Osteopathic Physician Mortality in the Influenza Pandemic of 1918-1920

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Financial Disclosures: None.

Support: None.

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Submitted
May 1, 2020;
revision received
May 29, 2020;
accepted
June 2, 2020.

The influenza outbreak that occurred during 1918-1920 was a defining moment in the history of the world and osteopathic medicine. Despite the tremendous loss of human life, osteopathic physicians also observed greater success in the treatment of patients with the disease, in contrast with their allopathic counterparts. Osteopathic physicians also succumbed to the deadly influenza effects while treating patients. A list of osteopathic physicians who died of influenza or related complications during the pandemic, obtained from osteopathic journals from that time, is provided, along with the historical context of the pandemic.

J Am Osteopath Assoc. 2020;120(7):472-475. Published online June 23, 2020.

doi:10.7556/jaoa.2020.080

Keywords: influenza, pneumonia, 1918 pandemic

Amid the global crisis of World War I, influenza made its own deadly rounds. Beginning in 1918, the influenza pandemic claimed the lives of 50 million people around the world and 675,000 individuals in the United States, infecting more than one-third of the global population.¹

A.T. Still, MD, DO, died December 12, 1917, and osteopathic physicians in this relatively nascent discipline looked to step forward to accept the challenges and prove its excellence as the pandemic spread. The American Osteopathic Association had approximately 2800 members at the time; these physicians were trained at 6 osteopathic medical schools in 1916, growing to 7 osteopathic medical schools by 1920.^{2,3}

President Woodrow Wilson outlined the Fourteen Points, a proposal for peace articles to end World War I, which were presented to Congress in January 1918. Final peace talks in Paris did not occur until January 1919, when the influenza outbreak began to subside.

As the world was embroiled in death and disease from 1918 to 1920, US osteopathic physicians did not stand idle. Those still completing medical education were drafted to serve their country in the various armed forces. Osteopathic physicians, however, were not allowed to join the medical corps like their allopathic counterparts because of the alleged inferiority of osteopathic physicians. Draft exemptions were made for allopathic medical students to continue their medical education; however, this privilege was not extended to osteopathic medical students, and the trend would continue through World War II.⁴ Osteopathic journals at the time noted that some osteopathic physicians served as ambulance drivers or in other medical corps capacities.

The present article discusses the historic clinical context of the 1918 influenza pandemic, explores mortality rates of osteopathic physicians of that time, and gleans clinical context insights to be compared with the current coronavirus disease 2019 (COVID-19) pandemic.

Osteopathic Medicine During the 1918 Influenza Pandemic

The osteopathic physicians who remained on the US home front worked tirelessly despite the absence of antivirals, antibiotics, advanced imaging modalities, a lack of influenza vaccine, and stiff opposition from allopathic physicians. Their care had a significant impact on the health of their patients. In a retrospective, self-reported questionnaire-based study, osteopathic physicians reported 1/40 the losses of traditional physicians in a review of 100,000 cases.⁵ The influenza mortality rate for the global population during the 1918 pandemic was estimated at 2.5%, but it varied widely by region.⁶ Census data from the time and health commissioner reports established a 27% mortality rate for Boston, 5% to 6% mortality rate in 148 other US regional reports, and a 34.5% mortality rate for pneumonia in army camps.⁷

Of patients with serious influenza complications such as pneumonia, one-third fewer died while in the care of osteopathic compared with allopathic physicians.⁸ The discrepancy between influenza and pneumonia mortality rates is attributed to the incorporation of manipulative medicine in contrast with questionable medical treatments, including vomiting and bloodletting.⁸ An editorial in *The Osteopathic Physician* in January 1919 opined:

...the present influenza-pneumonia situation and the results achieved by Osteopathy, if only properly cultivated and made known to the public, will forever stop the medics from casting slurs upon Osteopathy and in fact will turn the tables and set the 'regulars' [MDs] to apologizing for their own deficiencies in practice.⁹

Osteopathic Medical Community Suffers Losses

The success of osteopathic physicians in handling the deadly pandemic came with significant expense to the lives of physicians and their families from working in close contact with infected individuals. Deaths of influenza were not the only cause of physician morbidity and mortality during the influenza pandemic. For

example, R.M. Wolf, DO, was seriously injured in a motor vehicle accident that occurred after being overcome by exhaustion from caring for influenza patients.^{10,11} Laura Cleland, DO, and her unborn child died of influenza during her pregnancy.^{10,11} Lieutenant Malcolm Cunningham, DO, died of influenza while caring for influenza-infected soldiers.¹¹

The worst of the pandemic ended by spring 1919, but the complete pandemic continued through 1920.

Colleagues who died of influenza- or pneumonia-related illness were recognized by official journals through 1921 ([Table](#)).¹⁰⁻¹² Reports and obituaries of physician deaths were obtained from *The Journal of the American Osteopathic Association* and *The Osteopathic Physician* from the years 1918 to 1921.^{10,11} The actual number of osteopathic physician deaths of influenza may differ and remains unknown.

