

Woodrow Wilson's hidden stroke of 1919: the impact of patient-physician confidentiality on United States foreign policy

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World War I catapulted the United States from traditional isolationism to international involvement in a major European conflict. Woodrow Wilson envisaged a permanent American imprint on democracy in world affairs through participation in the League of Nations. Amid these defining events, Wilson suffered a major ischemic stroke on October 2, 1919, which left him incapacitated. What was probably his fourth and most devastating stroke was diagnosed and treated by his friend and personal physician, Admiral Cary Grayson. Grayson, who had tremendous personal and professional loyalty to Wilson, kept the severity of the stroke hidden from Congress, the American people, and even the president himself. During a cabinet briefing, Grayson formally refused to sign a document of disability and was reluctant to address the subject of presidential succession. Wilson was essentially incapacitated and hemiplegic, yet he remained an active president and all messages were relayed directly through his wife, Edith. Patient-physician confidentiality superseded national security amid the backdrop of friendship and political power on the eve of a pivotal juncture in the history of American foreign policy.

It was in part because of the absence of Woodrow Wilson's vocal and unwavering support that the United States did not join the League of Nations and distanced itself from the international stage. The League of Nations would later prove powerless without American support and was unable to thwart the rise and advance of Adolf Hitler. Only after World War II did the United States assume its global leadership role and realize Wilson's visionary, yet contentious, groundwork for a *Pax Americana*.

The authors describe Woodrow Wilson's stroke, the historical implications of his health decline, and its impact on United States foreign policy.

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PRIOR to World War I, the United States had maintained an isolationist approach toward European foreign affairs and policy; the weight of the Monroe Doctrine still tipped the scale of public opinion and attitude. Even the eventual participation of the US in World War I was at that time met with great debate and skepticism on the part of the public and Congress.

On April 2, 1917, President Woodrow Wilson asked Congress for a Declaration of War on the grounds that Germany's unrestricted submarine warfare affected the national interest of the US.⁷ This declaration was approved

by the Senate on April 4 (82 votes for and 6 against) and the House of Representatives on April 6 (373 for and 50 against).¹⁷ The US entered World War I, but it did so reluctantly.

The nation struggled to reconcile multiple opposing ideologies. Isolationist attitudes existed among members of all political parties at the time. The Secretary of State, William Jennings Bryan, resigned due to his personal opposition to war. Racial and ethnic tensions remained high; Irish Americans did not want to fight side by side with their historic British foe and German Americans felt be-

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trayed. While religious and suffrage groups argued about the morality of war, Wilson asserted the war's moral foundation as a means required to maintain democracy around the world. Most people remained ambivalent; they were optimistic, but resigned. However, speech that threatened to undermine the war effort was silenced. The Espionage Act of 1917 rendered illegal the dissemination of any information that would interfere with the success of the armed forces. The Sedition Act of 1918 expanded this policy and outlawed speech that cast the war effort or the government in a negative light and interfered with war bond collection.^{7,17} Wilson was the voice for collective international democracy amid a battle over civil liberties and public opinion at home.

Silently, Wilson was fighting a personal battle against the physical manifestations of mental exhaustion. He pressed on, fueled by an unrelenting vision of peace founded on democratic principles, in the quest for which, according to Wilson, nearly 117,000 doughboys had lost their lives. Wilson embarked on his own version of political blitzkrieg, against medical advice and in detriment to his health, campaigning across the country in an attempt to rally American public opinion behind participation in the League of Nations and opposition to isolationism. Wilson's efforts would prove to be unsuccessful.⁷

Pre-Presidency Strokes

Woodrow Wilson had a long history of cerebrovascular disease.⁸ His first stroke is reported to have occurred in 1896²¹ when he was only 40 and, at the time, an academician serving on the board at Princeton University as the Chair of Jurisprudence and Political Economy.¹⁹ His symptoms involved 4 months of right-hand weakness, loss of fine motor skills, and right arm pain. Historically, this event was linked to an embolic middle cerebral artery branch territory ischemic stroke. Wilson sought the care of Dr. William Keen. Of note, it was Dr. Keen who performed the first brain tumor surgery in the US in 1888. Later his grandson, Dr. Walter Jackson Freeman II, would gain notoriety for his expertise in lobotomy. Wilson made a full recovery from his first stroke. He learned to compensate by writing with his left hand and rehabilitated to full strength.¹⁹ Ironically, those close to Wilson noted that the president viewed the stroke as a defining point in his life. Following the stroke, he developed a more driven and focused personality and was elected president of Princeton University in 1902.²¹

