



4

# Daniel Hale Williams, MD: "A Moses in the profession"



AMERICAN COLLEGE OF SURGEONS

*Inspiring Quality:  
Highest Standards, Better Outcomes*

100+years

AUTHORS

**Alisha J. Jefferson, MD**

**Tamra S. McKenzie, MD, FACS**

*Department of Surgery, East Tennessee State  
University, Johnson City, TN*

CORRESPONDING AUTHOR

**Alisha Jefferson, MD**

PO Box 70575

Johnson City, TN 37614

Daniel Hale Williams (1856–1931) was the most prominent African-American surgeon in the U.S. in the late 19th and early 20th centuries. While he is best known for his achievements in surgery (second repair of a stab wound to the pericardium in 1893; among the first to repair a penetrating wound to the spleen in 1902) his signal achievements were as an advocate for equal access to medical care and training for African Americans.

Williams had a significant impact on the major health institutions of black America. After graduating from Chicago Medical College in 1883, he was denied appointment to hospitals in Chicago due to his race. He opened Provident Hospital in 1891, the first black hospital in the country for patients who required inpatient care and a facility to train black nurses and doctors. He reorganized Freedmen's Hospital in Washington, DC, as its chief of surgery from 1894 to 1898, reforming its school of nursing and starting a training program in surgery. He was a leader in the formation of the National Medical Association in 1895 and served as its inaugural vice-president.

The success of his annual clinics at Meharry Medical College, which began in 1900, motivated the black community in Nashville, TN, to open an inpatient facility, the forerunner of a wave of black hospitals across the U.S. In 1913, he became a charter member of the American College of Surgeons and its first black Fellow. Ulysses Dailey, surgeon and former president of the National Medical Association, called Williams "a Moses in the profession."

Helen Buckner wrote a well-referenced biography of Daniel Hale Williams, *Daniel Hale Williams, Negro Surgeon* (New York, Pitman Publishing, 1968).<sup>1</sup> All of the details in this profile come from her book unless otherwise referenced. She described in detail his contentious years in Washington, DC, at Freedmen's Hospital and his difficulties at Provident Hospital. Another source, especially for Williams' impact on African-American health institutions, came from W. Montague Cobb, professor at Howard University and a chronicler of African American history. Cobb wrote two profiles of Williams in the *Journal of the National Medical Association*.<sup>2,3</sup>

### Early life and education

Daniel Hale Williams was born on January 18, 1856, the fifth of six children of Daniel Williams, Jr., and Sarah Price Williams, in Hollidaysburg, PA (Figure 1). His father's family, a racial mix of German immigrants, Native American, and free blacks, settled in York County, PA. They were active in the abolitionist movement as members of the National Equal Rights League. Williams' mother, with the same interracial heritage, came from a free family in Annapolis, MD, headed by a clergyman. The Williams family did well until the father died of consumption during a visit to Sarah's family.



In the aftermath of the passing of the elder Daniel Williams, the Williams children were separated. Eleven-year-old Daniel was taken out of school and sent to Baltimore, MD, as a shoemaker's apprentice. One year later, out of loneliness, he asked an acquaintance of his father for a rail pass to Rockford, IL, where his mother had resettled with her family. Their reunion, however, was brief. Williams' mother left him and his sister, Sally, under the care of her family and in the company of his cousins.

In Rockford Williams worked odd jobs on lake boats and learned to cut hair. With the restlessness of their mother, the two Williams children migrated to Edgerton, WI, where Daniel opened a barbershop of his own at age 17. When the business failed he joined an established barber shop in Janesville, WI, a larger town a few miles away.

Harry Anderson, its owner, impressed by the independent, hard-working lad, took him and Sally in to board in his home. Daniel cut hair part time and tried unsuccessfully to finish high school. He tried music for a year, singing tenor and learning to play the guitar and bass fiddle. With Anderson's encouragement, Daniel entered a private school, Haire's Classical Academy, where he completed his secondary education in 1877. He cut hair part time, played in a dance band, and attended services at the Unitarian Church.

