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Perspectives – Infectious Diseases in History

1918-1919 Influenza Research Paper

April 31, 2006

The Spanish influenza was a strain of influenza that struck the world throughout the years 1918 and 1919. The term "Spanish Flu" came as a result of events in World War I when Spain, who maintained neutrality, began reporting about the onset of the virulent strain of influenza. Everywhere else the newspapers were being filled with reports of the worldwide war and had little room to report about the spread of influenza, which was sometimes downplayed in its threat and importance. One newspaper article in the *Moultrie Observer* even claimed that the Spanish Flu was not dangerous and that the reports of its rapid spread and danger were undoubtedly over exaggerated because there is no disease that could spread that quickly.<sup>1</sup> Even though the 1918-1919 influenza strain was dubbed the "Spanish Flu" it did not necessarily originate in Spain. It most likely first struck the various armies fighting in World War I.

The symptoms of influenza are not always the clearest and can often be confused with other illnesses. A description of the disease and its symptoms can be found in the *Savannah Morning News*. "No disease develops so quickly or spreads so rapidly. The first symptom usually is a sharp rise in temperature to 103 or 104 degrees, headache, pain

<sup>1</sup> "Spanish Flu May Catch You," *The Moultrie Observer* (Moultrie, Georgia), October 5, 1918, 1.

## The Common Cure

Influenza, the flu, la grippe, jolly rant, the new acquaintance, all names describing an illness caused by the Influenza virus. In 1918-1919 Influenza spread across the world causing pain and grief everywhere, Georgia and the rest of the Southern United States were not spared from the grip of the Spanish Flu. Even though influenza was not a new illness, when Spanish Influenza spread into the Southern United States people were unprepared to handle the situation as they had little reliable knowledge as to how to prevent infection and the spread of the disease.

The Spanish Influenza was a strain of influenza that struck the world throughout the years 1918 and 1919. The term "Spanish Flu" came as a result of events in World War I when Spain, who maintained neutrality, began reporting about the onset of the virulent strain of influenza. Everywhere else the newspapers were being filled with reports of the worldwide war and had little room to report about the spread of influenza, which was sometimes downplayed in its threat and importance. One newspaper article in the Moultrie Observer even claimed that the Spanish Flu was not dangerous and that the reports of its rapid spread and danger were undoubtedly over exaggerated because there is no disease that could spread that quickly.<sup>1</sup> Even though the 1918-1919 influenza strain was dubbed the 'Spanish Flu' it did not necessarily originate in Spain. It most likely first struck the various armies fighting in World War I.

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<sup>1</sup> "Spanish 'Flu' May Catch You," The Moultrie Observer (Moultrie, Georgia), October 8, 1918, 1.



in the back, throat feeling dry or sore.”<sup>2</sup> Another complication that often accompanies influenza is various types of pneumonia, whether caused by the strain of influenza or brought about through another pathogen and allowed into the body due to the individual’s weakened immune system. It is the pneumonia that causes the most deaths in cases of influenza and in the 1918-1919 influenza pandemic. While the Spanish Flu had a high mortality rate as compared to other strains of influenza, its mortality rate was relatively low as compared to other illnesses. The Spanish Flu had a worldwide mortality rate of about two to three percent.<sup>3</sup> However, the great harm and threat caused by the disease was a result of its wide spread infection and its ability to kill even healthy young adults rather than just the young children and the elderly. It is estimated that “some 20 to 40 million people died of influenza in less than a year [during the 1918-1919 flu pandemic]...[and] one-fifth of the world’s population was infected.”<sup>4</sup> Another interesting statistic regarding the virulence and potential damage caused by the Spanish Flu is that nearly eighty percent of the United State’s Army’s casualties in World War I were caused by influenza and not war related wounds.<sup>5</sup>

Throughout the influenza pandemic there were three main forces that were trying to prevent and cure the deadly illness. These forces were the doctors, the local health boards and the public in general. Each group propagated methods that they thought were supposed to be successful in preventing and combating the Spanish Flu. By looking at

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<sup>2</sup> “Health Boards Give Warning of Influenza Danger,” Savannah Morning News (Savannah, Georgia), November 1, 1918, 8.

<sup>3</sup> Michael B. A. Oldstone, Viruses, Plagues, and History (Oxford, England, Oxford University Press, 1998), 173.

<sup>4</sup> Ibid., 173.

<sup>5</sup> Ibid., 173.

the methods that people believed could be used to fight off and prevent influenza one gains an insight into how those people felt about the illness at the time.

The general public, by far, had the most ways to fight off influenza. These were people that had little or no medical knowledge and were using mostly hearsay and rumor to develop defenses against influenza. The greatest source of the public's defenses against influenza came from advertisements in the newspaper. These advertisements provided information about the Spanish Flu: how dangerous it was, how to prevent it, how to fight it off when infected, its symptoms, among other tidbits of information. Once again, the most important thing to remember when looking at the methods that the public used to avoid and get over influenza is that they had no medical knowledge. An example of some preventative measures taken by the general public can be found in almost any advertisement in any newspaper: "... (Eucapine Salve) Is Most Effective Preventative, Known... Sterilize morning, noon, and night by sniffing the Eucapine up into the nostrils and rub a little on the back of your tongue, whence it will spread to your throat and tonsils, thus sterilizing the nose and throat."<sup>6</sup> Sterilization of the throat and nose is the most effective method of preventing influenza according to this article, yet another claims "Nothing you can do will so effectively protect you against the Influenza or Grippe epidemic as keeping your organs of digestion and elimination active and your system free from poisonous accumulations."<sup>7</sup> Both articles claim to be the most effective way of preventing the Influenza, yet this can obviously not be true. These opposing articles, placed on the same page in the same newspaper help show the confusion that the

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<sup>6</sup> "Avoid 'Flu' By Sterilizing Your Nose," Savannah Morning News (Savannah, Georgia), November 1, 1918, 5.

<sup>7</sup> "How to Avoid Influenza," Savannah Morning News (Savannah, Georgia), November 1, 1918, 5.

public had regarding the cause of influenza and how to prevent it. It is important to note that none of the articles specifically say that they refer to what people think, however they are all advertisements and through extrapolation one can figure that what is being so widely advertised throughout many newspapers is what the general public is using. Most advertisements promote medicines as panacea's, taking care of many different illness: "Dr. Williams' No. 101 Tonic is a ready prepared prescription of a noted physician, the late Dr. G. B. Williams, of Quitman, Ga., and has been extensively used for malaria, grippe, colds, chills, and fevers. Get a bottle at once and begin taking it and make yourself immune from the 'flu.'"<sup>8</sup> Here we have another example of a cure all medicine. The underlying theme of all the advertisements and all of the different preventative measures that the public has at their disposal is that these cures make money. The threat of the Spanish Flu is not taken very seriously other than it provides an opportunity for some people to develop 'cures' to sell off and make money with. With that being said, it is clear that the public was not provided very effective options to use to protect themselves from influenza and so they must have had to resort to a great variety of different tonics, and behavioral defenses against influenza. As a result of the public's lack of medical knowledge about influenza they were forced to resort to taking the word and opinions of others in order to protect themselves from the Spanish Flu. The reader has already been shown some examples of how the general public's defenses against influenza were affected by advertisements about various drugs, but the behavioral defenses against influenza were supported the strongest by the many health boards and committees.