Other physician mortality of unspecified cause during this time includes the following reported deaths; influenza as the cause of death remains a possibility for them¹⁰⁻¹²:

C.R. Atzen, DO (Omaha, NE), Benjamin B. Baldwin, DO, Ralph Barringer, DO (Oregon, IL), Albert R. Bell, DO (Washington, NC), Ori Coppemol, DO (Alliance, NE), L. Malcolm Cunningham, DO (Astoria, OR), Sara Agnes Davidson, DO (Canada) (Montreal, Quebec), Walter S. Dressell, DO (Carrollton, IL), Warren Dressel, DO, Bessie Duffield, DO (Knoxville, TN), Louisa Dutcher McKone, DO (Kansas City, MO), Albert A. Fisher, DO (Chicago, IL), Walter J. Ford, DO (Seattle, WA), S.J. Fryette (Madison, WI), Mathias Hook, DO (Grand Junction, CO), C.M.T. Hulett (Chicago, IL), Frank L. Johnston, DO, Seth Y. Kennedy, DO (Gloversville, NY), J.A. Kerr, DO (Wooster, OH), J. R. Klippelt, DO (Lebanon, MO), M.A. Lane, DO (Kirksville, MO), A. O. Lash, DO, John H. Lucas, DO (Chicago, IL), Dora Wyland McAfee, DO (Chariton, IA), T.H. McCall, DO (Atlantic, NJ), J.L. McClanahan, DO (Paola, KS), Mattie Moffet, DO (Windsor, MO), Nellie Morelock, DO (Rifle, CO), Ralph Moses, A.L. Nelson, DO (Sioux City, IA), Augusta Priscilla Musick, DO

Table.
Influenza-Related Osteopathic Physician Deaths 1918-1920

Journal	Year	Issue month	Name of physician	Location of work	Illness
JAOA	1918	November	Ralph L. Baringer, DO	Oregon, IL	Influenza pneumonia
JAOA	1918	November	Grace Bullas, DO	Biloxi, MS	Influenza pneumonia
JAOA	1918	November	F. H. McCall ^a , DO	Atlantic City, NJ	Pneumonia
JAOA	1918	November	H. L. Perham, DO	Concord, NH	Pneumonia
JAOA	1918	December	Franklin Hudson, DO	Edinburgh, Scotland	Influenza pneumonia
JAOA	1918	December	Oscar Evans Bradley, DO	Elmwood, PA	Influenza pneumonia
OP	1919	January	John E. Haskins, DO	Piqua, OH	Influenza pneumonia with meningitis
OP	1919	February	C. R. Atzen, DO	Omaha, NE	Pneumonia
JAOA	1919	February	Malcolm Cunningham, DO	Springfield, IL	Influenza
JAOA	1919	February	J. Fred Wood, DO	Williamsport, PA	Influenza pneumonia
JAOA/OP	1919	February/March	M. Ernest Cannon, DO	Leitchfield, KY	Influenza pneumonia
OP	1919	March	Eugenia L. Summers, DO	Colorado Springs, CO	Influenza
OP	1919	March	J. Mark Kilgore, DO	York, NE	Influenza pneumonia
OP/JAOA	1919	April/May	DeWitt T. Lightsey, DO	Bartow, FL	Influenza
JAOA	1919	October	William W. Fifield, DO	Old Town, ME	Lingering illness
JAOA	1919	November	Edward Mattock, DO	Glendale, AZ	Pneumonia
JAOA	1920	April	S. Howard Gardner, DO	Kirksville, MO	Influenza
OP	1920	January	Alred Marshall Smith, DO	Charlestown, WV	Lingering illness
JAOA	1920	July	Herbert E. Wright, DO	Malden, MA	Influenza
OP/JAOA	1920	September/October	Laura Miller Cleland, DO	Port Huron, MI	Influenza with pregnancy

^a The authors believe that due to a possible typographic error, T.H. McCall and F.H. McCall may be the same person but do not have evidence to support removing either name from the respective lists.

Abbreviations: JAOA, *Journal of the American Osteopathic Association*¹¹; OP, *Osteopathic Physician*.¹⁰

(Omaha, NE), E.E. Raynor, Johanna Miller Robson, DO (Hasting, NY), Maude Russell, DO (Fort Worth, TX), Orr Sanders, DO (Fargo, ND), Thomas Sellards, DO (Ann Arbor, MI), Wm. M. Smiley, DO (Albany, NY), James Alvin Stewart, DO (Denver, CO), B.V. Sweet, John W. Sylvester, DO (Cleveland, OH), F.M.

Thomas, DO (Flagler, CO), Agnes Ussing, DO (Cranford, NJ), M.R. Wallace, DO (Oakland, CA), Harvey John Wentworth, DO (Appomattox, VA), T. Wildsmith, DO (Philadelphia, PA), Frank L. Wilt, DO. We believe that because of a possible typographic error, T.H. McCall and F.H. McCall ([Table](#)) may be the

same person but do not have evidence to support removing either name from the respective lists.

Discussion

In a review of the obituaries, 20 osteopathic physicians were specifically found to have died of influenza-related complications, as listed in the [Table](#). An additional 46 osteopathic physicians were listed without any cause of death in any of the journals. Comparing these numbers with the AOA membership of approximately 2800 osteopathic physicians equates to a 2.4% mortality rate from influenza, pneumonia, and unlisted causes. This relatively low death rate is surprising considering the lack of PPE both available at the time and recommended within the journals. In contrast, much attention was given to good hygiene and nutrition throughout the journals.

As of April 13, 2020, 17 US physicians,¹³ osteopathic and allopathic, have died of COVID-19, out of 500,000 practicing physicians in the United States,¹⁴ providing a COVID-19 physician mortality rate of 0.0003%. With the continued attention to nutrition and hygiene that osteopathic physicians originally emphasized, combined with modern health care advances and personal protective equipment use, physician mortality during pandemics will continue to be reduced.

Conclusion

As modern medicine faces a new nemesis in COVID-19, it is our hope that osteopathic physicians look to their heritage of dedication, innovation, and manipulative medicine in pursuit of health for patients. May those who have lost their lives, both then and now, be remembered.

Acknowledgment

We are grateful for material provided from the Museum of Osteopathic Medicine in Kirksville, Missouri.

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