His older brother was a successful lawyer, so Williams tried reading law, which held little interest for him. Instead he was drawn to medicine. In 1878, he became an apprentice to Henry Palmer, a prominent surgeon and civic leader in both Janesville and the entire state of Wisconsin. In 1880, after two years with Palmer, he entered Chicago Medical College, which later became the medical department of Northwestern University. Now immersed in his medical studies, Williams relied on Anderson for support.

He struggled with his studies but got by with low passing grades. During finals week one year he fell ill in the midst of a smallpox epidemic, which left him with pockmarks on his nose. His clinical experience was at the South Side Dispensary, Mercy Hospital, and St. Luke's Hospital.

After graduation from medical school in 1883, and a year as intern at Mercy Hospital, he opened a practice in a well-to-do South Side neighborhood where both white and black families resided. He was one of only three black physicians in the city. As he built his practice he taught and demonstrated anatomy at the Chicago Medical School from 1885 to 1888. He had privileges at the South Side Dispensary and got a job as surgeon to the City Railway Company. He established a reputation as a skilled surgeon. In 1889, Illinois Governor Joseph Fifer appointed Williams to the State Board of Health.

However, none of the established hospitals in Chicago would grant privileges to a black surgeon. He was fortunate that he could operate at the Dispensary. Without access to inpatient facilities, he was confronted by the limited educational and practice opportunities for black physicians.

## Provident Hospital

In 1890, Reverend Louis Reynolds, pastor of St. Stephen's African Methodist Church, approached Williams with a concern. His sister Emma had come to join him from Kansas City, hoping for admission in one of the city's training programs for nurses. She had been turned down by all of them because she was black.

The solution was a hospital, not restricted to either race, which would train black nurses. He and other black physicians would benefit, as it would be an inpatient facility for their patients. Another pressing need would be met: intern training positions for black medical school graduates. The idea had merit. Chicago's black community was growing, supporting 200 black-owned enterprises, 20 churches, and three newspapers. As a member of the state board of health, Williams knew that more hospitals were needed for all races.

Williams organized rallies in support of a hospital in the African-American communities of the west and south sides of Chicago. He won over black pastors and lay leaders. City businesses, both black- and white-owned, pledged money to the project. An important early contribution was made by Reverend Jenkins Jones, who secured a down payment from the Armour Meat Packing Company for a three-story brick house on the corner of 29th Street and Dearborn.

Frederick Douglass donated the proceeds of a lecture to the hospital fund. Members of the community gave what they could: a wringer for the hospital laundry, lace for the nurses' caps, and books for a patient library. White philanthropists donated, as did white churches and synagogues.

As momentum grew, resistance began to build. Some resented that a separate facility had to be built at all; why not integrate the existing hospitals? Another said that a black-owned hospital had never been tried before; what made Williams believe that he could succeed? William's dedication and resolve overcame the doubters.

In January 1891 the articles of incorporation were drawn up in the name of the Provident Hospital and Training School Association, with every donor as a member. An advisory board of white civic leaders and medical professionals was named; the hospital trustees and executive and finance committees were all black. In May 1891 the hospital opened its doors (Figure 2).



Success depended on having excellent clinicians on his staff. His priority was quality, regardless of race, so his staff had both black and white members. He availed himself of consultants from the city's medical schools, such as Christian Fenger and Frank Billings, who were his past associates at the Chicago Medical School.

Austin Curtis became Provident's first surgical trainee under Williams later that year. (He later became professor of surgery at Howard University and chief surgeon at Freedmen's Hospital.) The first class of nursing students enrolled the year following, including Emma Reynolds.

## Repair of the pericardium

Williams is best known as the second surgeon to successfully repair a laceration of the pericardium in July 1893. The patient, a 26-year-old man, was admitted to the Provident Hospital one evening after suffering a stab wound just left of his sternum. During the night he continued to bleed from his wound. By morning he was in shock, so Williams was forced to operate.

With five other surgeons in attendance as observers, he extended the stab wound toward the sternum on either side in the direction of the border of the costal cartilage. The internal mammary vessels had been transected. To expose and ligate the vessels, he removed a segment of the costal cartilage.