In 1906 Wilson probably suffered another stroke that rendered him partially blind in the left eye.¹⁹ He remained under the care of Dr. Keen, who recommended that Wilson reduce stress, remain calm, and focus on his health. Similar advice was given to Wilson by prominent ophthalmologist Dr. George de Schweinitz. As a man of near manic levels of work, Wilson was reluctant to follow such advice and sought the counsel of internist Dr. Alfred Stengal. Stengal suggested only a brief period of rest followed by a full return to duty.²¹ This was more consistent with Wilson's personal philosophy of work and illness. His aggressive schedule as Princeton University President, including frequent trips to Europe, continued. The same

year, 1906, Wilson lost a dispute with university officials, an event that historians later used to question whether Wilson's cerebrovascular history affected his abilities.¹⁹

Upon entering the White House, Wilson came under the care of White House physician Dr. Cary Grayson, who had served President Taft. Predictably, as his workload increased, Wilson suffered what was probably his third stroke in 1913, causing left arm weakness that was again attributed to an embolic event.^{21,19} Wilson continued his consuming work pace; however, at the urging of his wife he did seek the care of two neurologists who provided dissenting opinions. Dr. Silas Mitchell stated that Wilson would not survive his term if he continued to ignore his health. Dr. Francis Dercum, a prominent Philadelphia neurologist, recommended just a few months' rest. Expectedly, Wilson sided with Dercum. In 1915, he was officially diagnosed with severe atherosclerosis.¹⁹

It is important to note here that Wilson's medical history has been retrospectively reconstructed by historians nearly 100 years after his death. There exists debate between historians regarding the exact impact, if any, Wilson's earlier strokes played in his career progression. Some even question the diagnosis of these early strokes on the basis of a limited number of historical documents.

The Presidential Stroke of 1919

In 1919, Wilson was relentlessly traveling the country by rail to garner support for American entry into the League of Nations. Grayson accompanied the president on the tour. Wilson collapsed in Pueblo, Colorado, on September 25, 1919. The tour had started on September 3 and was interrupted by Wilson's urgent return to Washington on September 26, following physical manifestations of exhaustion.⁷ His primary symptom was headache, unrelated to position and unrelenting. He recuperated slightly after some rest, and reports state that on October 1 he was able to watch a film and read verses from the Bible.⁷ On October 2 he began to exhibit left hand and leg paresis and was found slumped on the floor of the private quarters bathroom by Edith Wilson. This progressed to left hand and leg plegia.¹⁶ Wilson had suffered his most significant stroke, a stroke that would leave him disabled.^{8,21,19} The care of Dr. Grayson was sought immediately. Grayson, under enormous secrecy, served as the de facto head of an interdisciplinary health care team. Dr. Francis Dercum was urgently summoned from Philadelphia to the White House. Grayson personally picked up Dr. Dercum from Union Station and within hours of the stroke one of the preeminent neurologists in the country was examining Wilson. On October 3, Dercum's examination noted a central left 7th cranial nerve deficit and complete left upper- and lower- extremity plegia.⁷ Given the nature of the onset and the lack of significant mental status changes, the presumed diagnosis of an ischemic stroke without hemorrhagic convergence was made. On October 4, ophthalmologist George de Schweinitz also noted left visual field cuts consistent with a large-segment, right sided middle cerebral artery stroke.⁷ Because the stroke was right-sided, speech function remained intact. Later, on October 14, the president developed acute prostatitis and was evaluated as

a potential surgical candidate for this disease on October 17, 1919. At that time his condition would have warranted near-emergent surgery, but Wilson's operative risk stratification was too high for surgery to be considered.⁷

Information to the public was extremely limited. Only general statements from the government were issued and essentially no one was allowed to see the president.¹⁶ The severity of the stroke was kept secret from Wilson himself, his cabinet, Congress, and the American people.¹¹ Wilson struggled to sign his own name, was bedridden, and needed assistance with activities of daily living, including feeding.¹⁶ Nevertheless, he did not consider resigning.⁷ Interestingly, Edith Wilson thought that resignation would be fatal to the president and noted that "If he resigns, the greatest incentive to recovery is gone."⁷

