

Discovering the social determinants of health



Booker T. Washington, circa 1895. Library of Congress, Public Domain

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Introduction

Richard L. Byyny, MD, FACP

The Pharos of Alpha Omega Alpha Honor Medical Society (AQA) was first published in 1938 by Walter Biering, MD (AQA, University of Iowa Roy J. and Lucille A. Carver College of Medicine, 1921, Alumni), then-President of AQA. *The Pharos* takes its name from the ancient beacon of the Mediterranean at Alexandria. Like the ancient lighthouse, *The Pharos* of AQA is a beacon of light, truth, knowledge, learning, wisdom, worthiness, duty, hope, strength, scholarship, vigilance, integrity, reason, and clarity of vision. Not just for AQA members, *The Pharos* represents all in the profession of medicine, the care of the suffering, and humanism and the humanities. As it has for more than 80 years, *The Pharos* is committed to guiding the future of medicine and will shine well into the future.

Reading and writing well are incredibly important and versatile skills with countless applications in life, medicine, health care, learning, education, communication, and improving one's mental and physical health.

Whether communicating with patients, colleagues, researchers, family, or friends, effective communication is essential. In addition, as we traverse our unique "inward journey" of life and learning, our experiences are developed through accurate and helpful internal and external communication.

Writing well helps to develop an individual's voice and improves verbal communication skills. By effectively developing writing abilities, one can become a more effective communicator, which in turn benefits career, patients, family and friends.

Writing requires the organization of thoughts and ideas logically, and improves the ability to think critically, and develop a deeper understanding of the material. Good writing requires a critical approach to thinking and learning to organize, analyze, and synthesize information to help make better decisions and contribute effectively at work and home. Writing well is an excellent tool for enhancing critical thinking abilities in medicine, health care, learning, and life. Writing effectively also aids in developing a deeper understanding of oneself and others. It allows for a reflective and introspective mindset and helps to understand how words and language impact others.

When I assumed the leadership role of new Division of General Internal Medicine at the University of Colorado, I quickly became aware that the faculty were not good readers or writers. This was evident in clinical notes, but also in most of their written and spoken conversation. I knew faculty at the University of Colorado Boulder Department of English, and I hired a faculty

member to meet monthly with the General Internal Medicine faculty and Fellows. The English professor carefully reflected on each of the medical faculty's written assignments, and provided assessment, evaluation, and editing. The experience provided valuable insight for the faculty members, helped with their job satisfaction, encouraged better patient care, and improved their communication and interactions with patients.

Because of the critical importance of excellent written communication, *The Pharos* aspires to provide exceptional, well-written articles. The journal emphasizes the arts, literature, and language and culture in medicine. Although themes may shift, humanism is the enduring motif of *The Pharos*.

AQA and *The Pharos* also work to stimulate medical students, physicians, and others to submit articles for publication. One way to accomplish this has been to develop AQA awards for poetry and writing with recognition and publication in *The Pharos*. The Robert H. Moser Essay Award is one of these writing awards.

Robert H. Moser, MD (AQA, Georgetown University School of Medicine, 1969, Alumni) organized and worked in one of the first MASH (Mobile Army Surgical Hospital) units during the Korean War. He was a pioneering flight controller for NASA during the Project Mercury and Project Apollo space Programs, served as Chief of Medicine at Tripler Army Medical Center in Hawaii, and treated patients at the Kalaupapa Leper Colony in Molo-kai, Hawaii. He was Chief of Medicine at Walter Reed National Military Medical Center in Bethesda, Maryland, and editor of JAMA, Executive Vice President of the American College of Physicians, and a member of *The Pharos* Editorial Board.

In 2016, following Dr. Moser's death, AQA established an endowed writing award in his name. The award is presented annually to a physician who writes an essay about another physician, living or dead, and carries with it a \$4,000 award.

The 2024 recipient of the Dr. Robert H. Moser Essay Award is Richard D. deShazo, MD, MACP, for his essay, "Discovering the social determinants of health." Dr. deShazo's essay reviews many of the issues related to diversity, equity, and inclusion through the life and leadership of Booker T. Washington.

Washington identified what is now defined as the "social determinants of health" (SDH), though that term was not widely recognized until in 2005 when Wilkinson and Marmot published the book, *Social Determinants of Health*, which strongly influenced wellness and disease.¹

Prior to then, the determinants of health that were most focused on by physicians and the general public included diseases, genes, biology, and pathogens. The World Health Organization's Commission on the Social Determinants of Health defines SDH as, "the circumstances in which people are born, grow, live, work and age, and the wider set of forces and systems shaping the conditions of daily life."² According to the WHO this includes socioeconomic and political contexts, living and working conditions, and access to resources.²

As dramatic and consequential as medical care is for some patients, it is not the major determinant of overall levels of the population's health. As Booker T. Washington taught us, we should make social interventions and education high priorities to improve health and quality of life for all.