The bleeding controlled, Williams found a one-and-a-quarter inch laceration of the pericardium. No hemopericardium was present, and there was enough room to inspect the heart. There was a laceration of the right ventricle near the right coronary artery, but it was not bleeding. He left it alone and sutured the pericardium closed. The patient's recovery was complicated by a two-and-a-half-liter pleural effusion, which Williams drained three weeks after the original operation. The patient walked out the hospital a month later. Williams found him at work at the Union Stockyards two years later.

Williams believed he had done something unprecedented: exploration of a cardiac stab wound and suture of a pericardial laceration. After a search in the National Library of Medicine, he thought he established his priority. He reported his success in the *Medical Record* in 1897 (Figure 3), but he had missed an 1895 paper, just two years before his, which reported repair of the pericardium done in 1891 by Henry Dalton in the *Annals of Surgery*.<sup>4,5</sup> Still, it remained a great achievement that would be acknowledged for generations.<sup>2,3</sup>

STAB WOUND OF THE HEART AND PERICARDIUM—SUTURE OF THE PERICARDIUM—RECOVERY—PATIENT ALIVE THREE YEARS AFTERWARD.

BY DANIEL H. WILLIAMS, M.D.,  
SURGEON, FREEDMEN'S HOSPITAL, WASHINGTON, D. C.

The following case is deemed of sufficient importance to be reported three and a half years after its occurrence. The writer's illness about the time of the patient's recovery and a change of duties to his present position have prevented previous publication.

James Cornish, an expressman, aged twenty-four years, during an altercation received a stab wound through the fifth costal cartilage, injuring the internal mammary vessels and wounding the pericardium and heart. The kind of knife and length of blade could not be determined from the patient.

He was admitted to Provident Hospital, Chicago, July 9, 1893, at 7:30 P.M., with a stab wound about one inch long, three-fourths of an inch to the left of the sternum, through and in the long axis of the fifth cartilage. A probe recognized only a superficial wound, but during the night there were such persistent



## Freedmen's Hospital

In 1893 he was named professor of surgery of Howard University and surgeon-in-chief of Freedmen's Hospital, a 220-bed facility for blacks in Washington, DC. He was recommended by Walter Q. Gresham, Secretary of State under the Grover Cleveland administration, in addition to the leadership of the Chicago medical community. Franklin Martin, founder of the American College of Surgeons, wrote:

*I have known intimately Dr Daniel H. Williams for more than ten years. I know him to be a man of honor and as a member of society a superior gentleman. Professionally he stands at the top of the medical profession of Chicago. He is a surgeon of great scientific ability, and his executive ability as demonstrated in the organization and equipment of Provident Hospital of Chicago, is beyond question.<sup>1</sup>*

While he was reluctant to leave the 12-bed Provident Hospital, the opportunity to take the most prominent position in surgery at Howard and the largest medical facility for blacks was irresistible. "If it's service to your race you're thinking of," Gresham said, "Freedmen's needs you more than Provident."<sup>1</sup>

He arrived in Washington several months late, delayed by a hunting wound that was slow to heal. He had to overcome the resentment of local physicians who mistrusted an outsider, and the incumbent, Charles Purvis, who had stayed on faculty and still served as secretary of the medical staff organization for Freedmen's. Created by an act of Congress and located in the District of Columbia, the Freedmen's Hospital was under the authority of the Federal Government. Its administration had been passed around a number of departments. By the time Williams arrived the facility was in the Department of the Interior, led by its newly appointed Secretary, Hoke Smith. With much bigger tasks facing him, Smith gave Williams freedom to do as he liked, as long as he stayed within its meager budget.

3

The hospital under Purvis' administration had no formal departmental organization. It had a men's ward, one for women, and one for "confinement" cases. Nursing was substandard and staffed by attendants with minimal training. When it came time for medication, a nurse stood at the center of the ward and clapped her hands. "All you eleven-o'clockers, take your medicine!" she shouted.<sup>1</sup> The death rate in the facility was more than 10 percent.

