Interpreting Newspaper Coverage of the 1918 Influenza Epidemic

Tom Ewing
Virginia Tech

National Library of Medicine
April 30, 2013
SCOURGE ON WANE; FATALITIES FEWER

Decrease of Fourteen Deaths and 190 New Cases for Twenty-Four Hours.

OFFICIALS ARE OPTIMISTIC
ALLIES CAPTURE WHOLE OF BELGIAN COAST

HUNS ARE QUITTING BRUSSELS, IS CLAIM; ALLIES PRESS ON

British reported near Dutch frontier—French cavalry approaching Ghent.

HOUSE WILL MEET ONLY TWICE A WEEK

Freedom Speaks to Slackers

MAJ. F. H. H. W. S.

House passes the bill for U.S. National Guard

Yankees surprise Germans; seize Bantheville in advance

NEW GERMAN LINE FROM AYERSTOWN TO RANDO TO SELOTA
SCOURGE ON WANE;
FATALITIES FEWER

Decrease of Fourteen Deaths
and 190 New Cases for
Twenty-Four Hours.

OFFICIALS ARE OPTIMISTIC

Hope of local health officers that the influenza is on the wane here seemed borne out today by a decrease of fourteen deaths for the twenty-four hours ended at noon today as compared with the increase of eight deaths for a similar period yesterday. A decrease is noted of 190 cases of new patients for the twenty-four hours ended at noon today.

Seventy-seven deaths from influenza were reported to the health department for the period ended at noon. Yesterday's report at the similar hour totaled ninety-one deaths, an increase of eight over Thursday.

Great hope is derived from the report of but 742 cases reported for the twenty-four hour period ended at noon today, as compared with the previous day's record of 934 cases.

Justification for Optimism.

Health Officer W. C. Fowler this morning said that the optimistic view taken by him of the influenza situation as expressed in The Evening Star yesterday afternoon held good today, he maintaining the belief, with all the lights before him of the conditions in the city and the operation of the activities fighting the spread of the disease; that the contagion was on the decrease and that in a short time this would be evident.

"There is no doubt in my mind," said Dr. Fowler, "that we are holding our own, and with the splendid cooperation of the public health service, that of the Red Cross activities, the trained nurses' organization, the physicians and the army of volunteer helpers we have every encouragement that we are slowly but surely mastering the disease.

He cited the decrease of fourteen deaths today and the decrease of 190 in the new cases reported for the day as a basis of his views."
Hope of health officials that the influenza is on the wane here seemed borne out today by a decrease in fourteen deaths for the twenty-four hours ended at noon today as compared with the increase of eight deaths for a similar period yesterday. A decrease is noted of 190 cases of new patients for the twenty-four hours ended at noon today. Seventy-seven deaths from influenza were reported to the health department for the period ended at noon. Yesterday’s report at the similar hour totaled ninety-one deaths, an increase of eight over Thursday. Great hope is derived from the report of but 744 cases reported for the twenty-four hour period ended at noon today, as compared with the previous day’s record of 934 cases.

**Justification for Optimism**

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Interpretation of a Text

- Who is the author?
- Who is the intended audience?
- What is the content?
- What is the context?
- What is the purpose?
- What is implicit or omitted?
- What is the response?
- Epidemiological question: medical accuracy?
- Historical question: what changes over time?
Classifying Tone in Reports on Influenza

- Alarmist
- Warning
- Explanatory
- Encouraging
“Scourge on Wane; Fatalities Fewer,” Evening Star (Washington) October 19, 1918, p. 1. *Decrease of Fourteen Deaths and 190 New Cases for Twenty-Four Hours.*

**Officials are Optimistic**

Hope of health officials that the *influenza is on the wane here* seemed borne out today by a *decrease in fourteen deaths* for the twenty-four hours ended at noon today as compared with the increase of eight deaths for a similar period yesterday. A *decrease* is noted of 190 cases of new patients for the twenty-four hours ended at noon today. *Seventy-seven deaths from influenza* were reported to the health department for the period ended at noon. Yesterday’s report at the similar *hour totaled ninety-one deaths, an increase of eight over Thursday.*