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<sup>8</sup> "Don't Have the 'Flu'." Savannah Morning News (Savannah, Georgia), November 1, 1918, 3.

It was the job of the health boards to keep their town safe from illness and disease. As time progressed and they were forced to develop protective measures against many different diseases the theme that most seemed to stick with was “rest in bed, especially during fever, warmth, fresh air, abundant, wholesome food, and medicine for the relief of pain and fever....”<sup>9</sup> The main efforts from the health boards was trying to enforce behavioral practices in order to prevent the spread of influenza. Another example of preventative measures that the health boards told the public is a method of killing the bacteria left by an infected person. “During the disease handkerchiefs and linen contaminated by the patient should be disinfected by boiling water or soaking in a disinfectant solution, such as 5 per cent carbolic acid or chloride of lime solution. To disinfect rooms after the disease, thorough cleaning, air, and sunning will be sufficient.”<sup>10</sup> Once again there is an emphasis on getting fresh air in order to prevent the disease and to help recover from the disease, yet the old children’s rhyme comes to mind: I had a little bird, its name was enza, I opened the window, and in-flu-enza. Ironically shows some opposition to the idea of ‘opening the window and getting fresh air,’ although the rhyme could merely be referring to the seemingly unstoppable onslaught of the disease it is interesting to take note of. The health boards had, generally, more medical knowledge than the public did, and could give better advice, as pertaining to what preventative measures one should take in order to protect oneself from the Spanish Flu. Another major method of prevention emphasized by the state health boards was isolation. In Atlanta, “Immediate closing of schools, churches, theaters, and other places of public assembly in communities threatened by an epidemic of Spanish Influenza is

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<sup>9</sup> “Influenza Rapidly Spreads in Georgia,” The Albany Herald (Albany, Georgia), October 4, 1918, 8.

<sup>10</sup> *Ibid.*, 8.

recommended...by the Georgia State Board of Health...."<sup>11</sup> Other preventative measures listed in this article included: using individual drinking cups, sleeping in well ventilated rooms, preferably on a sleeping porch, resting immediately if stricken with a severe cold or influenza, and resting until completely healed, and keeping offices and other work places well ventilated.<sup>12</sup> The three main preventative measures promoted by health boards were isolation, in order to prevent giving the disease to someone else and prevent one from contracting it from someone else, ventilation, in order to allow the fresh air in to keep the disease from infecting the body, and rest. To keep the body's strength up so that if one came in contact with the pathogen then one's body could fight it off.

The group with the most medical knowledge was, obviously, the doctors and physicians. This group of people also supported the prevention of influenza in a different method. The medical community supported some medicines for treatment of influenza and also supported behavioral steps taken in order to prevent the spread and acquirement of influenza, but their greatest support seemed to be in the area of vaccinations. The advertisements seen in medical journals were much different than those found in the newspaper. The medical journal's advertisements were often promoting the purchase and use of various influenza vaccines rather than some panacea-like tonic. One advertisement in a medical journal was supporting the Mulford Influenza Serobacterin Mixed as a mixed bacterial vaccine and as an efficient prophylactic and therapeutic agent.<sup>13</sup> One article gave some general statistical data about the effectiveness of using a

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<sup>11</sup>"Spanish Influenza Epidemic Calls for Drastic Measures: Closing of Schools is Recommended by State Health Boards," The Albany Herald (Albany, Georgia), October 8, 1918, 3.

<sup>12</sup> Ibid. 3

<sup>13</sup> "Influenza Prevention and Treatment," The Journal of the Medical Association of Georgia, IX (May, 1919).

prophylactic vaccine. The article generally stated that the number of cases among people vaccinated was higher than those not vaccinated, except in the number of people in hospitals contracting pneumonia. It also said that the mortality rate among those inoculated three times was about one-fifth that of those who were not inoculated.<sup>14</sup> So this shows that those vaccinated were more likely to become infected under regular conditions but were much less likely to develop the severe symptoms of pneumonia, and were much less likely to die from the influenza.

Among all three groups of people supporting various preventative measures against the Spanish Flu, one thing was common; no one was certain about any method of treating or preventing influenza. Without certain knowledge of one preventative treatment people tried to develop as many as possible, to a point where it seems like the main goal for individuals was not preventing the spread of damage of influenza but instead the main goal was acquiring money through selling one's drug. In general the preventative measures taken by people were rest, isolation, and some form of medicine intended to stop the Spanish Flu.

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<sup>14</sup> "Influenza Vaccine," The Journal of the Medical Association of Georgia, IX (May, 1919), 97-98.



## Annotated Bibliography

Oldstone, Michael B. A. Viruses, Plagues, and History. Oxford, England: Oxford University Press, 1998.

This source was used in my paper for some statistical information about the mortality of the Spanish Influenza Pandemic. The source qualifies as valid because it is used as a textbook for a college course about infectious diseases. This source also qualifies itself as valid because it provides an extensive list of the sources that the author used for his research. The intended audience for this source is those who are looking for initial study into the area of how infectious diseases have affected history.

"Influenza Prevention and Treatment." The Journal of the Medical Association of Georgia, IX (May, 1919).

This source was useful for my paper because it provided an advertisement about an influenza vaccine. The intended audience is scientists and doctors, and anyone who would be reading a medical journal. The source qualifies as valid because it is from a medical journal where restrictions for printing something would be more strict than other sources, allowing for a reliability of the information given.

"Influenza Vaccine." The Journal of the Medical Association of Georgia, IX (May, 1919), 97-98.

This source was useful for my paper because it provided an article about an influenza vaccine being discovered and the preventative effects that the vaccine has had in its application. The intended audience for this source is also anyone who would professionally or personally have an interest in reading a medical journal and who has the knowledge to understand the subject. This source is valid because it is in a medical journal where its validity would be checked before its publication in the journal would be allowed.

"Avoid 'Flu' By Sterilizing Your Nose." Savannah Morning News, 1 November 1918, 5.

This source was useful for my paper because it helped show the variety of preventative measures offered to the public. The intended audience for this source was anyone who took interest in reading the newspaper, particularly those older readers who would be able to go to the drug store and purchase the medicine being advertised. This source's validity comes only from the fact that it is in a newspaper at the time of the influenza pandemic and is thus a first-hand source. Although some validity is taken away because the source is an advertisement and would, by its nature, be exaggerating the effects of the drug being advertised.

"Don't Have the 'Flu'." Savannah Morning News, 1 November 1918, 3.

This source was helpful for my paper because it was an advertisement showing that there were a variety of options open for those who wished to protect themselves from influenza as well as many other illnesses. This source also showed the concept of the cure-all medicine that was prominent during the Spanish Flu pandemic. This source was directed at those who desired to remain out of the reach of influenza and other diseases. Due to its nature as an advertisement this source is also particularly directed towards adults who have the ability to purchase the drug at the drug store. The source's validity comes from the fact that it is a first-hand account of the Spanish Flu pandemic and the people of the time.