Upon briefing his cabinet, Dr. Cary Grayson refused to acknowledge or sign the statement of disability, thereby terminating any discussion of potential succession.¹¹ A stunning debate occurred during a cabinet meeting on October 6, 1919, in which Secretary of State Robert Lansing raised the issue of Article II, Section 1 of the Constitution, which designates the vice president as substitute for the president if the latter is "unable to discharge the powers and duties of his office." Grayson responded bluntly:

Secretary Lansing asked me the direct questions as what is the matter with the President, what is the exact nature of the President's trouble, how long he would be sick and was his mind clear or not. My reply was the President's mind is not only clear but very active, and that he clearly showed that he was very much annoyed when he found out that the Cabinet had been called and that he wanted to know by whose authority the meeting had been called and to what purpose.⁷

For a period of 17 months, nearly all communication to and from the president was maintained via his wife Edith.^{7,16} Wilson then privately communicated with Edith, who would then relay Wilson's supposed responses.¹¹ Therefore, Edith Wilson, although not officially making presidential decisions, functioned as the "gatekeeper" of information to Wilson and the voice of his responses. She alone decided what was appropriate for the president to review or not. Years later, while under political pressure, she once stated almost poetically "I, myself, never made a single decision regarding the disposition of public affairs."⁷ However, at least one document is noted to have been prepared without Wilson's consent. "Wilson's" veto of the Volstead Act in 1918 was written by proxy as a result of Edith Wilson's urging. The president's private secretary Joseph Tumulty, with the help of Secretary of Agriculture David F. Houston, crafted a message aiming to veto the law establishing enforcement of the 18th Amendment (Prohibition).⁷ This was directly in line with Wilson's known political ideology. It comes as no surprise that some historians refer to this period as the most vulnerable period in the history of the American presidency,¹¹ while others consider Edith Wilson the first female president. A timeline of Wilson's history and health can be found in Table 1.

Dr. Cary Grayson

Dr. Cary Grayson served as an admiral in the United

TABLE 1. Events in the life of Woodrow Wilson

Date	Event
1856	Birth in Staunton, VA
1883	Received PhD from John Hopkins; dissertation entitled <i>Congressional Government: A Study in American Politics</i>
1885	Marriage to Ellen Axson
1896	1st stroke
1902	Elected president of Princeton University
1906	2nd stroke
1911	Sworn in as Governor of New Jersey
1913	Sworn in as President of US
1913	3rd stroke
1914	Death of Ellen Axson Wilson
1915	Marriage to Edith Bolling Galt
1917	US entry into World War I
1918	End of World War I
Sept. 3, 1919	Wilson begins public speaking tour for League of Nations
Sept. 26, 1919	Tour cancelled due to physical & mental health
Oct. 2, 1919	4th & most devastating stroke
Nov. 19, 1919	US rejects Treaty of Versailles w/ League of Nations participation
1921	Knox-Porter Resolution ends hostility w/o League of Nations participation by US
1924	Death of Woodrow Wilson
1939	Germany invades Poland
1943	Tehran Conference; Allies vote to replace League of Nations
1945	Formation of United Nations w/ US support

States Navy, Chairman of the Red Cross, and personal physician to President Woodrow Wilson.^{9,13} A direct descendant of American Patriot George Mason and the son of Dr. John Cooke Grayson, he was born in 1878. He studied medicine at the Medical College of Virginia and the University of the South, and undertook an internship at Columbia Hospital for Women.⁴ He embarked on a career as a physician in the United States Navy, which put him in positions of unique power and opportunity. He served in the US Navy Hospital in 1903⁹ and deployed for 2.5 years on the *USS Maryland*, a Pacific-based armored cruiser. He returned to the epicenter of political influence and, through his position at the Navy's Bureau of Medicine and Surgery, he was appointed physician to President Theodore Roosevelt on his private yacht the *Mayflower* in 1907.⁹ He served as physician to President William Taft from 1909 to 1913.