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‘There is no doubt in my mind,’ said Dr. Fowler, ‘that *we are holding our own,* and with the *splendid co-operation* of the *public health service,* that of the Red Cross activities, the trained nurses’ organization, the physicians and the army of volunteer helpers we have every encouragement that we are slowly but surely mastering the disease.’ He cited the *decrease of fourteen deaths today* and the *decrease of 190 in the new cases* reported for the day as *basis for his views.*
The Evening Star
[Washington]
October 19, 1918, p. 1
Data Mining

• Analysis of materials on a very large scale
• Digitized texts, images, sounds, video, etc.
• Devising methods to answer research questions about content / context
• Automated tools to analyze textual data
Principal Investigators:
- Tom Ewing, Department of History (VT)
- Bernice Hausman, Department of English (VT)
- Bruce Pencek, University Libraries (VT)
- Naren Ramakrishnan, Dept of Computer Science (VT)
- Gunther Eysenbach, Centre for Global eHealth Innovation (UT)

Graduate Research Assistants:
- Samah Gad, Dept of Computer Science (VT)
- Kathleen Kerr, Department of English (VT)
- Michelle Seref, Department of English (VT)
- Laura West, Department of History (VT)
NEH ODH and NLM Collaboration

An *Epidemiology of Information*: the intersection of public health, digital humanities, and information science

Purpose: Using library resources (digitized newspapers) to explore a public health crisis in historical context to provide new insights into the dissemination and interpretation of information on a large scale
Reading small collections of carefully chosen works enables scholars to make powerful inferences about trends in human thought. However, this approach rarely enables precise measurement of the underlying phenomena. Attempts to introduce quantitative methods into the study of culture (1–6) have been hampered by the lack of suitable data.

We report the creation of a corpus of 5,195,769 digitized books containing ~4% of all books ever published. Computational analysis of this corpus enables us to observe cultural trends and subject them to quantitative investigation. ‘Culturomics’ extends the boundaries of scientific inquiry to a wide array of new phenomena.
Culturomics. Culturomics is the application of high-throughput data collection and analysis to the study of human culture. Books are a beginning, but we must also incorporate newspapers (29), manuscripts (30), maps (31), artwork (32), and a myriad of other human creations (33, 34). Of course, many voices—already lost to time—lie forever beyond our reach.

Culturomic results are a new type of evidence in the humanities. As with fossils of ancient creatures, the challenge of culturomics lies in the interpretation of this evidence. Considerations of space restrict us to the briefest of surveys: a handful of trajectories and our initial interpretations. Many more fossils (Fig. 5 and fig. S13), with shapes no less intriguing, beckon:

(i) Peaks in “influenza” correspond with dates of known pandemics, suggesting the value of culturomic methods for historical epidemiology (35) (Fig. 5A and fig. S14).

These, together with the billions of other trajectories that accompany them, will furnish a great cache of bones from which to reconstruct the skeleton of a new science.
Scope of Data: Key word: “influenza”

<table>
<thead>
<tr>
<th>Database (Titles)</th>
<th>1917-1919</th>
<th>Just 1918</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronicling America (pages)</td>
<td>12,365</td>
<td>6,389</td>
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<tr>
<td>Peel’s Prairie Provinces</td>
<td>2,147</td>
<td>1,212</td>
</tr>
<tr>
<td>Newsbank America’s Historical Newspapers (articles)</td>
<td>51,929</td>
<td>31,717</td>
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<tr>
<td>Proquest:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York Times</td>
<td>9,304</td>
<td>3,518</td>
</tr>
<tr>
<td>Washington Post</td>
<td>1,545</td>
<td>1,069</td>
</tr>
<tr>
<td>San Francisco Chronicle</td>
<td>1,366</td>
<td>914</td>
</tr>
<tr>
<td>Los Angeles Times</td>
<td>13,033</td>
<td>1,970</td>
</tr>
<tr>
<td>Chicago Tribune</td>
<td>3,430</td>
<td>1,455</td>
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<tr>
<td>Atlanta Constitution</td>
<td>1,772</td>
<td>931</td>
</tr>
<tr>
<td>Baltimore Sun</td>
<td>3,586</td>
<td>1,639</td>
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<tr>
<td>Boston Globe</td>
<td>1,440</td>
<td>843</td>
</tr>
<tr>
<td>Colorado Historical Newspaper Project</td>
<td>3,358</td>
<td>1,899</td>
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<tr>
<td>Georgia Newspaper Project</td>
<td>669</td>
<td>517</td>
</tr>
<tr>
<td>Totals</td>
<td>105,944</td>
<td>54,073</td>
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</table>
# Washington Newspapers (1918)