"Health Boards Give Warning of Influenza Danger." Savannah Morning News, 1

November 1918, 8.

This source was helpful to my paper because it gave health board's opinion about the Spanish Influenza pandemic and it provided another explanation of how to treat influenza. The target audience was the general public because it is providing general information about the spreading influenza pandemic, but it also targets, somewhat, adults because within the article it promotes the purchase and use of Hyomel, a drug intended to preventative and healing agent for influenza. This source's validity comes from the fact that it is a first-hand account, and that it is referring to information provided by a health board, which is supposed to be a reliable source of information.

"How to Avoid Influenza." Savannah Morning News, 1 November 1918, 5.

This source was helpful for my paper because it provided me something to contrast the article "Avoid 'Flu' by Sterilizing Your Nose" with. It is an advertisement that is placed on the same page as the aforementioned advertisement and both claimed very different things. This source's intended audience was adults who were able to go to the drug store and purchase the drug being advertised. The source's validity comes from the fact that it is a first-hand account.

"Influenza Rapidly Spreads in Georgia." The Albany Herald, 4 October 1918, 8.

This source was helpful for my paper because it provided me with some preventative behavioral measures that health boards supported to protect one from influenza. The source's intended audience was adults who would then use the knowledge that the article provided to help keep their family safe from influenza. The source's validity comes from the fact that it is a first-hand account and because it is information provided by the state board of health.

"Spanish Influenza Epidemic Calls for Drastic Measures: Closing of Schools is

Recommended by State Health Boards." The Albany Herald, 8 October 1918, 3.



This source was helpful to my paper because it provided more insight into behavioral preventative measures taken to protect the populace against the spread of Spanish influenza. Its target audience is the entire populace because it is referring to closing down many different places of public assembly as measures to prevent the spread of influenza. The validity of the source comes from it being a first-hand account and because it is referring to information provided by the state health board.

"Spanish 'Flu' May Catch You." The Moultrie Observer, 8 October 1918, 1.

This article was helpful to my paper because it also emphasized methods that were supposed to be helpful in preventing and treating influenza. It was also very interesting because it provided some insight into the opinions that people had in the early stages of the Spanish influenza pandemic. In this article the author claims that the Spanish Influenza is not as much of a threat as it was rumored to be. The intended audience for this source was just the general public. The validity of the source comes from it being a first-hand account.

"Influenza Vaccine." The Journal of the Medical Association of Georgia 1X (May, 1919), 97-98.

This source was useful for my paper because it provided an article about an influenza vaccine being discovered and the preventative efforts that the vaccine has had in its application. The intended audience for this source is also anyone who would be interested in reading a medical journal and who has the knowledge to understand the subject. This source is valid because it is in a medical journal where it would be checked before its publication in the journal would be allowed.

"Avoid 'Flu' By Quitting Your Nose." Savannah Morning News, 1 November 1918, 5.

This source was useful for my paper because it helped show the variety of preventative measures offered to the public. The intended audience for this source was anyone who took interest in reading the newspaper, particularly those older readers who would be able to go to the drug store and purchase the medicine being advertised. This source's validity comes only from the fact that it is in a newspaper at the time of the influenza pandemic and is thus a first-hand source. Although some validity is taken away because the source is an advertisement and would, by its nature, be exaggerating the effects of the drug being advertised.

Name of Person reading/noting microfilm: \_\_\_\_\_ Date \_\_\_\_\_

### Newspaper Notes form for History of Disease Class

If you need more forms to Archives. If you have more than will fit on this front and back form, simply use another form, with the same date and call it part two.

Name of Paper The Aultrie Observer

Date Oct. 8, 1918 Vol 25 Issue 23

SOURCE 1

#### Influenza-Related Articles:

1. Title: Spanish "Flu" May Catch You Page: 1

Important  
Names \_\_\_\_\_

#### Summary of

Article: Spanish Flu is not dangerous, the # of deaths reported in Spain exaggerated because no known disease spreads that fast. Best treatment: rest in bed, warmth, fresh air, abundant food, Dover's powders for pain relief. Tells some sources of the infection.

Keywords (no more than 10)-  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Title: \_\_\_\_\_ Page: \_\_\_\_\_

Important  
Names \_\_\_\_\_

#### Summary of

Article: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Keywords (no more than  
10) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Title: \_\_\_\_\_ Page: \_\_\_\_\_

Important  
Names \_\_\_\_\_

Name of Person reading/noting microfilm: Vineet Kumar Date \_\_\_\_\_

### Newspaper Notes form for History of Disease Class

If you need more forms to Archives. If you have more than will fit on this front and back form, simply use another form, with the same date and call it part two.

Name of Paper The Albany Herald  
Date Oct 4 1918 Vol 628 Issue 294

Influenza-Related Articles:

1. Title: Red Cross will help combat influenza Page: 3

Important  
Names \_\_\_\_\_

Summary of

Article: The appointment of W. Frank Parsons by Red Cross  
as a director general of civilian relief.

Keywords (no more than 10)-  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Title: \_\_\_\_\_ Page: 8

Important  
Names \_\_\_\_\_

Summary of

Article: Basically summarizes the influenza virus.

Keywords (no more than  
10) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Title: \_\_\_\_\_ Page: \_\_\_\_\_

Important  
Names \_\_\_\_\_



## INFLUENZA RAPIDLY SPREADS IN GEORGIA

### State Board of Health Issues Warning Against Epi- demic—Proper Precautions and Treatment.

Influenza, which has been termed "Spanish Influenza" during the present epidemic, is not a new or mysterious disease, but is caused by well-known germs and is spread by well-organized conditions. The epidemic now sweeping the country must be intelligently met or a vast toll of suffering and many deaths will result. Reports to the State Board of Health already show a considerable prevalence in Georgia, and since the disease is characterized by its rapid spread, we must expect other cases, probably in numbers. This can be minimized by proper precautions and treatment. Pneumonia often complicates or follows influenza, especially when treatment is not appropriate.

The onset is generally sudden and is often accompanied by weakness, dizziness and pains in various parts of the body. Fever usually develops, the temperature rising to 103 and 104 degrees. Sore throat likewise experienced and sometimes bronchitis and broncho-pneumonia.

The disease is caused by the influenza bacillus, a germ which has caused similar wide-spread epidemics in past years. This germ is found in the secretions of the nose, mouth and lungs. Close contact with patients and their eating utensils, cups, handkerchiefs, towels, etc., is almost sure to result in contraction of influenza. Spitting, coughing or sneezing by patients is also most dangerous to those near as the moist secretions, even in fine drops, contain the germ. Crowded rooms, public assemblages and cars should be avoided as much as possible. It may be stated that the germ does not live long outside of the body.

Treatment should consist of rest in bed, especially during fever, warmth, fresh air, abundant, wholesome food, and medicine for the relief of pain and fever under the care of a physician whenever possible.