Grayson's relationship with Wilson flourished both professionally and personally. The two men met on inauguration day, March 4, 1913. Grayson had treated Woodrow Wilson's sister after an injury in 1913 and in doing so gained Wilson's trust during his rise to the presidency.^{9,13} Their relationship transcended that of a patient and physician. They enjoyed playing golf and attended the theater regularly. Grayson often stayed at the White House and

attended the Paris Peace talks with Wilson in 1919.⁹ The two men were good friends and political allies, dedicated to one another's personal and political success. Grayson even introduced a recently widowed Woodrow Wilson to Edith Bolling Galt (Edith Wilson).^{9,13,15}

The greater part of Dr. Grayson's work was performed with the utmost secrecy and confidentiality to protect not only the president's health but also his public image.⁶ In a 2007, a recently released letter from Dr. Grayson to his wife, Alice, illustrated the quiet anxiety he felt over a nasal surgery performed on the president. The procedure was known only to the physician, the nurse, the White House usher, and Edith Wilson.⁶

Grayson's rank and influence increased as Wilson's power increased, and he catapulted from the rank of lieutenant to rear admiral in 1916.³ In doing so, Grayson bypassed the ranks of lieutenant commander, commander, and captain and went from being an assistant surgeon to a medical director. His personal and professional loyalty to Wilson was unwavering. In 1921 when Wilson's health was in decline, the United States Navy assigned Grayson to the Navy Dispensary, which allowed him to continue to care for Wilson after he left office.¹² Grayson did not continue to serve as a physician to the next president. During his time in the Navy he was awarded the Navy Cross, the Navy's second highest honor for valor, for his service to Woodrow Wilson. He retired in 1928 and died in 1938 after having served 3 years as Chairman of the American Red Cross.⁹

Patient-Physician Relationship

The Grayson-Wilson relationship is an illustration of the principles of patient-physician responsibility and confidentiality. Moreover, the rapid rise of Dr. Grayson was directly linked to the rise of Woodrow Wilson's political influence.⁶ Grayson's best friend and political ally was one of the most powerful men in the world, and one can argue that there were ulterior motives for Grayson to keep Wilson in power. Grayson's actions affected not just Wilson and his family but the entire nation. Grayson's taciturn and laconic demeanor intentionally obfuscated the argument of presidential power succession and perhaps shares responsibility for the failure of the US to enter the League of Nations.

The sacred bond between physician and patient dates back to the Hippocratic oath, which dictates the fundamental principles governing the relationship between patient and healer.¹⁰ The principle of patient-physician confidentiality protects against the immediate transmission of sensitive and private information and establishes a foundation of trust. It is a topic that has continued to be discussed and studied. Patients who do not trust their doctors have worse health outcomes and poorer compliance, while physicians who fail to establish rapport with their patients suffer from less job satisfaction and deliver an inferior quality of health care.¹⁰

Extraclinical factors can and do influence patient-physician relationships. In a military setting, patient-physician confidentiality can be bypassed for the sake of national security. Commanding officers may obtain information

about soldiers under their command if it could affect unit cohesion or endanger lives.¹⁴ Team physicians in sporting events often diagnose, treat, and publically disclose athletes' injuries while representing the team but treating an individual.²⁰ Physicians are required to report cases of sexually transmitted diseases, rape, and genetically linked diseases.⁵ Mandatory reporting for cases of tuberculosis and child abuse are also common.²⁰ Patient-doctor confidentiality is at times abandoned for the sake of the public good. In 1976, the California Supreme Court reached this conclusion in the case of *Tarasoff vs. Regents of University of California*. This decision was in concordance with the 1957 American Medical Association's Principles of Medical Ethics, which states that practitioners are required to maintain patient confidentiality unless the life of an individual is directly threatened by a patient.¹ Airline and military pilots undergo physicals that are then reported to their employers. The Joint Chiefs of Staff also undergo physicals establishing that they are fit for duty. It is argued that the president, as commander-in-chief and head of the government, has a public function and that, as such, the public may have a right to certain information that would normally be considered private.¹

25th Amendment: Establishing the Rules for Presidential Incapacity

A president's health decline while in office was not a novel event isolated to Wilson. Four of the eight presidents who died while in office did so from disease and disability. However, no other president's health had such grave foreign policy implications as Wilson's. The only truly prolonged illness was that of James A. Garfield, who survived 81 days following an assassination attempt before succumbing to infection, blood poisoning, and pneumonia.⁷ Prior to passage of the 25th Amendment no president sought to voluntarily formally transition complete power to their vice president during a period of illness (Table 2).

The 25th Amendment was passed on February 10, 1967, at the urging of President Eisenhower, to create a direct line of presidential succession and rules for governing under presidential incapacity. Prior to this, the Constitution was vague and contradictory in Article II, Section 1, and Article I, Section 3. The idea of presidential succession was first tested in 1841, when John Tyler became president (as opposed to acting president) upon the death of William Henry Harrison. After much bickering and debate, Tyler performed his duties as full president, without a new election. Precedent had been set. From 1841 to 1967, vice-presidential succession upon presidential death was automatic, but rather constitutionally ignored (Table 3). The 25th Amendment established the mechanism for the constitutionally guaranteed permanent or temporary transition of power to the vice president.