<table>
<thead>
<tr>
<th>Title</th>
<th>Format / Database</th>
<th>OCR?</th>
<th>VT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evening Star</td>
<td>Microfilm (MF)</td>
<td>No</td>
<td>N</td>
</tr>
<tr>
<td>Washington Bee</td>
<td>Readex America’s Historical Newspapers</td>
<td>No</td>
<td>Y</td>
</tr>
<tr>
<td>Washington Herald</td>
<td>Library of Congress Chronicling America</td>
<td>Yes</td>
<td>Y</td>
</tr>
<tr>
<td>Washington Post</td>
<td>MF / Proquest Historical Newspapers</td>
<td>No</td>
<td>Y/N</td>
</tr>
<tr>
<td>Washington Times</td>
<td>Library of Congress Chronicling America</td>
<td>Yes</td>
<td>Y</td>
</tr>
</tbody>
</table>
Timelines: Influenza across space and time

Washington DC

Population, as of July 1918: 401,681
Estimated deaths due to influenza, Sept 1918 to Jan 1919: 2,892

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Sept 14</th>
<th>Sept 21</th>
<th>Sept 28</th>
<th>Oct 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
<td>0</td>
<td>0</td>
<td>34</td>
<td>173</td>
</tr>
<tr>
<td>Week ending</td>
<td>Oct 12</td>
<td>Oct 19</td>
<td>Oct 26</td>
<td>Nov 2</td>
</tr>
<tr>
<td>Deaths</td>
<td>488</td>
<td>622</td>
<td>389</td>
<td>181</td>
</tr>
<tr>
<td>Week ending</td>
<td>Nov 9</td>
<td>Nov 16</td>
<td>Nov 23</td>
<td>Nov 30</td>
</tr>
<tr>
<td>Deaths</td>
<td>55</td>
<td>42</td>
<td>37</td>
<td>42</td>
</tr>
<tr>
<td>Week ending</td>
<td>Dec 7</td>
<td>Dec 14</td>
<td>Dec 21</td>
<td>Dec 28</td>
</tr>
<tr>
<td>Deaths</td>
<td>41</td>
<td>86</td>
<td>120</td>
<td>154</td>
</tr>
</tbody>
</table>
INFLUENZA EPIDEMIC
1918

DEATHS: — PER 100,000 POPULATION FROM INFLUENZA AND PNEUMONIA (ALL FORMS)
DURING WEEK ENDING

[Graph showing the influenza epidemic as described in the text.]
Deaths from Influenza in Washington DC

- Sept 14: 0
- Sept 21: 0
- Sept 28: 34
- Oct 5: 173
- Oct 12: 488
- Oct 19: 622
- Oct 26: 389
- Nov 2: 181
- Nov 9: 55
- Nov 16: 42
- Nov 23: 37
- Nov 30: 42
- Dec 7: 41
- Dec 14: 86
- Dec 21: 120
- Dec 28: 154
- Jan 4: 139
- Jan 11: 109
- Jan 18: 107
- Jan 25: 73
Search in Chronicling America for Washington Times for terms:
1) “influenza” (613 total); 2) “influenza” and “death” (328 total)
"Influenza"