He reorganized the hospital into seven departments: medicine, surgery, gynecology, obstetrics, dermatology, urology, and respiratory. He added departments of pathology and bacteriology even though the facilities and equipment were hopelessly inadequate. To replace the existing staff of four entrenched fulltime physicians, Williams enlarged the medical staff to "20 gentlemen who have achieved eminent success as practitioners in their respective lines of work."<sup>1</sup>

Both the nursing and operating room staffs were substandard. The care provided by nursing students under strict supervision was an improvement. He got Sarah Ebersole, the night supervisor at Presbyterian Hospital in Chicago, to move to Washington as his nursing superintendent. Purvis had started a nurse training program at Freedmen's the year before Williams arrived, a haphazard curriculum of didactic lectures. The trainees were given no formal instruction on direct patient care. In contrast, Ebersole and Williams instituted a rigorous 18-month training program that included practical work on the wards and was equal to that of any in the country.

The surgical assistants at Freedmen's were lazy, so he fired them. With the money saved, he started a training program for black interns. Here, too, motivation and intelligence would be an improvement. Most importantly, it opened training opportunities to black medical graduates. A tough taskmaster, he demanded full attention during operations. He once sent a trainee out the operating room because he let his eyes drift away from the patient while administering anesthesia.

His predecessors used carbolic acid spray and adhered to the concept of "laudable pus" as a sign of healthy wound healing. Williams introduced steam sterilization and aseptic technique.<sup>3</sup> He started a hospital ambulance service. His unquestioned leadership had a profound effect. At the end of his first year, he had only eight deaths out of 533 operations, a mortality rate of only 1.5 percent. He operated anywhere in the body and had spectacular surgical successes that added to his reputation.

Williams believed that the black community did not accept the professional ability of black physicians and surgeons. His solution was controversial: public operations. Every Sunday afternoon, the public was welcome to observe an operation at Freedmen's Hospital conducted by a black surgeon and staff. In defense of Williams, Cobb noted that the patient's identity was for the most part hidden.<sup>2</sup> The surgical amphitheater was a longstanding tradition as the centerpiece of surgical instruction, and viewing operations conducted by John Murphy at Mercy Hospital was a popular event at annual meetings of the Clinical Congress of the ACS well into the 1920s.<sup>6</sup>

## National Medical Association

Excluded from Washington's professional organizations because of his race, there was no forum where Williams could present his cases and receive the opinions of his peers. The Medical Society of the District of Columbia (MSDC) restricted its membership to white physicians, a policy it held from its founding in 1717. Black physicians in Washington, including Purvis, formed a racially integrated rival group, the National Medical Society (NMS), in 1870. At the annual meeting of the American Medical Association (AMA) that year, they tried to win recognition by the national group on the basis of the racist membership requirements of the local AMA society, the MSDC. They were soundly defeated by Southern delegates on the basis of the perceived right of professional organizations to set their policies, and by Northern delegates, from a reluctance to create disharmony within the organization. This policy was maintained by the AMA long into the 20th century, allowing racial exclusion to persist until the Civil Rights Act of 1964.<sup>7</sup>

In 1884 Williams and an interracial group of physicians revived the NMS and formed the Medico-Chirurgical Society of the District of Columbia (MCSDC), dedicated to the interchange of medical ideas and information among practitioners of all races. Within a decade other African-American medical societies formed in Texas (1886), North Carolina (1887), Georgia (1893), and Arkansas (1893), using it as a model. At the Cotton States and International Exposition world's fair in Atlanta in 1895, representatives from these organizations, including Williams, formed the National Medical Association (NMA). Williams was named its inaugural vice-president.<sup>8</sup>

## Accusations and disappointment

Under Interior Secretary Hoke Smith, in the Democrat Grover Cleveland administration, Williams was free to re-organize Freedmen's the way he wanted. Things changed with the presidential election of 1896 and the election of Republican William McKinley, who named Cornelius Bliss Secretary of the Interior in 1897. "Now," observed Buckner, "Freedmen's was indeed a political football."<sup>1</sup>

Bliss suspected that the charities in the District of Columbia, including Freedmen's, were mismanaged and corrupt. One of his Republican allies, Senator James McMillan, had come out with a report on Freedmen's Hospital. It accused Williams of incompetency. At a hearing of McMillan's committee, Williams was pointedly asked about details of his purchases of books, instruments, and even hospital linen. Discrepancies were questioned in detail and aggressive follow-up questions implied malfeasance. As the hearing unfolded, Williams' counsel, Judge Jerry Wilson, asked, "So my client is charged with felonious

theft?"<sup>1</sup> Hearing those words, Williams suddenly realized the gravity of the accusations against him. He fell to the ground in a dead faint.