During the disease handkerchiefs and linen contaminated by the patient should be disinfected by boiling water or soaking in a disinfectant solution, such as 5 per cent. carbolic acid or chloride of lime solution. To disinfect rooms after the disease, thorough cleaning, airing and sunning will be sufficient.

The city of Montreal brought a lot of steel several years ago to enlarge the city waterworks, but the undertaking was postponed. Now the city has sold the steel at a profit of \$40.



A scene from Act Two in "The 13th Chair," at the Auditorium Monday night. Ovation is guaranteed you by Wm. Harris, J. G. Goldowsky Bros. and everyone who has seen it.

## THEATRICAL

AL G. FIELDS.

The public are seeking amusements and while they are discriminating in their choice, the sterling attractions seem to be crowding the public into the theatres.

The AL G. Field Greater Minstrels—a third of a century marks their trail—are gathering the shekels and pleasing the crowds as usual. The management advice this is the banner year thus far and that they have exerted themselves to put forth the best of all their preceding productions scenically and in that goes to make up a big picture. The presentation of the best of the minstrelsy affords, with a number of mammoth properties.

It is claim of the effects, costuming and make-up of the organization, since all that has been seen in minstrelsy.

AL G. Field has kept faith with the public for so many years that all are willing to accept his statements as to the excellence of his enterprise. When the minstrelsy comes, next Tuesday night, Oct. 8, the theatre will be crowded, as it always is.

### "THE 13th CHAIR."

Theatregoers who have waited patiently for the coming of "The 13th

James Adam, of Australia, and Henry Eve, of Bermuda, previously unacquainted, registered recently at a Toronto hotel.

Union boat Galt, Canada vance of 15 members emf partments at other depart

## SURE RELIEF FOR ALL RHEUMATICS

If So Crippled You Can't Use Arms or Legs, Rheuma Will Help You.

If you want relief in two days swift, certain, gratifying relief, take a small dose of Rheuma once a day.

If you want to dissolve every particle of uric acid poison in your body and drive it out through the natural channels, so that you will be free from rheumatism, get a dose of Rheuma from Ross's Drug Co. or any druggist at once. It must give the joyful relief expected or money refunded.

Rheumatism is a powerful disease strongly entrenched in joints and muscles. In order to conquer it a powerful enemy must be sent against it. Rheuma is the enemy of Rheumatism—an enemy that conquers it in nearly every instance.

Judge John Barhorst, of Frio, Ohio, knew it. He was with crutches, today he is free. He should do as you do. He did not fail. — A.

to your gives ya



Name of Person reading/noting microfilm: Vincent Kumar Date \_\_\_\_\_

### Newspaper Notes form for History of Disease Class

If you need more forms to Archives. If you have more than will fit on this front and back form, simply use another form, with the same date and call it part two.

Name of Paper Savannah morning news  
Date November 1, 1918 Vol 1 Issue \_\_\_\_\_ no. 19,161

#### Influenza-Related Articles:

1. Title: Dont have the flu Page: 3

#### Important

Names Advertisement - of Dr. Williams no. 101 Tonic

#### Summary of

Article: This tonic kills the germ & expels it through the excretory system.

#### Keywords (no more than 10)-

2. Title: How to Avoid influenza Page: 5

#### Important

Names Advertisement

#### Summary of

Article: NR-Tablets - eliminates poisons from ur system helps eliminate constipation. helps decrease the chances of getting influenza

#### Keywords (no more than 10)

3. Title: Health Boards give warnings of influenza danger Page: 8

#### Important

Names Add Br Hyomel oil & inhaler.



Name of Person reading/noting microfilm: \_\_\_\_\_ Date \_\_\_\_\_

Summary of

Article: Emphasizes the urgency that a person should take when 1st

Symptoms arise.

-emphasizes the use of Hyomel oil; into an inhaling device & ~~breathe~~ inhale it.

Keywords (no more than 10)

4. Title: Avoid "Flu-" by Sterilizing Your nose

Page: 5

Important

Names \_\_\_\_\_

Summary of

Article: Eucapine solve -sterilizes the nose by sniffing it. The chief

ingredient of this stuff is Oleum Eucalypti.

-This stuff was used by London people in their outbreak in 1891.

ingredients - camphor, menthol, oil of white pine.

Keywords (no more than 10)

5. Title: \_\_\_\_\_

Page: \_\_\_\_\_

Important

Names \_\_\_\_\_

Summary of Article:

Keywords (no more than 10)

Other Article(s) of Interest:

Title: \_\_\_\_\_

Page \_\_\_\_\_

Summary:

## AVOID "FLU" BY STERILIZING YOUR NOSE

London Epidemic of 1891

Proved Ol. Eucalypti (Eucapine Salve) Is Most Effective Preventive Known.

Get out your jar of Eucapine Salve, or, if you have none, go to the nearest drug store at once and get a family jar of this well-known nose and throat sterilizer. Sterilize morning, noon and night by sniffing the Eucapine up into the nostrils and rub a little on the back of your tongue, whence it will spread to the throat and tonsils, thus sterilizing the nose and throat.

The chief ingredient of Eucapine Salve is Oleum Eucalypti, the nonpoisonous antiseptic whose power to prevent influenza was first discovered in the London epidemic of 1891. In addition, Eucapine Salve contains just enough camphor, menthol and oil of white pine to make it soothing, healing and delightful to use. Even the babies enjoy it. Ask any well informed physician and he will tell you that Eucapine, though originally designed for the mother's use with her children in colds, croup and to prevent pneumonia, is the best and most agreeable antiseptic you can use to sterilize the nose and throat of young and old alike. Any drug store can supply you for half a dollar.—Adv.

## WHY RUN-DOWN PALE EXHAUSTED WOMEN SHOULD TAKE IRON

There can be no beautiful, healthy, well-developed, steady nerves without iron. When the iron goes from the blood of women, the runs go from their cheeks, their charm and attractiveness depart. I always insist that

## UNITED WAR WORK RALLY AT MOULTRIE GETTING READY FOR DRIVE Rev. Ashby Jones and Rabbi Marx Among Speakers.

Moultrie, Ga., Oct. 31.—The United War Work rally which was held here to-day for the Valdosta-Moultrie district was the first of a series of such district rallies which are to be held in all sections of the state. The second rally will be held in Thomasville tomorrow, when the party of speakers here to-day will speak again.

Every county in the Valdosta-Moultrie district was represented at the rally here. Committeemen and workers, both men and women, having come for miles around from the counties of Ben Hill, Turner, Irwin, Tift, Berrien, Cook, Colquitt, Lowndes and Echols. Reports from county chairmen showed that every one of these counties has completed its organization, and there is every indication that the entire district will go over the top for a wide margin above its quota not later than the second day of the campaign, which begins Nov. 11.

Ely B. Callaway of Lagrange, state director for the United War Work Campaign, who attended the rally showed the gathering a map of the state, showing that practically every county in the state has completed its organization, and said that the others will have been organized by the end of this week.