"Influenza" + "death"
Washington Times
September 11 – November 8, 1918
Washington Times
September 11 – 26, 1918
Newspapers reported on the disease with the same mixture of truth and half-truth, truth and distortion, truth and lies with which they reported everything else... As terrifying as the disease was, the press made it more so. They terrified by making little of it, for what officials and the press said bore no relationship to what people saw and touched and smelled and endured. People could not trust what they read. Uncertainty follows distrust, fear follows distrust, and, under conditions such as these, terror follows fear... Over and over in hundreds of newspapers, day after day, repeated in one form or another people read [Surgeon General] Rupert Blue’s reassurance as well: ‘There is no cause for alarm if precautions are observed’.”…’Don’t Get Scared!’ was the advice printed in virtually every newspaper in the country, in large, blocked-off parts of pages labeled ‘Advice on How to Avoid Influenza.’... How could one not get panicky? Even before people’s neighbors began to die, before bodies began to pile up in each new community, every piece of information except the newspapers told the truth... Fear drove the people, and the government and the press could not control it. They could not control it because every true report had been diluted with lies. And the more the officials and newspapers reassured,... the more people believed themselves cast adrift, adrift with no one to trust, adrift on an ocean of death.” (John Barry, The Great Influenza, pp. 334-340)
Washington Herald, from Chronicling America
421 results (pages) with “influenza,” Sept – Dec 1918:
<table>
<thead>
<tr>
<th>Date</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/4/1918</td>
<td>The Spanish influenza situation at the near-by camps is reaching alarming proportions.</td>
</tr>
<tr>
<td></td>
<td><strong>New cases of influenza today leaped to 1,695</strong>, as against 999 reported yesterday.</td>
</tr>
<tr>
<td>10/5/1918</td>
<td>Five More Grip victims Succumb--<strong>City Closed Tight.</strong></td>
</tr>
<tr>
<td></td>
<td>Racing at the Maryland plant will be resumed sometime next week as the Maryland Health Board is now confident that the epidemic is waning and conditions are gratifying.</td>
</tr>
<tr>
<td>10/19/1918</td>
<td>The number of new influenza cases and of deaths in the army camps is showing a slight decrease, according to a statement issued by the military authorities yesterday.</td>
</tr>
<tr>
<td></td>
<td>The Spanish influenza is on the wane here according to Dr. W. L. Wood, a special state health officer, and also of the United States Public Health Service.</td>
</tr>
<tr>
<td>10/9/1918</td>
<td>Middies Game with Princeton Pay Station <strong>Put Off Because of &quot;Flu.&quot;</strong></td>
</tr>
<tr>
<td></td>
<td>Mrs. Crozier was expected in Washington for a visit during October, but has postponed her trip on account of the influenza epidemic.</td>
</tr>
<tr>
<td>10/19/1918</td>
<td>These children, he stated, are suffering with the influenza and it is impossible for the two nurses who have been caring for them during the past week to give each the individual treatment they need.</td>
</tr>
<tr>
<td>10/19/1918</td>
<td>The Spanish influenza situation here continues serious.</td>
</tr>
<tr>
<td>10/7/1918</td>
<td>Friends and relatives of Washingtonians and war workers in the city are requested by the health department to remain out of the city until the epidemic is under control.</td>
</tr>
<tr>
<td>10/8/1918</td>
<td>Relatives of even those who are ill with the disease are warned that their presence in the city can do no good, and that they are running an unnecessary risk.</td>
</tr>
</tbody>
</table>
## Washington Herald: 537 sentences manually coded, 75% or more agreement