The motivations behind his prized achievements, the training programs for nurses and black physicians, were questioned. Purvis, still smarting from his ouster by Williams, saw his chance. He said that Williams' changes in the nursing program, which Purvis had actually started, were unnecessary. Purvis claimed that his ouster as chief surgeon was politically motivated and caused by Secretary Smith's objection to a speech that Purvis had made. Williams then had to field questions whether he won his appointment not from a Civil Service examination, but through patronage.

Williams, weary of the brouhaha, resigned his position at Freedman's in February 1898, just a year into the new presidential administration. In accordance with the new regulations, the Civil Service Commission submitted candidates to an examination. The leading candidate was rejected by the new Secretary. Instead he chose Austin Curtis, Williams' former trainee at Provident, who finished a distant second in the test but whose wife had been especially useful to the chair of the Republican National Committee during the election.

Williams escaped Washington to Chicago with his new bride Alice (née Johnson). Much had changed at Provident Hospital. The facility had plans to move to a much larger 65-bed facility the next year. But the hospital that he founded had no role for him other than staff surgeon. George Cleveland Hall, now surgeon-in-chief and chief of staff at the hospital, made no sign of yielding either position to Williams. The latter, not wanting to create a controversy, reopened his old office and resumed his practice at Provident, and later Cook County Hospital.

The disaster at Freedmen's and his disappointment on his return to Provident changed him. In contrast to the ebullient, outgoing Hall, Williams became a solitary, somber figure. To add to his misery, Alice miscarried in 1899 and in the aftermath of her long recovery came the prognosis that she would never have a baby.<sup>1</sup>

## Meharry

When he returned to Chicago, black patients from Alabama and Georgia sought him out to operate on them. The need for a medical and surgical center in the South was obvious, he concluded. What better place than the Tuskegee Institute in Alabama under Booker T. Washington? Washington had visited Freedmen's Hospital and was impressed by Williams' reorganization. He invited him to Tuskegee to inspect the clinic there and suggest improvements. Now back in Chicago, Williams was ready to do in Alabama what he had done at Provident and Freeman's.

However, when the two met during a visit by Washington to Chicago, the latter was decidedly cool to the idea. A short visit by Williams to Alabama was one thing; transforming the institute's small dispensary into a hospital was quite another. Washington's letters in response to Williams became brief and terse, and eventually they broke correspondence. The dissolution of Williams' relationship with the most prominent figure in black America depressed him.

In 1899 George Hubbard, president and dean of Meharry Medical College in Nashville, TN, invited Williams to hold clinics there. The clinics would be seven- to 10-day sessions where he would see patients and perform operations. Williams agreed, eager to recommit himself to surgical education and service to an African-American community that badly needed modern clinical service.

Meharry was the primary source of medical doctors for the black South. By the turn of the century, half of its 410 graduates were in practice below the Mason Dixon line. The curriculum was woefully inadequate. Robert Boyd, professor at Meharry who became the first president of the NMA, saw patients and performed deliveries in the basement below the school's offices. This was the only clinical experience some of the Meharry students would get before they graduated and began their practices.

In 1900 the first of Williams' demonstrations were held in Boyd's makeshift facility, operating by candlelight. The clinics were an immediate success. Williams saw firsthand the deficiencies at Meharry. Later that year he returned to Nashville and addressed the town's black community leaders. He described how he started the Provident Hospital and encouraged them to do the same. Williams evoked Frederick Douglass' advice to him when he started his term as surgeon-in-chief at Freedmen's: "The only way you can succeed is to override the obstacles in your path," he said. "Hope will be of no avail. By the power that is within you do what you hope to do."<sup>1</sup> That September, the black community opened a facility in a large house that accommodated 12 beds at first, and eventually 33. Meharry's professors had an operating room for their practices. When Williams visited, he had a place to demonstrate modern surgery.

Williams' speech in Nashville was published and his words motivated other black communities to open inpatient facilities in Knoxville, Kansas City, St. Louis, Louisville, Memphis, Birmingham, Atlanta, and Dallas. In a few years more than 40 African-American community hospitals opened in 20 states.