The speakers at the rally to-day were Dr. M. Ashby Jones, J. K. Orr, Rabbi David Marx and Mrs. E. H. McBurney of Atlanta. The party arrived here early this morning and were met by a local committee consisting of F. R. Pidcock, district chairman; John W. Greer, county chairman; Mrs. W. A. Covington, county chairman for women's work; W. C. Vereen, W. J. Vereen, Dr. J. E. Hampton, pastor of the Baptist Church; Dr. R. M. Hargrain of the Presbyterian Church, and others.

Chairman Pidcock presided over the conference, which was opened with singing and a prayer by Dr. A. W. Reese. Judge W. A. Covington delivered a brief address of welcome. J. K. Orr explained the manner in which the seven organizations working for the welfare and happiness of the

# How To Avoid INFLUENZA

Nothing you can do will so effectively protect you against the influenza or Grippe epidemic as keeping your organs of digestion and elimination active and your system free from poisonous accumulations.

Doctors and health authorities everywhere are warning people of the danger of constipation, and advising, and urging everyone to see that the bowels and other eliminative organs act freely and regularly.

Ordinary laxatives, purges and cathartics, salts, oils, calomel and the like, are good enough to clean out the system, but do not strengthen the weakened organs; they do not build up vitality.

Why don't you begin right today to overcome constipation and get your system in such shape that you can feel

reasonably sure of resisting disease. You can do so if you will just get a 25c. box of Nature's Remedy (NR Tablets) and take one each night for a while.

NR Tablets do much more than merely cause pleasant, easy bowel action. This medicine acts upon the digestive as well as eliminative organs, promotes good digestion, causes the body to get the nourishment from all the food you eat, gives you a good, hearty appetite, strengthens the liver, overcomes biliousness, regulates kidney and bowel action and gives the whole body a thorough cleansing out. This accomplished you will not have to take medicine every day. An occasional NR Tablet will keep your body in condition and you can always feel your best. Sold and recommended by druggists.

**NR TO-NIGHT—  
Tomorrow Alright  
Get a 25c Box**



Jones said, will be the office of the United War Work organizations to supply the medium of bringing the boys back from the army to civilian life—to prevent the gulf which inevitably must separate the soldier from the civilian under a regime of militarism. Dr. Jones said vast importance by the United War Work Fund for this purpose.

At noon a splendid luncheon was served the Atlanta party and the district delegates in Moultrie's handsome Y. M. C. A. building by the ladies of the city.

In the afternoon Rabbi David Marx emphasized the melting pot of the prejudices, racial, religious and other

Mr. Hurley, that our shipyards will be kept going to their capacity and they must not let up. The inefficient plants which have been permitted to operate because of the war emergency and the immediate need of ships, will, as a matter of business expediency, drop out when the emergency is removed. Efficient yards will be encouraged and supported, because we can depend upon them to carry out their promises and produce ships economically. The work inefficient yards cannot do will fall to other plants. We will look to the West coast to continue the pace it maintained and to the yards of the East and South, and in the Great Lakes region to increase

fluency, followed by pneumonia, which resulted in his death on Wednesday, Oct. 23. Mrs. Bleckmann is ill at home in Oakland, Cal., with influenza. She will be remembered in Savannah Miss Mary Hopps, daughter of Dr. Mrs. D. R. Hopps.

### Archie McBride, Alston.

Alston, Ga., Oct. 31.—Archie McBride, aged 74, died at the home of his C. L. McBride, after an illness of several days. The deceased was a member of a prominent family and is survived by the following children: Mary Hutcheson of Jeff Davis county, Ga., and D. R. McBride, Youngstown, O.; W. McBride, Dothan, Ala.; E. W. McBride, Camp Upton, N. J. Interment was in Sharp Cemetery, Alston.

### Lewis C. Sims, Jr.

Lewis C. Sims, Jr., 18-months son of Mr. and Mrs. Lewis C. Sims, died yesterday morning at their home, Best street, after a week's illness of influenza. The funeral will be this morning at 10 o'clock from H. degen Brothers, and the interment be in Laurel Grove Cemetery. John S. Wilder will conduct the services.

### Funeral of Joseph Goldberg.

Funeral services for Joseph Goldberg who died Wednesday, were held yesterday afternoon at 3 o'clock in Bovenure Cemetery, conducted by Rabbi Levine and Rabbi Palitz of the Congregation B. N. Jacob. The pallbearers were A. Raizin, M. Rothenberg, I. C. Hob, Sol Bradley, J. Richmond and Richmond.

### Ivy Bridges, Valdosta.

Valdosta, Ga., Oct. 31.—Ivy Bridges, aged 19 years, died yesterday morning at the residence of his aunt, Mrs. Bridges. The remains were taken to Sylva, near Sparks, for interment this morning. The young man is survived by his mother and father, and Mrs. Edgar Bridges of Sparta, five sisters and six brothers.

### Arthur Nigro.

Arthur Nigro, 14 months old son of Mr. and Mrs. Anthony Nigro, died yesterday afternoon at 5 o'clock at residence, 718 Oglethorpe avenue, where the body will be sent to Brooklyn, N. Y., to-morrow by Henderson Brothers.

**DOCTORS  
FAILED TO HELP**



TO OAH FISH.

A new company is being formed with a capital of \$268,000, subscribed in Denmark and Norway, to build a factory at Esbjerg, on the west coast of Denmark, for canning fish for export. The manager of the company

## HEALTH BOARDS GIVE WARNING OF INFLUENZA DANGER

**Ask People to Be Careful and  
Take Proper Treatment  
Promptly. Many Pneumonia  
Cases Follow Influenza.  
What to Do.**

To be prepared for the serious outbreaks of influenza and pneumonia that are now sweeping over the entire country and that have seized on this community Public Health Boards everywhere are issuing cautions and instructions to the public not to neglect treatment at the first symptom of a cold and to co-operate with health boards and physicians in stamping out the spread of the disease.

No disease develops so quickly or spreads so rapidly. The first symptom usually is a sharp rise in temperature to 103 or 104 degrees, headache, pain in the back, throat feeling dry or sore. Unless promptly checked by proper treatment, the best plan is to go to bed and stay there for at least a week, keeping warm to avoid pneumonia and let the minor ailment run its course and also to prevent the spread of the disease to others.

Most of us, in these busy days, cannot afford, if it can be avoided, to lose a week or more of work so it is all the more necessary that at the very first sign of grip or influenza a counter-acting treatment should be taken.

Probably no better or more effective treatment could be followed at such a time than to get from the nearest drug store a complete Hyomei outfit consisting of a bottle of the pure Oil of Hyomei and a little vestpocket, hard rubber inhaling device into which a few drops of the oil are poured.

Put the inhaler in your mouth and breathe its air deep into the passages of your nose, throat and lungs. Every particle of air that enters your breathing organs will thus be charged with an antiseptic healing balsam.

You can't do this too often. The Hyomei Inhaler is small and can be conveniently carried in a hand-bag or in your vestpocket. Every half hour or so throughout the day take it out and draw a few breaths of its pure healing air into your nose and throat. The outfit is not at all expensive for the rubber inhaler will last a lifetime while the Oil of Hyomei can be obtained at little cost from any reliable drug-gist. Lots of people already have a Hyomei Inhaler. Take it out, charge it and use it without delay. If you haven't one get it to-day.