<table>
<thead>
<tr>
<th>Week</th>
<th>Alarmist</th>
<th>Warning</th>
<th>Explanatory</th>
<th>Reassuring</th>
<th>All</th>
<th>All (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 8-14</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0.6%</td>
</tr>
<tr>
<td>Sept 15-21</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>5</td>
<td>16</td>
<td>3.0%</td>
</tr>
<tr>
<td>Sept 22-29</td>
<td>5</td>
<td>3</td>
<td>14</td>
<td>4</td>
<td>26</td>
<td>4.8%</td>
</tr>
<tr>
<td>Sept 29-Oct 5</td>
<td>10</td>
<td>18</td>
<td>37</td>
<td>11</td>
<td>76</td>
<td>14.2%</td>
</tr>
<tr>
<td>Oct 6-Oct 12</td>
<td>19</td>
<td>39</td>
<td>69</td>
<td>38</td>
<td>165</td>
<td>30.7%</td>
</tr>
<tr>
<td>Oct 13-19</td>
<td>18</td>
<td>28</td>
<td>99</td>
<td>50</td>
<td>195</td>
<td>36.3%</td>
</tr>
<tr>
<td>Oct 20-26</td>
<td>1</td>
<td>4</td>
<td>31</td>
<td>20</td>
<td>56</td>
<td>10.4%</td>
</tr>
<tr>
<td>Totals</td>
<td>53</td>
<td>94</td>
<td>262</td>
<td>128</td>
<td>537</td>
<td>9.2%</td>
</tr>
</tbody>
</table>
Washington Herald: 537 sentences manually coded, Sept 12-Oct 22, 1918
“Expert” Coders: Kathleen Kerr, GRA, English
Bernice Hausman, Professor, Department of English
Bruce Pencek: Social sciences librarian, University librarian
Tom Ewing: professor, Department of History

- Alarmist: 9.9%
- Warning: 17.5%
- Explanatory: 48.8%
- Reassuring: 23.8%
Washington Herald: ≈700 sentences manually coded, Sept 12-Oct 22, 1918

- **All Tones**
- **Alarmist**
- **Warning**
- **Explanatory**
- **Reassuring**
Washington Herald: ≈700 sentences manually coded, Sept 12-Oct 22, 1918
Washington Herald, ≈700 sentences, Sept 12-Oct 6, 1918
Washington Herald, ≈700 sentences, Sept 12-Oct 6, 1918
Issues with Tone Detection

• Training the algorithm
• (Dis)agreement among coders
• Poor text derived from OCR
• Level of analysis: phrase, sentence, or article
• Limited number of newspapers available for text mining (Chronicling America and Peel’s Prairie Provinces)
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/16/1918</td>
<td>Help of all kinds is needed and needed at once if Washington is to fight a successful battle against the greatest epidemic that has ever swept the nation.</td>
<td>WRa1</td>
</tr>
<tr>
<td>9/21/1918</td>
<td>To prevent the spread of Spanish influenza in Washington, Dr. Fowler, District health officer, yesterday made an appeal to the doctors throughout the city to report all cases of acute grip, which they suspect to be the dreaded disease.</td>
<td>Wr2E2</td>
</tr>
<tr>
<td>9/21/1918</td>
<td>The physician, however, took no changes but immediately reported his patient's condition to Dr. Fowler in order to prevent the spread of the disease if Lieut. and Mrs. Henne's case should be a mild form of &quot;Spanish influenza.&quot;</td>
<td>Wr2E2</td>
</tr>
<tr>
<td>9/25/1918</td>
<td>Because of the alarming spread of influenza, the schools of this city were ordered closed today until the epidemic has abated.</td>
<td>AeA2</td>
</tr>
<tr>
<td>9/25/1918</td>
<td>The Public Health Service last night announced that 2,943 new cases of Spanish influenza in the United States had been reported during the past twenty-four hours.</td>
<td>AeA2</td>
</tr>
<tr>
<td>9/25/1918</td>
<td>Secretary Daniels said there was nothing at the Department to verify any alarming statements either as to the number sick or the number dead if any had died.</td>
<td>AeR2</td>
</tr>
</tbody>
</table>
MAKES APPEAL TO D.C. DOCTORS

Officer Warns Against Epidemic of “Spanish Influenza.”

To prevent the spread of Spanish influenza in Washington, Dr. Fowler, District health officer, yesterday made an appeal to the doctors throughout the city to report all cases of acute grip, which they suspect to be the dreaded disease.

This was made to the physicians of the city as this disease is not on the list which doctors are required to report to the health office, and the neglect of this precaution may account for the rapidity with which it has spread in other cities.

Symptoms Unknown.