## An operating surgeon

Williams was invited to many of the new facilities, speaking and usually doing operations. By all accounts he continued to show surgical dexterity long into his career. Supremely confident in this ability and knowledge, he made bold decisions that were counter to surgical orthodoxy. At Provident in 1902, he repaired a stab wound to the spleen, preserving the spleen when the conventional recommendation would be to remove it. The patient recovered with his spleen intact, preserving its immunological function, a priority that was recognized decades later in the 1960s and 1970s.

He was among the first to recognize the risk of abdominal injury in stab wounds to the chest. A patient had been stabbed in the chest below the nipple, in the sixth interspace. The pericardium had been lacerated without injury to the heart or lung. He noted, however, two tears in the diaphragm where the knife had pierced it through-and-through. Not liking what he saw he made a second incision in the abdomen and found a laceration of the transverse colon. The conventional approach was to enlarge the diaphragmatic injury to make sure nothing below it was injured. Williams was convinced that he would not have found the injury to the colon through a relatively small incision in the diaphragm. The lesson was that a penetrating injury, seemingly high in the chest, can still enter the abdomen, a dictum that is now a basic principle in trauma to the torso.<sup>9</sup>

For injuries to the extremities, Williams saw amputation only as a last resort. He went to extremes to salvage limbs, especially in the young. He took the time to painstakingly get the fractures to heal and the wounds covered with skin. It might take months of hospitalization, but patients walked out of Provident on their own.

## Sad end and a final first

Williams resigned from the staff at Provident in 1912, unable to fight an internecine battle with Hall, his successor as surgeon-in-chief when he left for Washington. Since his return to Chicago, Williams, a stellar instructor at the bedside and in the operating theater, ran weekly clinics at Provident that attracted students and doctors from across America. To Hall, the clinics were unwieldy affairs and impracticable for the rest of the hospital, so he closed the popular events.

Williams had a busy practice and at times had patients of both races at five Chicago hospitals. When Williams' practice at St. Luke's became successful, the facility's rich white clientele irritated Hall. The surgeon-in-chief demanded that Williams bring all of his patients, rich and poor, white and black, to Provident.

Behind the overt demands were a background of slurs, slights, and rumor mongering that made miserable the lives of Williams, his wife Alice, and their friends. In 1917, two years after the death of Booker T. Washington, Williams was on a trip with Washington's assistant and confidant Emmett Scott. It was well known that Hall had Washington's confidence. With Washington's death Scott was free to explain why Washington was so cool to the idea to start a black inpatient facility at Tuskegee. Hall had spread falsehoods about Williams, Scott said. The mildest among them was that Williams had the ambition to be named surgeon-in-chief at Tuskegee.

Even with this revelation, Williams kept his silence. His friends could not understand Williams' resignation and refusal to confront Hall directly. In the first year after Williams' resignation from Provident, the hospital lost 250 patients; in the second, 300. It took five years to rebuild the number of patients to the level it had been.

In 1913, Williams was elected as a charter member of the ACS, its first black member. Franklin Martin of Chicago organized the first meeting of the ACS in Washington, DC. Acceptance of a surgeon as a Fellow of the ACS required review of 100 cases by a credentials committee, five letters of recommendation by colleagues, and a pledge not to engage in fee splitting. John B. Murphy, Albert Ochsner, and Franklin Martin, all founding members of the College, supported his application. Murphy wrote, "[Dr. Williams] has had great experience and a studious career, surgical training far above average. Moral standing exceptional. Ethical standing perfectly good."<sup>10</sup>

John O'Shea noted the controversy that Williams' candidacy generated at the Board of Regents meeting that reviewed applicants for the first convocation of the ACS. "At least one Southern surgeon expressed a strong opinion that recognizing Dr. Williams as a Fellow and the notoriety that would follow would be a source of considerable social problems."<sup>10</sup> Most of the Regents supported Williams, and Ochsner threatened to resign if Williams was rejected. Williams's application was accepted.