A few cents spent now may easily prevent serious illness and save you many dollars and help stamp out the spread of the disease. Knight Drug Co.—Adv.

**YOUR OWN!**

Or, **SELL** the Savannah Morning News **EARN GOOD MONEY**—then, as you begin in **THRIFT STAMPS**, thereby support your big brothers and friends

Good **TRAINING** for a boy, selling corners, or handling a paper route! Men **GOT** a **START** that way! Tea Gets him in the way of **THINKING**

Even **RICH** men's sons sell papers in a democratic land. It's an honorable and so the best families are glad to see their Son, the Morning News can use **YOU**

Call at Savannah Morning News, Circulation Dept. see **J. P. Kenney** or **E. C. Keeling**

*symptoms*



**Savannah Mo**



# DON'T HAVE THE "FLU"

## Follow the Suggestions Here and Escape Serious Illness.

When you feel feverish or as if you are taking cold and you start sneezing and your nose begins to run, you've surely got influenza germs working in you and you should immediately take a few doses of Dr. Williams' No. 101 Tonic and escape a spell of illness and loss of time in bed. It is just what you need at that time and it works wonderfully well—and quickly, too. The quinine in it kills influenza germs without mercy. The iron ingredient gives appetite and restores your "pep." The magnesia acts on the liver and bowels, eliminating poisonous gases and excretions and making the body clean and wholesome. Dr. Williams' No. 101 Tonic is a ready prepared prescription of a noted physician, the late Dr. G. B. Williams, of Quitman, Ga., and has been extensively used for malaria, grippe, colds, chills and fevers. Get a bottle at once and begin taking it and make yourself immune from the "flu." All druggists and drug dealers sell it or can get it for you—25c and 50c a bottle. Refuse all substitutes. —Adv.

tions, our troops fighting on Italian soil will evacuate occupied regions.

"In the Italian theater there has been only minor fighting activity on the Tyrolean front. Between the Brenta and the Piave fresh and superior enemy forces attacked Monte Alcone and Monte Pertica. Our troops with unexampled and soldierly faithfulness brought all the enemy's attempts to naught."

### Austrians Withdrawing.

Vienna, Oct. 30 (via London, Oct. 31).—Austro-Hungarian forces on their eastern wing in Serbia are withdrawing from occupied territory and have completed the crossing of the Danube, according to an official statement tonight from Austro-Hungarian headquarters. Elsewhere in Serbia the Austrian withdrawal continues.

The statement reads:

"Southeastern theater: The eastern wing of our forces is evacuating Serbia and already has completed the evacuation to the northern bank of the Danube. Our rearward march toward the Save and the Drina continues, according to plan. The enemy follows nowhere. The rear guard of our Albanian forces has only had to repulse isolated bands."

### A Berlin Report.

Berlin (via London), Oct. 31.—The repulse of violent attacks delivered by the French yesterday in the region south of the Oise river is reported by German army headquarters in its official statement to-day. Tentative attacks by the Belgians on the Flanders front were stopped, the statement adds. There was an in-

Pershing's communique for to-day reads:

"On the Verdun front there was heavy artillery and machine gun fire during the night on both sides of the Meuse. North of Grand-Pre our troops advanced their line and occupied the Bellejoieuse farm."

"Yesterday our bombing units attached to the First and Second armies carried out a number of successful raids, dropping six tons of explosives on Barriecourt, Bayonneville and Longuyon."

### Enemy Machines Driven Down.

London, Oct. 31.—Sixty-four enemy machines were destroyed and fifteen others driven down out of control on the western front Wednesday, says an official communication issued to-night, dealing with aerial operations.

The communication says:

"There was intense activity yesterday over the whole of the front. Sixty-four enemy machines were destroyed and fifteen driven down."

"Including two machines destroyed on the ground, the total of sixty-six German planes known to have been accounted for without considering those driven down, establishes a record for one day."

"This was accomplished with proportionately small loss. Eighteen of our machines are missing."

### Americans Get Bellejoieuse Farm.

With the American Forces Northwest of Verdun, Oct. 31, 7 p. m. (by the Associated Press).—Gen. Pershing's forces to-day occupied Bellejoieuse farm and the southern edges of the Bois des Loges. The Americans encountered but little machine gun opposition.

The advance was in the nature of a long straightening operation.

Otherwise the activity along the front to-day consisted principally of reciprocal artillery firing and bombing.

### Rioting in Budapest.

Amsterdam, Oct. 31.—Grave rioting broke out at Budapest on Wednesday, according to news reaching here to-day from the Hungarian capital. Mobs looted the stores and attacked the banks which have limited payments to one hundred crowns.

### Plenty of Fuel Wood.

With the American Army in France, Monday, Oct. 28 (by the Associated Press).—American fighting men at the front are to keep warm this winter. The forestry section of the American expeditionary force has promised to deliver on the road ready to be hauled to the men at the front before Jan. 1, 100,000 cubic meters of fuel wood. This is equivalent to a pile of wood a yard wide and a yard high stretching from Paris to Berlin.

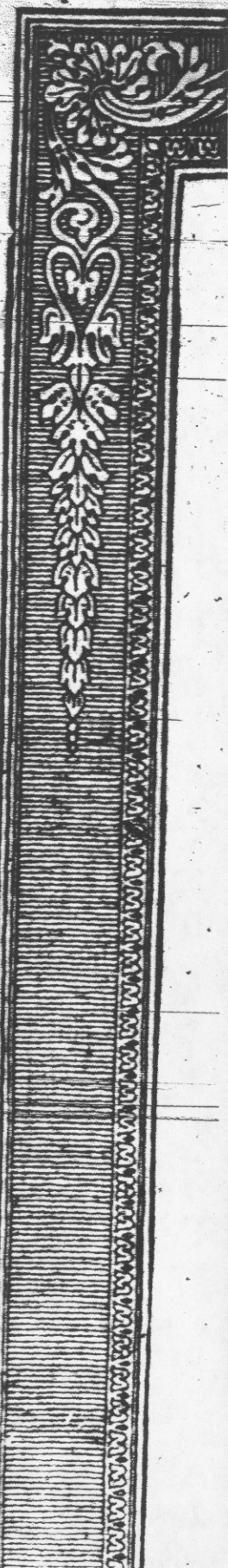
Thousands of foresters are now busy in the French forests gathering and cutting the wood, which comes from dead wood and refuse in the forests. The fine trees of which the French are so proud are not being cut.

### Erzberger is Appointed.

Amsterdam, Oct. 31.—Prince Maximilian, the German Chancellor, has signed a decree entrusting Mathias Erzberger, as deputy imperial chancellor, with control of the war press department, according to the Vossische Zeitung of Berlin.

Advance from the Piave.

Start to  
War Savi



Name of Person reading/noting microfilm: Vineth Kumar Date \_\_\_\_\_

### Newspaper Notes form for History of Disease Class

If you need more forms to Archives. If you have more than will fit on this front and back form, simply use another form, with the same date and call it part two.