As the majority of the doctors in Washington readily admit they do not know the exact symptoms of “Spanish influenza,” it has been the work of the District health office to ferret out the suspected cases.

The case of Lieut. Arthur Hennes and his wife, of 262 Eighteenth street northwest, was reported to Dr. Fowler yesterday. Lieut. and Mrs. Hennes returned from New York on Monday and since their return they both have been suffering from what they considered “the grip.”

In speaking of his symptoms to his attending physician, Lieut. Hennes described them as similar to a severe attack of hay fever or an “old-fashioned” cold.

The physician, however, took no chances but immediately reported his patient’s condition to Dr. Fowler in order to prevent the spread of the disease. If Lieut. and Mrs. Hennes’ case should be a mild form of “Spanish Influenza.”

Twelve cases of “Spanish influenza” have been reported from Camp Humphreys. The 80,000 men in training there are using every precaution to prevent the spread of the disease.

Cases of “Spanish influenza” have appeared at several of the training camps throughout the country, according to a report issued last night by the Surgeon General’s Office.
To prevent the spread of Spanish influenza in Washington, Dr. Fowler, District health officer, yesterday made an appeal to the doctors throughout the city to report all cases of acute grip, which they suspect to be the dreaded disease.

This was made to the physicians of the city as this disease is not on the list which doctors are required to report to the health office and the neglect of this precaution may account for the rapidity with which it has spread in other cities.
To prevent the spread of influenza in Washington, Dr Fowler, District health officer, ordered all in appassion to the reactor throughout the duty to report all cases of acute grip, which the superintendent to be Ot. Drs. This was made to the private of the city "nu diaeaeae la (.at .?? the list which dolor? are i*equa*eal ?af? report to the health office and the neglect of this precaution may account for the rapidity with which IM had spread in other cities?.

Aa the majority of the doctor? ??a?' Washington readily admit ther ?lo not know the exact symptoms of "Sputuiiah influenza." it has been in work of the District health office ?a ferret out the suspected case. The case of L'eut. Arthur Hearers was reported to Dr. Fowler yesterday. Lieutenant and Mrs. Henne returned from New York on Monday and since their return they both have been Buffering from what they consider "the eff'P?? In speaking of his symptoms to hi attending physician, Lieut Heran? - described them as a? altanar to a i?e*?er?? attack of hay fever or an. "?yid fashioned" cold. The physicians however took no chances but immediately reported the patient's story to Dr. Fowler in order to prevent the spread. If Lieut, and Mrs. Henne? case should be a mild form of 'Span influenza."
Chronological map of the influenza epidemic of 1918. Based on preliminary reports from 376 localities. Indicating the approximate dates on which the disease reached an epidemic stage.
Chronicling America
Newspapers: 1918
Influenza Epidemic

Washington Times
New York Tribune
Evening World
Evening Public Ledger
Washington Herald
When the “Flu” Mask Helps and When It Doesn’t

Even “Bonehead Bill” is wearing a mask.

The flu-muzzle has more than one advantage.
They all look alike to the conductor --
EVEN "BONEHEAD BILL" IS WEARING A MASK.

WATCH ME FOOL THEM!
“When you’ve been holding in a big sneeze for a long time and you have to let it go just as your opponent is about to putt. Also the influenza suspicion is aroused.”

“Well for thuh luva mike—this is a swell place for me to be—we’ll all be catchin’ the influenza I can see that.”

Contact Information: Tom Ewing (etewing@vt.edu)
FLU BAN IS OFF—SCHOOL BEGINS TODAY.

Paw, Paw, do you think it's safe to go to school today?

That's right, Henry. If you must sneeze, do so behind your book.

Fake sneeze.

Teacher! Willie has brought medicine to school. That makes him sneeze whenever he wants to.

Ker-choo-ee!

Pa says this old pipe'll keep the flu off if any think, will.

Better leave me alone! I got the flu!
FLU IN LOS ANGELES.

Laugh and Scare the Blamed Germs Away from You.

City on the Coast is Adjusting Itself to Conditions Created by the Wholesale Prohibition of All Gatherings.

