't comprehend it," she added. "Death is something that is very remote to children."

Unsolved Mysteries

There are a number of mysteries surrounding the 1918 flu virus. The virus was unusually deadly, even for a population that did not have the influenza vaccines and antiviral drugs we have today. For some reason, it was most lethal among 21-to 29-year-olds, sparing many of the children and elderly who are usually the first to die in an epidemic. Elizabeth Donnelly, a 7-year-old in Ocala at the time, bounced back from the 1918 flu after several days of bed rest and drinking pitchers of water. "It didn't mean that much to a child," she said. "I had whooping cough later and that was much worse. In those days you had everything that everybody else had, because there were no shots or anything."

Carl Lindner, Jr., was not so lucky. Carl, then eight, and his five-year-old cousin Philip Townsend shared a room in Marion County Hospital in March 1919, both sick with the flu. "When Philip finally came to, he asked the nurses, 'Where is Carl?' and the nurses said, 'Oh, he's already gone home,'" said Mary Townsend, Philip's widow. "Carl was dead, but the nurses didn't know how to tell that to a 5-year-old boy," she said.

The Lindner family shared their grief with the entire town, taking out an ad in the Ocala Weekly Star to thank those who supported them "during the long and distressing sickness and final death of our lovable and much loved little boy." Less than two weeks later, the flu claimed Carl's father, Dr. Carl W. Lindner, at age 73. The next week, the doctor's widow, Sallie Townsend Lindner, added the loss of her own father to the loss of her husband and son. "It must have been very hard on her," Mary Townsend said. "After that, Philip went to go stay with his Aunt Sallie for a year or two," she said. "It might be that he was helping to fill an emptiness in her life."

Crepe and Coffins

Other children who escaped the illness still witnessed the severity of the epidemic. Margaret Cassinelli, then 10 years old, saw at least a dozen people in her Bethlehem, PA, neighborhood die of Spanish influenza. She recalls families hanging colored crepe around their front doors to announce the grim news, black for the elderly, white for babies, and purple for those in between. "I remember as a kid it used to bother me to know that people

died,” said Cassinelli, who lives in Silver Springs Shores. “But when you think about it, we’re only put on this earth for a short time. I guess it was one of those things.”

Dorothy Schilly, then an 8-year-old living in Atlantic City, NJ, also did not get sick, but her parents and sister did. She was not allowed to go anywhere near their rooms, and she was also quarantined from the public. “I would go out on the street and no sooner had I gone out there, the mothers would call all of their kids in,” she said. “Boy, was I ever lonely.” In Herculeaneum, MO, a small town thirty miles south of St. Louis, her future husband Archie Schilly, saw the undertaker bring a horse-drawn farm wagon through the city twice a day, piling up caskets to be taken to the graveyard. Schilly, then 11, watched as someone in every family he knew died. Remarkably, no one in his eight-member family took ill. “The doctors went around in the winter time with their heavy overcoats, and each of the pockets had pills in them,” he said. “They would come in, look at you, drop some pills over there, and say, ‘Take some every so often. Goodbye.’ That’s how busy they were.”

Not only were the doctors busy, they were helpless. Until the advent of the Spanish flu, modern medicine had seemed invincible. Microscopes had enabled doctors to identify disease-causing pathogens. Scientists developed a battery of vaccines for smallpox, diphtheria, anthrax, rabies, and meningitis. But the Spanish flu stumped science. The virus was too small to be seen under the light microscope, and none of the medicines of the time had any effect. The doctors did what they could to quell a panicking public, but rumor and superstition began to take over. In some places, Germany’s Kaiser Wilhelm was blamed for unleashing the virus on American troops. Street corner evangelists in the major cities said the flu was the scourge of the sinners.

The failure of medicine sparked a revival of folk remedies akin to those used against the Black Death of the 14th century. Onions, garlic, salt, and other pungent elements were worn as a first line of defense. Dorothy Schilly remembers wearing a small sack of camphor balls around her neck to fend off the flu. “I guess it worked, because I didn’t get it,” she said with a laugh.

In a matter of months, the virus worked its way across the globe, and those who slipped out of its deadly grip developed immunity to the strain. The disease then disappeared as quickly as it came.

Could It Happen Again?