Name of Paper The Albany Herald  
Date Oct. 8 1918 Vol 37 Issue \_\_\_\_\_

#### Influenza-Related Articles:

1. Title: Spanish Influenza Epidemic calls for Drastic measures Page: 3

Important  
Names Closing of schools is recommended by state health board

Summary of  
Article: Georgia state board of health - immediate closing of public places Atlanta - closed down  
Prevention measures given.

Keywords (no more than 10)-  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Title: Spanish Influenza has spread All over South Page: 3

Important  
Names \_\_\_\_\_

Summary of  
Article: 53,000 cases reported in the south.

Keywords (no more than 10)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Title: \_\_\_\_\_ Page: \_\_\_\_\_

Important  
Names \_\_\_\_\_



**TO BE  
PRESSED HERE  
FRIDAY EVENING**

Guttry, of Liverpool, England, and Dr. C. B. Wilmer, of Atlanta, will speak at Auditorium.

Arthur T. Guttry, of Liverpool, England, one of England's most distinguished ministers and orators, and Dr. C. B. Wilmer, rector of St. Luke's Church, Atlanta, one of the leading churches of the South, will address the meeting at the auditorium on Friday evening at 8:15 o'clock under the auspices of the national committee of the Churches and the Moral Education of the South, which is now conducting a nation-wide educational campaign along the lines indicated by the organization.

Guttry is in this country for the special purpose of aiding in the war effort and will speak in practically all parts of the Mississippi valley during the next several months. Dr. Guttry and Dr. Wilmer will meet on Friday afternoon at 2 o'clock at the Albany to be marked by a gathering for which an immense program is being prepared. Address Ministers' Meeting.

On Friday afternoon at 2 o'clock Guttry and Dr. Wilmer will meet to address the ministers of Albany and the nearby towns on the subject of the "Moral Aims of the War," with a view to informing them so that they may disseminate this information to their respective congregations. The moral aims of the war, as conceived by the fostering organizations of the present educational campaign, are divided into four major heads:

- 1. Moral Aims of the War.
- 2. To win the war against any enemy.
- 3. To make the world safe for democracy and democracy safe for the world.
- 4. To secure for nations, peace, and great safety, justice, and economic opportunity.
- 5. To establish a league of nations.

Guttry comes to Albany fresh from a visit to the American battle front in France. He is a minister of the Primitive Methodist church, of London, and president-elect of the Church Council of England and Wales. He has a reputation as one of the foremost speakers in Great Britain. Much of his time is spent in lecturing and lecturing to large audiences.

Guttry comes at the invitation of the same organization which last year brought Sir George Adam Smith to Scotland and will be in this fall and winter in giving American audiences an opportunity to hear one of the most noted preachers of England and France. The trip was arranged through the American and British Departments of Public Information. A meeting of the pastors and a meeting of laymen from different

# Spanish Influenza Epidemic Calls For Drastic Measures

## CLOSING OF SCHOOLS IS RECOMMENDED BY STATE HEALTH BOARD

Churches, Theatres and Other Public Gathering Places Included—Measures for Prevention Recommended.

ATLANTA, Ga., Oct. 8.—Immediate closing of schools, churches, theatres and other places of public assembly in communities threatened by an epidemic of Spanish influenza is recommended today by the Georgia State Board of Health, and it is understood that a number of cities and towns are planning to put this suggestion into effect without delay.

Atlanta Closes Up.  
Steps were taken yesterday afternoon by the Atlanta Board of Health to close all places of public assembly in Atlanta as a measure of precaution against a possible epidemic of the disease in this city. Although Atlanta has fortunately escaped with only a few cases up to date, the influenza is rapidly spreading at Camp Gordon.

The United States Public Health Service on yesterday wired the State Board of Health, strongly recommending that places of public assembly be closed wherever an epidemic was threatened, and the state authorities at once passed on the suggestion to the local authorities throughout the state.

- Preventive Measures.  
Measures recommended for prevention are as follows:
1. Use individual drinking cup.
  2. Sleep in well ventilated room, or preferably on sleeping porch.
  3. If attacked by severe cold or grippe, go to bed at once and stay there until completely recovered.
  4. Keep offices and other places of employment well ventilated.

## SPANISH INFLUENZA HAS SPREAD ALL OVER SOUTH

Churches, Schools, Theatres and Other Places of Public Gathering Have Been Closed in Almost Every City of Any Size.

ATLANTA, Ga., Oct. 8.—Spanish influenza, which started in epidemic form in the East a month ago, now has spread throughout the South, despite drastic action of health officials. Unofficial reports from a score of the larger cities in the South show more than 50,000 cases reported among

## SEVERAL HUNDRED CASES OF SPANISH INFLUENZA IN ALBANY CITY

Type is Very Mild So Far. But Public is Cautioned to Take Measures to Prevent Spread.

Spanish influenza! Have you got it, yet? It's going the rounds of Albany and many are being claimed as victims of the mild type this city has secured.

Yes, it seems to be a mild type, fortunately, and so far, nobody has been dangerously ill as a result. Still, there is danger, the doctors say, and the disease is not one a person should seek as a form of pleasure or excitement.

Reports from different physicians in the city indicate that there are several hundred cases of the disease in Albany. As already stated, none of these cases have taken a very serious turn, and so far as is known, not one has developed into pneumonia.

Precaution is urged upon the people of the city, however, that the spread of the epidemic be as limited as possible for there is no assurance that the type prevalent here will continue to a mild one or that there will be no pneumonia as a consequence.

Those who have been exposed to the malady are urged to keep their noses and throats sprayed. Others are instructed to observe sanitary precautions, such as failure to use the same drinking vessels as others, to stay clear of close and stuffy rooms and to get all the fresh air and sunshine possible. Some have urged the closing of the schools and all other places of public gathering until the epidemic has been brought under control.

Many Deaths in Ohio.  
COLUMBUS, Ohio, Oct. 8.—The epidemic of influenza is increasing rapidly in Ohio, and a total of 25,000 cases and many deaths have been reported to date.

Camp Sherman reported 104 deaths for the 24-hour period ending at 3 p. m. yesterday.

St. Louis Closes Up.  
ST. LOUIS, Mo., Oct. 8.—In an effort to ally the Spanish influenza epidemic, all churches, theatres, schools and cabarets were closed today, and all public gatherings, including public funerals, forbidden by order of the health authorities. The order will remain in effect until the epidemic has passed, it was said.

The Retort Courtroom.

**TWENTY-SIX  
IN SEP 1918**

State Will Set  
Camp Wheeler  
trial Call for

The local board yesterday. One is to be sent to the G. Technology for a v. No quota is specified state is to send three and induction will be from the various except that of Eighty men White announced that no man register will be included in that none seek to be.

On October 16 Go to send fifteen heads for general and Camp Wheeler, the voluntary induction called on to furnish Deely, 18; Early, Lowndes, 29; Mille 18; Quiltman, 3; Kim art, 26; Samster, Thomas, 29; Tiff, Webster, 8; Worth.

English sniper—I spike off of his blood took the top off of it—and it's my shot n

## HOW C TRADE A C

That's the of hundreds Merchants' October, 15th.

There'll come the war—where.