References

1. Wilkinson RG, Marmot M. *Social Determinants of Health*. Oxford: Oxford University Press; 2005.
2. World Health Organization. Social determinants of health. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1.

Discovering the social determinants of health



Richard D. deShazo, MD, MACP

I think Dr. Robert H. Moser (AQA, Georgetown University School of Medicine, 1969, Alumni) would be pleased that this essay is about a doctor who was not a physician, but a person who played an important and unrecognized role in the American quest for

health equity. This essay is a tribute to Col. Bob Moser, MC USA, and to the memories of our years together in the green uniform with the caduceus.

Dr. Booker T. Washington lived in an era when anybody could call themselves a medical doctor, and many did. There was no systematic medical licensure until 1912, the year of his death, nor was there credentialing of medical schools offering the MD degree until 1942.¹ He arrived in the rural Blackbelt town of Tuskegee, Alabama in 1881, at age 25, to start a new school that became a university for African-Americans. He came under the

worst of circumstances, post-civil war southern desolation, poverty, hunger, and disease laced with the hate and violence of the transition from the American Reconstruction to Jim Crow.

He persevered and that school is now a university ranked among the top 10 historically Black colleges and universities (HBCU) in the United States. Like Dr. Benjamin Franklin who received his doctorate (*honoris causa*) from the University of Oxford (England), health was among his major concerns. It led Franklin to offer medical advice in his newspaper and to co-found America's first hospital, the Pennsylvania Hospital, in 1751.

Washington came from a very different background than Franklin, who was also a polymath. He was born enslaved on a plantation in rural Virginia in 1856. He received his doctorate (*honoris causa*) from Harvard College in 1896, the first of his color to do so. He was the first American to identify the social problems related to health that later came to be known as the social determinants of health (SDOH). Monitoring of these problems now provides data about health equity among myriad American sub-populations. If Washington had been a medical man, his specialty would have been Public Health.

A very brief biography

It is a good thing that Washington's life (1856-1915), intellect, and passion for education as a way out of poverty and discrimination is well documented. Otherwise, his life story and accomplishments would seem fabricated. The Booker T. Washington Collection at the Library of Congress consists of 1,075 library boxes of his personal papers, now indexed for search.² They include the many books he wrote, speeches he gave, and correspondence with Presidents T. Roosevelt and Taft whom he advised.

Washington's autobiography, *Up from Slavery*,³ records the love of his enslaved mother and stepfather, and the absence of his father, a white rapist from a nearby farm in rural Virginia. Washington's family eventually escaped to Malden, West Virginia, where he and his stepfather found work in the coal and salt mines owned by the Ruffner Family.

In 1871, at 12-years-old, Washington was promoted to houseboy reporting to Viola Ruffner, a former teacher in Malden, and the wife of Lewis Ruffner, a wealthy West Virginia former slaveholder, Civil War Confederate Major General, industrialist, and legislator. Washington's most important duty was to walk the family's daughter to and from school and carry her books. He was given an hour each day to listen-in at the school, and was also tutored

by Mrs. Ruffner. She fueled his hunger for knowledge. He considered her his mentor.

Washington heard positive things about Hampton Normal and Agricultural Institute, now Hampton University in Hampton, Virginia, from a fellow miner. In 1872, at 16-years-old, he left Malden and made the 400-mile journey on foot and hitch hiking, arriving penniless to beg for entrance to Hampton Institute. He was allowed to work as a janitor to pay his way, and graduated with honors in 1875, at 21-years-old.

During that time, he developed a lifelong relation with former Union General Samuel T. Armstrong, Hampton's president, a White man famous for leading Black troops in the Civil War.

Washington returned to Malden for two years to teach Black children in a grammar school, and developed a night school for adults. He returned to Hampton Institute at Armstrong's request to host a group of 75, mostly male, Native Americans from the western tribes. His charge was to teach them English, reading, writing, and vocational education. He became friends with his students, and they made considerable educational progress. As Washington reported in the chapter of his autobiography titled, "Black Race and Red Race," this friendship was notable, as Native American tribes held enslaved Blacks and considered them to be inferior to themselves.³

In early 1881, General Armstrong received a telegram from Mr. Lewis Davis of Tuskegee, in Macon County, Alabama. Unknown to General Armstrong, Lewis Davis was a highly respected, formerly enslaved, self-taught, successful Black tradesman, and had made a deal with former slaveholder and Confederate Colonel, W.F. Foster, related to the 1880 Alabama elections. The proposed deal was, if Davis delivered the Black vote in his district to successfully elect Foster to the Alabama legislature, Foster would obtain legislative funding for a new school for Black children in Tuskegee. Davis's objective was to build a school in Tuskegee to educate the children of former slaves in Macon County. Davis accepted the deal, Foster delivered, and the Alabama legislature appropriated \$2,000 for a new school. The 1881 telegram from Davis asked Armstrong for a recommendation of a White principal to lead the new school. Armstrong replied that he had only one recommendation, Booker T. Washington, and he was Black and qualified. Davis accepted his recommendation, and Armstrong convinced Washington to move to Tuskegee to make the school happen.