Debate occurred during and following the ratification of the 25th Amendment to alleviate the burden from the individual presidential physician in determining the medical necessity of presidential incapacity. It was hypothesized that a medical advisory committee assessing the health of the president should be established. Several legislators understood the concerning and well-documented

TABLE 2. History of known presidential incapacity*

President	Illness	Date	Outcome
George Washington	Influenza	1790	No action deliberately decided by VP Adams & Senate
James Madison	Fever & delirium	1813	No action
James Monroe	Malaria	1818	No action
James Garfield	Gunshot wound (81 days)	1881	No serious action despite organization of VP Chester Arthur's cabinet
Glover Cleveland	Mandible surgery for tumor (x2)	1893	No action
William McKinley	Gunshot wound	1901	VP Roosevelt traveled to Buffalo but no formal action to take over duties while McKinley was alive
Woodrow Wilson	Stroke	1919	Edith Wilson served as de facto president
Franklin Roosevelt	Melanoma cardiomyopathy CHF Stroke	1943	Deliberate avoidance by Democratic party to empower VP Wallace to act as president (historically debated)
Dwight Eisenhower	MI Bowel surgery Stroke	1955 1956 1957	VP Nixon assumed responsibilities w/o full presidential power
Lyndon Johnson	Gallbladder surgery	1965	No action
Ronald Reagan†	Intestinal surgery	1985	VP Bush served as acting president for 7 hrs
George W. Bush†	Colonoscopy Colonoscopy	2002 2007	VP Cheney served as acting president for 2 hrs (on 2 separate occasions)

CHF = congestive heart failure; MI = myocardial infarction; VP = vice president.

* Adapted from Schlimgen J: Woodrow Wilson - strokes and denial. Arizona Health Sciences Library. (<http://ahsl.arizona.edu/about/exhibits/presidents/wilson>) [Accessed April 21, 2015].

† 25th Amendment invoked.

loyalty that existed between presidents and their personal physicians. This was echoed by the influential presidential historian James MacGregor Burns. In 1964, Burns recommended that the task of determining presidential disability be entrusted to a panel of medical experts with disinterested motives. Senator Birch Bayh advocated that while the cabinet and vice president could make a determination of disability, they should be armed with objective expert medical information. Later it was discussed that such a hypothetical committee would consist of two internists, two

neurologists, a psychiatrist, and a surgeon.¹ The president of the Institute of Medicine would nominate a list of individuals from which the surgeon general would choose the final members for terms of 6 years. This committee was to also review the president's annual health maintenance information stored at the Walter Reed National Military Medical Center. This plan, however, never came to fruition as it violated the fundamental tenet of patient care: It removed the patient from the care of a physician and placed the health of the president in the hands of a politically appointed committee.¹

TABLE 3. Presidential succession after death in office

President	Cause of Death	Date	Outcome
William Henry Harrison	Pneumonia	1841	VP John Tyler assumes office
Zachary Taylor	Bilious cholera	1850	VP Millard Fillmore assumes office
Abraham Lincoln	Assassination	1865	VP Andrew Johnson assumes office
James Garfield	Assassination	1881	VP Chester Arthur assumes office
William McKinley	Assassination	1901	VP Theodore Roosevelt assumes office
Warren Harding	CHF	1923	VP Calvin Coolidge assumes office
Franklin Roosevelt	Cerebral hemorrhage	1945	VP Harry Truman assumes office
John F. Kennedy	Assassination	1963	VP Lyndon Johnson assumes office

Woodrow Wilson's Illness and Grayson's Confidentiality

One of the great debates, in the case of Wilson, is whether Grayson's refusal to publicize the president's health status was an extension of the patient-physician confidentiality or if it served other purposes as well. The Hippocratic oath states:

Whatever, in the course of my practice, I may see or hear (even when not invited), whatever I may happen to obtain knowledge of, if it be not proper to repeat it, I will keep sacred and secret within my own breast... While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times...²

We may never understand the true motive of Dr. Grayson, but his long relationship with Wilson allows us to assume that he must have acted with his patient's (and best friend's) interests in mind and honored the confidentiality

of their relationship. We have to be mindful that at the time the 25th Amendment did not exist and there was no solid legal substrate for presidential succession and the US was rebuilding after its participation in the Great War. Some would argue that Grayson's duty to Wilson was to protect his health and thus protect him from a duty he could no longer perform. Grayson's patriotism and devotion to Wilson cannot be argued against and in the end Grayson acted with Wilson's and the nation's best intentions in mind.