How much the country

No

# Influenza

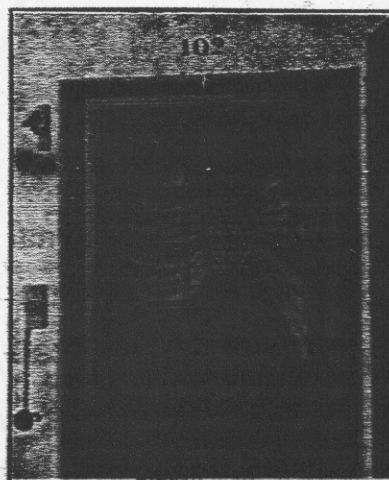
## Prevention and Treatment

**Mixed bacterial vaccines** for the prevention and treatment of common colds and influenza were first produced commercially in the United States by the Mulford Laboratories, in 1910. Since its introduction, the formula of **Mulford Influenza Serobacterin Mixed** has been maintained unchanged.

During the influenza epidemic of 1918, additional strains obtained from virulent cases in different parts of the country were added. These strains include:

**Influenza Bacillus** (Pfeiffer).  
**Streptococcus** (hemolytic and viridans).  
**Staphylococcus** (aureus and albus).  
**Pneumococcus** (types I, II, III, IV).  
**Micrococcus catarrhalis**.  
**Bacillus Friedlander**.

The experience of physicians who used **Mulford Influenza Serobacterin Mixed** in industrial institutions and private practice confirmed their belief in its efficiency, both as a prophylactic and therapeutic agent.



Section of incubator for growing bacteria.

Influenza Serobacterin Mixed is supplied as follows:	{	M 109-0—4-syringe . . .	1 immunization.
		M 109-9—5-mils . . .	2 immunizations.
		M 109-4—20-mils . . .	8 immunizations.

**A**S immunity is only relative, there is an advantage in four injections, beginning with a small initial dose, progressively increased, thus affording a more complete and lasting immunity.

*Always specify "Mulford" on your orders and prescriptions*



41200

### H. K. Mulford Company

Manufacturing and Biological Chemists

Philadelphia, U. S. A.



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ered. Evidently all of those hemorrhages during this time were not due to malignancy. Therefore, we accomplished something more than controlling the hemorrhages-the pathology which causes these uterine hemorrhages was destroyed, which might have resulted in cancer in the future if left alone.

None of the non-malignant cases treated by Radium have had malignancy to date.

This report runs over a period of three years.

### INFLUENZA VACCINE.

E. C. Rosenow and B. F. Sturdivant, Rochester, Minn. (Journal A. M. A., Aug. 9, 1919), report their experience with prophylactic vaccine prepared at Rochester. Influenza bacilli were numerous at the beginning of the epidemic, but were rarely found later in its course. They were, therefore, left out of the later vaccine, which contained a higher proportion of the green-producing streptococci. The formula of the vaccine, as finally used, is given. The concentration was twice as great as at first, and the quantity of liquid reduced one-half. The injections were given subcutaneously one week apart. The results were obtained under the most varied conditions, as reported by the physicians to whom the vaccine was sent for testing. In some places, the mortality was excessively high, and in others comparatively low, but the number of inoculations was such as to make the statistical figures fairly dependable. The observations were reported over a period of from three to seven months. While the incidence of influenza and pneumonia reported is probably inexact, the error should be about the same in the vaccinated and unvaccinated groups. If there is any difference, the number of cases reported among the vaccinated is likely to be proportionately higher than that of the cases in the unvaccinated group, as the occurrence of influenza after vaccination would naturally tend to a higher percentage or re-

V-9  
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ports to the physicians who gave the inoculation. The average incidence of influenza and pneumonia is the group inoculated three times is about one third of that in uninoculated persons. The average mortality among the latter, according to the statistics sent to the authors, approximates the mortality rate (5.4 per cent.) from the epidemic in sixteen large cities of the U. S., as given in the Public Health Report, February 7; while that amongst the group inoculated three times is about one fifth of this. A definite, though smaller, rate of protection seemed to be afforded by only one or two inoculations. In a series of hospital cases of influenza, the tendency to develop pneumonia in the vaccinated was about one third of that in the unvaccinated. While the number of completed vaccinations in pregnant women was not large enough for exact figures, the indications are clear that a definite degree of protection was afforded, and from all the facts obtained it seems evident that with the use of a properly prepared vaccine it is impossible to rob influenza of some of its terrors. From the data obtained by Fennel and Cecil and Vaughan from the use of lipo-vaccines in pneumonia, it is strongly suggested that still better protection than that obtained by the use of saline vaccines, as reported in his paper, is possible.

### PROPHYLACTIC VACCINATION AGAINST INFLUENZA.

G. W. McCoy, Washington, D. C. (Journal A. M. A., Aug. 9, 1919), reviews the varied opinion as to the etiology of influenza and influenzal pneumonia. Although the Pfeiffer bacillus is commonly known as the influenza bacillus, there is really no convincing evidence of its causal relation to the disease, and, moreover, it includes a number of organisms varying in pathogenicity. As regards influenzal pneumonia, we find a rather general opinion that it is due to Pfeiffer's bacillus, or to a secondary invasion of acknowledged pathogenic organisms, particularly the various types of pneumococci, the streptococci, especially those known as hemolytic, and less commonly, Friedlanders pneumobacillus or

the staphylococcus. The organisms in influenzal pneumonia, as a rule, do not conform to the general type associated with pneumonia, and the disease can be differentiated from those ordinarily due to the pneumococcus of labor pneumonia. Immunization against the latter would appear to be of little value as affording immunization against the influenzal type. The vaccine from the influenza bacillus alone seems to have been used largely only in New England, and if the figures as to its use are carefully examined, its value would seem very dubious. Most of the inoculations were made during the epidemic, and the case incidence among the vaccinated was compared with that in the general population or of the control groups from the beginning of the epidemic. To make clear the error in this, "let us suppose that ten days after an epidemic started in a population of 1,000 persons, an admittedly worthless vaccine was administered to one half of those who at that time remained unattacked by the disease. Let us further assume that on the date of vaccination, 20 per cent. of the population had sickened, leaving 800 well persons, of whom 400 were vaccinated. Since the hypothetical vaccine is worthless, the morbidity of the disease will be as great in the vaccinated as in the non-vaccinated group. Let us assume this to be an additional 20 per cent. Then the total morbidity in the vaccinated group will be 20 per cent. of 400, or eighty cases. The total morbidity in the unvaccinated group, however, if we consider the entire period of the epidemic, will be 20 per cent. of 1,000, or 200, plus 20 per cent. of 400, or eighty, which would make 280 cases." Reports have been made, however, based on assumptions which would make the hypothetically worthless vaccine seem a valuable prophylactic. McCoy gives examples showing the failure of the influenza bacillus vaccine as a prophylactic, passed on to the vaccines made from the streptococcus and other organisms, and discusses their value. The impression is left that they may be of value, but that wherever they have been tried under perfectly controlled conditions, they fail to influence, definitely, either the mortality or the morbidity of the disease.

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