There has been a certain amount of alarm occasioned by the recent influenza epidemic in Los Angeles. The city fathers have taken steps to prevent the spread of the disease by closing schools, theaters, and other places of public assembly. The public is urged to avoid crowds and to wear masks when in public places.

RALLY TO LIBE

Thousands of Volunteer City for More Supplies

Responding to the call of the Government, thousands of citizens in Los Angeles have volunteered to work without pay for the nation's war effort. The city has set up a War Council to coordinate the efforts of its citizens.

Los Angeles Times, October 13, 1918, II, p. 1
Q. Which was more costly in terms of United States deaths: World War One or the Influenza?
A. The influenza.

Evidence:
US deaths from flu (current estimates); 625,000
American military deaths in the war: 116,000
Figure 3. Total deaths in the U.S. Army including Marines attached to it: April 6, 1917, to July 1, 1919

A.E.F. = American Expeditionary Forces
Figure 2. Deaths per 1,000 soldiers each week during 1918–1919 in the U.S. Army

Research Question, pt. 2

Q. Did Americans in 1918 understand that the influenza was more costly in terms of human life than the war?
A. Yes, if they read the newspaper on November 18, 1918.
WAR LESS FATAL THAN INFLUENZA

VITAL STATISTICS SHOW EPIDEMIC WAS SEVERE

Forces in France Suffered Less in Battle Than Victims at Home
INFLUENZA DEATHS EXCEED WAR'S TOLL

Forty-Six Cities Show 82,306 Fatalities While Fatalities Overseas Not Over 45,000.
INFLUENZA CAUSED MORE DEATHS THAN OCCURRED IN U.S. ARMY IN FRANCE

‘FLU’ IS WORSE THAN GERMANS!

Epidemic Has Caused More Deaths Among Americans Than Huns in France
DISEASE TOLL IS APPALLING

More Deaths at Home From Influenza Than Among Troops In War.
Influenza Toll of 82,306 in 9 Weeks
Twice Army Deaths

Fatalities in 46 American Cities Compare With 40,000 in War
TOLL OF INFLUENZA DEATHS IN U. S., 82,306;
AMERICA'S LOSSES DURING WAR, TOTAL, 27,789

The influenza epidemic in the United States reaped a bigger death harvest than the great war did in the American armies, according to the latest figures issued by the government. The war casualty list, including the list released November 17, places the total war deaths at 27,789, which compilation includes those lost at sea, those who died natural deaths, who were killed in action or died of wounds outside the United States, while the deaths due to influenza and pneumonia following influenza from September 14 to November 10 in the United States total 82,306, or three times the number of overseas war casualties.
War less fatal than influenza
Influenza deaths exceed war's toll

Influenza toll of 82,306 in 9 weeks
Twice Army deaths

Influenza caused more deaths than occurred in U.S. Army in France

'Flu' is worse than Germans!
Disease toll is appalling

Toll of influenza deaths in U.S., 82,306;
America's losses during war, total, 27,789
Hun bullets, poison gas, liquid fire and shrapnel have not succeeded in killing as many Americans since the beginning of the war as the Spanish influenza germ has since September 14.

Men killed in action and those who have died of wounds total 13,645. For the week ending October 12 there have been 17,735 deaths from Spanish influenza and resultant pneumonia in the United States. In several cities the percentage of deaths in proportion to the population has risen to heights never before recorded.

Washington has had a death rate for the past week of 86.7 per cent per thousand population. It ranks sixth among the cities scourged by influenza in its death rate. Fall River, Mass., in the center of the district where the disease raged first, records a death rate of 100.4. Philadelphia comes next with a percentage of 97.2. The number of deaths in Philadelphia were 3,234, compared with 470 for the same week in the previous year. Two thousand six hundred and thirty-five deaths were caused by influenza and pneumonia alone.
The Epidemiology of Information: New Methods for Interpreting Data and Disease
Virginia Tech Research Center-Arlington (Ballston Metro)
October 17, 2013
Details announced at www.flu1918.lib.vt.edu
Contact: Tom Ewing (etewing@vt.edu)