Conclusions

Wilson was a fervent believer in collective world democracy as a necessary prerequisite for world peace. This belief fueled his actions and life's work. It was the recalcitrant attitude of the American public in regard to international affairs and his own failure to persuade the US to join the League of Nations that led to his ultimate political and possibly his physical demise: "...but the League of Nations is now in its crisis, and if it fails, I hate to think what will happen to the world ... I cannot put my personal safety, my health, in the balance against my duty—I must go." —Woodrow Wilson, 1919.¹¹

Wilson suffered a catastrophic stroke in 1919 and died in 1924 without ever seeing the US join the League of Nations. His ideas, however, lived on. Regardless of the secrecy surrounding his stroke, his ideas propagated and found fertile ground in future generations, setting the foundation for the formation of the United Nations and the role of the US as a world leader.

References

- Abrams H: Can the Twenty-Fifth Amendment deal with a disabled president? Preventing future White House cover-ups. *Pres Stud Q* **29**:115–133
- Aghadiuno M: Hippocrates appraises 21st century doctors. *Br J Gen Pract* **53**:984–985, 2003
- Braisted WC, Bell WH: **The Life Story of Presley Marion Rixey, Surgeon General, U.S. Navy 1902-1910: Biography and Autobiography**. Strasburg, VA: Shenandoah Publishing House, 1930
- Cabell RW: **20th Century Cabells and Their Kin**. Franklin, NC: Genealogy Publishing Service, 1993
- Chan TK: Doctors have a duty to breach patient confidentiality to protect others at risk of HIV infection. *BMJ* **346**:f1471, 2013
- Chandler MA: A president's illness kept under wraps. **Washington Post**. February 3, 2007. (<http://www.washingtonpost.com/wp-dyn/content/article/2007/02/02/AR2007020201698.html>) [Accessed April 21, 2015]
- Cooper JM Jr: **Woodrow Wilson: A Biography**. New York: Random House, 2009
- Crispell KR, Gomez CF: **Hidden Illness in the White House**. Durham, NC: Duke University Press, 1988
- Deppisch LM: **The White House Physician: A History From Washington to George W. Bush**. Jefferson, NC: McFarland, 2007
- Dorr Goold S, Lipkin M Jr: The doctor-patient relationship: challenges, opportunities, and strategies. *J Gen Intern Med* **14** (Suppl 1):S26–S33, 1999
- Eyewitness to History: **President Wilson suffers a stroke, 1919**. (<http://www.eyewitnesstohistory.com/wilsonstroke.htm>) [Accessed April 21, 2015]
- Ferrell RH: **The Dying President: Franklin D. Roosevelt**. Columbia, MO: University of Missouri Press, 1998
- Ferrell RH: **Ill-Advised: Presidential Health and Public Trust**. Columbia, MO: University of Missouri Press, 1996
- Gibson TM, Coker WJ: Medical confidentiality: the right of a commanding officer to know. *J R Army Med Corps* **148**:130–136, 2002
- Grimmett RF: **St. John's Church, Lafayette Square: The History and Heritage of the Church of the Presidents. Washington, DC**. Minneapolis: Mill City Press, 2009
- Hoover IH: **Forty-two Years in the White House**. Boston: Houghton Mifflin, 1934
- Kennedy DM: **Over Here: The First World War and American Society**. Oxford: Oxford University Press, 2004
- Pietrantonio AM, Wright E, Gibson KN, Alldred T, Jacobson D, Niec A: Mandatory reporting of child abuse and neglect: crafting a positive process for health professionals and caregivers. *Child Abuse Negl* **37**:102–109, 2013
- Schlimgen J: Woodrow Wilson - strokes and denial. **Arizona Health Sciences Library**. (<http://ahsl.arizona.edu/about/exhibits/presidents/wilson>) [Accessed April 21, 2015]
- Testoni D, Hornik CP, Smith PB, Benjamin DK Jr, McKinney RE Jr: Sports medicine and ethics. *Am J Bioeth* **13**:4–12, 2013
- Weinstein EA: **Woodrow Wilson: a Medical and Psychological Biography**. Princeton, NJ: Princeton University Press, 1981

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