In the years since, scientists have studied the virus to find out where it came from and why it was so deadly—all to prevent such a disaster from recurring.

For starters, the term “Spanish flu” is a misnomer. Dr. Ed Kilbourne, pathologist at New York Medical College, said the leading theory is that the virus originated in China, and later humans passed it to pigs near Fort Riley, KS. Inside the swine, the virus probably mutated into its more deadly form before being reintroduced to the American population. The global travel coinciding with World War I then spread the virus to every continent.

Scientists with the Armed Forces Institute of Pathology are piecing together genetic bits of the virus, obtained from a frozen corpse in Alaska and two tissue samples from World War I soldiers, to learn more about why the virus was so deadly, especially to young adults. It will take scientists at least several more years to complete that sequencing.

Knowing the virus’ genetic makeup may give scientists leads but not the answers to the mysteries surrounding the epidemic, Kilbourne said. “Bear in mind that we have all the genes sequenced for the present viruses and we still don’t have a clue as to what makes one more virulent than another.” In the meantime, health officials keep an eye on each emerging strain of the influenza virus, ever watchful of a strain that could set off the next epidemic. Most virologists agree that the epidemics of the future will be influenza—not “exotic” diseases like the Ebola virus or the bubonic plague. The most dangerous flu strains are usually some combination of viruses that affect either pigs or birds. These strains usually come out of Asia, where the people live in close contact with such animals.

The two other major flu epidemics of this century—the 1957 Asian flu that claimed 70,000 U.S. lives and the 1968 Hong Kong flu that killed 28,000 Americans—originated in Asia. But flu epidemics do tend to come in 20-to-30-year cycles, and some experts believe we’re overdue for our next big flu.

Timing aside, Marion County health department director Dr. Nathan Grossman said improved communications and new medicines—including flu vaccines and the antiviral drug amantadine—have stacked the odds against another epidemic on par with the 1918 pandemic. But Grossman said people need to do their part by getting an annual flu shot. Every year, the common flu contributes to between 10,000 and 20,000 deaths in the United States, mostly among children or elderly with other health complications.

-this passage was written by Bridget Hall, staff writer for the Ocala Star-Banner

Spanish Flu Affected Polk County As Well

Spanish flu struck Polk County in the fall of 1918, according to archived articles in The Evening Telegram of Lakeland. Schools closed. Churches didn't hold services. Doctors and nurses struggled to keep up with the number of sick and dying. In October 1918, the Telegram carried nearly daily notices of people who had become ill with the flu or who had died from it.

"The first death in Lakeland from Spanish influenza occurred last night when Lula May Carter, the little 10-year-old daughter of Mr. and Mrs. H.B. Carter passed away after a week's illness," the newspaper reported Oct. 16, 1918. "This death is a particularly sad one, as the little girl's parents are both ill of the malady, being unable even to sit up, though they are now out of danger." That article appeared above another with a headline "20 New Cases of Spanish Influenza Since Yesterday."

No count was available to show how many people in Polk became sick or died from the flu, but the worries were serious enough that on Oct. 13, churches across the county held no services, according to the Telegram and M.F. Hetherington's book History of Polk County, Florida. Authorities also closed theaters and schools, and all public meetings were discouraged, according to the Telegram. Through early November, teachers published lesson plans in the newspaper so students could work at home while schools were shut down.

Discussion Questions for Reading Passage #1

1. From where do most experts think that the influenza virus of 1918-1919 originated, and how was it passed to humans?
2. Why are military bases considered “ground zero” for epidemic outbreaks?
3. An epidemic is defined as an outbreak of a contagious disease that spreads rapidly and widely. What is the difference between an epidemic and a pandemic, and what should the Spanish influenza of 1918-1919 be classified as?
4. Why did the virus become known as the “Spanish flu?” Do you think that that was an accurate name for the sickness?
5. The outbreak of flu in August of 1918 was 10 times more deadly than the first outbreak. Why was there a change?
6. At what major American port did the fall wave of the influenza pandemic strike first?
7. What was unusual about the Spanish flu’s lethality among young adults?
8. Do you think that the Spanish flu’s effects on soldiers might have affected the outcome of World War I?
9. Did each country affected by the flu suffer the same death rate? If not, what probably accounted for the differences? Did different groups in the same place suffer the same fates?
10. Do you think that American Navy Commander John Poyer, the governor of American Eastern Samoa during WWI and the Spanish flu pandemic, was overly harsh in the way he ordered the quarantine of American Samoa to be carried out, or do you think that the end results (especially when comparing American Samoa to New Zealand-controlled Western Samoa) justified the strictness of his orders? Explain your answer.