## "A Moses in the profession"

His travel to black hospitals and clinics decreased as he and Alice spent more of their time in a summer home they maintained in Park County, north of Chicago. She preceded him in death by several years, of complications of Parkinson's disease. Williams suffered a series of strokes and died in 1931 at age 75.

His accomplishments in American medicine go far beyond the second successful repair of the pericardium. He founded the first hospital for blacks in the country, advanced the training and education of black nurses and surgeons, and made substantial contributions to the most prominent institutions in black America at the time: Freedmen's Hospital, Howard University, Meharry Medical College, and the National Medical Association. The honors bestowed on him during his lifetime, although heartfelt, seem relatively modest: honorary degrees from Wilberforce University and Howard University, a portrait at Meharry, and fellowship in the ACS.

The most succinct description of his stature came in an article by Ulysses Dailey, quoted in an article by W. Montague Cobb. "He was a medical missionary," Dailey wrote. "A veritable Moses in the Negro profession."<sup>3</sup>

### References

- 1 Buckler H. Daniel Hale Williams. Negro Surgeon. New York: Pitman Publishing, 1968. Available at: [http://www.archive.org/stream/danielhalfwillia013550mbp/danielhalfwillia013550mbp\\_djvu.txt](http://www.archive.org/stream/danielhalfwillia013550mbp/danielhalfwillia013550mbp_djvu.txt). Accessed December 16, 2017.
- 2 Cobb WM. Daniel Hale Williams – pioneer and innovator. *J Natl Med Assoc*. 1944;36(5):158-159.
- 3 Cobb WM. Dr Daniel Hale Williams. *J Natl Med Assoc*. 1953;45(5):379-385.
- 4 Williams DH. Stab wound of the heart and pericardium – suture of the pericardium – recovery – patient alive three years afterward. *Med Rec*. 1897;51(13):437-439.
- 5 Dalton HC. Report of a case of stab wound of the pericardium, terminating in recovery after resection of a rib and suture of the pericardium. *Ann Surg*. 1895;21:147-152.
- 6 Wangenstein OH, Wangenstein SD. The surgical amphitheatre, history of its origins, functions, and fate. *Surgery*. 1975;77(3):403-418.
- 7 Baker RB. The American Medical Association and race. *AMA J Ethics*. 2014;16(6):479-488.
- 8 Morris KS. The founding of the National Medical Association. Yale Medicine thesis digital library, 2008. Available at: <http://elischolar.library.yale.edu/cgi/viewcontent.cgi?article=1359&context=ymdl>. Accessed December 17, 2017.
- 9 Williams DH. Penetrating wounds of the chest, perforating the diaphragm, and involving the abdominal viscera. *Ann Surg*. 1904;40(5):675-685.
- 10 O'Shea JS. Louis T. Wright and Henry W. Cave: How they paved the way for fellowships for Black surgeons. *Bull Am Coll Surg*. 2005;90:22-29.
- 11 Beatty WK. Daniel Hale Williams: Innovative surgeon, educator, and hospital administrator. *Chest*. 1971; 60: 175-182.
- 12 Dupre M, O'Leary JP. The first successful closure of a laceration of the pericardium. *Am Surgeon*. April 1997;63(4):372-374. PMID 9124763
- 13 Gordon R. Daniel Hale Williams: Pioneer black surgeon and educator. *J Invest Surg*. 2005;18(3):105-106.
- 14 Olivier AF. In proper perspective: Daniel Hale Williams, MD. *Ann Thorac Surg*. 1984;37(1):96-97.
- 15 Aris A. One hundred years of cardiac surgery. *Ann Thorac Surg*. September 1996;62(3):636-637. PMID 8783985
- 16 [No author.] The first Negro medical society: A history of the Medico-Chirurgial Society of the District of Columbia, 1884-1939. *J Amer Med Assoc*. 1943;121(2):159-160.

### Legends

- 1 Daniel Hale Williams, MD. Courtesy of the National Library of Medicine.
- 2 Provident Hospital and Training School for Nurses, Chicago, founded by surgeon Daniel Hale Williams, also depicted, in 1891. Schomburg Center for Research in Black Culture, Photographs and Prints Division, the New York Public Library. The New York Public Library Digital Collections.
- 3 Williams' article in the Medical Record, 1897. Article in public domain.