Discussion Questions for Reading Passage #2

1. How did the city of Jacksonville attempt to curb the spreading of the Spanish flu? In your opinion, was this effort successful? Why or why not?
2. For those unfortunates who died as a result of the Spanish flu, what caused their deaths?
3. Margaret Cassinelli, who was ten years old and living in Pennsylvania at the time of the Spanish flu pandemic of 1918-1919, remembered “families hanging colored crepe around their front doors to announce the grim news, black for the elderly, white for babies, and purple for those in between.” Why might people have chose this method to spread news about the well-being of their families? Do people still display signs such as these to inform others of family news?
4. Why would other neighborhood mothers have called in their children when 8-year-old Dorothy Schilly went outside to play?
5. Why were doctors helpless against the spread of the Spanish flu? How did the public react?
6. Why do many scientists think that the world is overdue for another pandemic, much like the Spanish influenza of outbreak of 1918-1919? Do you agree? Explain your answer.
7. Read the account of how the Spanish flu pandemic affected Polk County. Explain how life “stopped” in the county until the crisis was over. How would your life change if the same thing were to happen in modern times?

Assessment

- 1.) List the following as an example of an epidemic, a pandemic, or neither. Then, give your reasoning for why you classified it that way.
 - a. Someone comes to school with a cold, and a week later, over 60 students are sick;
 - b. Mike Bates, a newspaper columnist with the Oak Lawn (Illinois) Reporter, wrote on May 1, 2003, that severe acute respiratory syndrome (SARS) had affected over 5,000 people worldwide, and of those infected, 321 had died. Almost all cases were limited to China, Canada, and the United States.
 - c. A deadly illness called the "Black Death" killed over a third of Europe's population between the years 1347 and 1351. In 1347, Europe's estimated population was 75 million; in 1351, after this so-called bubonic plague had passed, it was 50 million. The death rate among those who were contaminated was over 90%. Fleas that bit people after feeding off of infected rats transmitted it.
 - d. Several members of an entire community contract food poisoning after eating egg salad left out in the sun too long at a neighborhood picnic.
 - e. The Spanish influenza outbreak of 1918-1919, which killed between 20 million and 40 million people worldwide.

- 2.) Many scientists believe that the Spanish influenza originated in _____, and then came to _____, where it was first seen in military camps.
 - a. the United States; China
 - b. China; the United States
 - c. Spain; Russia
 - d. Spain; Sierra Leone

- 3.) True or false. The Spanish influenza was named was for the disease's place of origin.

- 4.) Which of the following factors did not lead directly to the spread of the Spanish influenza?
 - a. close living quarters among infected and non-infected men in U.S. Army barracks;
 - b. the shipment of men and supplies from the United States to Europe during World War II;
 - c. lack of technology or expertise with regard to the medical community in combating the disease;
 - d. gas warfare used by the Germans during WWI

- 5.) Compared to other, less-developed places around the globe, the United States fared (better; worse; about the same) in dealing with the Spanish influenza.

Resources

Brown, David. "Grim Reminder: Spanish Flu Shows How a Disease Like SARS Could Sweep the Globe." Lakeland Ledger, page B1, June 10, 2003.

(<http://www.theledger.com/apps/pbcs.dll/artikkel?SearchID=73149454047614&Avis=LL&Dato=20030610&Kategori=NEWS&Lopenr=306100301&Ref=AR>)

Hall, Bridget. "Killer Flu Swept Around the Globe in 1918." Lakeland Ledger. (date unknown)

"The Influenza Pandemic of 1918"- www.stanford.edu/group/virus/uda/

"Bubonic Plague: Far from the Deadliest Epidemic" –
http://home.nycap.rr.com/useless/bubonic_plague/index.html

"Is SARS the new Bubonic Plague?" - <http://pages.prodigy.net/michaelmbbates/column377.htm>