Washington arrived in Tuskegee in June 1881 to discover that there was no land, buildings or equipment for

the school and the startup funds were limited to teachers' salaries. Regardless, on July 4, 1881, he opened the new Tuskegee Normal School for Colored Teachers, using loaned space in a dilapidated Methodist Episcopal Church and a leaky shanty.⁴ Graduates were to receive a diploma documenting that they were literate, had completed a course of studies equivalent to that of other Alabama high schools, and could teach others liberal arts topics including reading, writing, arithmetic, hygiene and social skills.

The Tuskegee curriculum was expanded in 1893 with a requirement for vocational education. Washington changed the name to Tuskegee Institute, and with the introduction of graduate and doctoral programs, Tuskegee Institute became Tuskegee University in 1985.

The school started with Washington teaching an inaugural class of 30 students, ranging in age from teenagers to 40-year-old adults in the shanty he named "Butler Hall." Many of the older students had functioned as local school teachers but had little formal training.

Washington and Davis had multiple vocational skills, including brick making and construction, which Washington had learned at Hampton Institute.

In 1882, local people loaned the school \$500 to purchase a 100-acre, infertile cotton plantation decimated during the Civil War, called, "The Old Burnt Place." The loan was paid off within five months with mostly small donations from local people. The first academic building was built using student work-study and volunteer labor. It included dormitory, classroom, food preparation, and dining spaces with indoor plumbing. The kiln constructed to make brick for the building also produced brick for sale.

By 1888, the school had multiple buildings, 400 students, and space for training in carpentry, cabinetmaking, printing, shoemaking, tin smithing, animal husbandry, farming, domestic skills and liberal arts. By 1906, the school owned 2,300 acres, and had 1,590 students and 156 faculty members. This expansion, and others to come, were made possible by Washington's network of philanthropists, many of whom were connected to him by Armstrong at Hampton Institute.

Washington spent much of his time traveling to meet with donors and give well-attended talks recounting his life story and the spectacular growth occurring at Tuskegee. These activities allowed him to expand his philanthropic network. Those regular donors included John D. Rockefeller, Julius Rosenwald, Anna T. Jeanes, Andrew Carnegie, and Henry Rodgers. The interesting details of his fundraising are detailed in a chapter of his autobiography titled, "Raising Money."³

Today, Tuskegee University has a *U.S. News Best Colleges* ranking of fourth among HBCUs, and eighth among regional universities. There are 2,100 undergraduate students, 43 bachelor's degree programs, 17 master's degree

programs including nursing, and five doctoral programs, including Doctor of Veterinary Medicine.⁶

Washington died in 1915 at 59-years-old from hypertensive cardiomyopathy with heart failure. He was a celebrated pioneer in improving the quality-of-life for African-Americans and other underrepresented minorities. A large part of that improvement can be attributed to his efforts to improve SDOH.



Tuskegee college students assisting in the construction of classrooms, circa 1885. Library of Congress. Public Domain

Social determinants of health

The German physician-pathologist, Rudolph Virchow (1820-1902), among the founders of social medicine, noted that one "must intervene in political and social life" if they are to "accomplish its great task."⁷ This was a wise, philosophic comment following the deadly typhus epidemics in Europe. Virchow recognized that factors like living and working conditions, nutrition, and sanitation, i.e., a person's environment, significantly impact their health. Though he laid the groundwork for social medicine and public health, he was not the first to coin the term social determinants of health.

Following Virchow, the Scottish physician, Thomas McKeon and associates in 1975 noted that mortality rates in England and Wales from the 1850s to the 1960s dropped before the development of modern medicine, and were likely attributable to cleaner water, better food and living conditions. Medical advances alone did not affect mortality, a major finding.⁸

Health Initiatives of Dr. Booker T. Washington (1856-1915)^{10,12}

1881—Washington opens Tuskegee Normal School for Colored Teachers in Alabama. Acquires suboptimal temporary location and opens on July 4. Notes students are malnourished. Rides a mule wagon into rural areas of Macon County from where students come. Finds hunger, a “slave diet,” poverty, illiteracy, and disease. Introduces new mandatory courses on nutrition and personal hygiene into curriculum, and requires daily exercise.

1883—Recruits CN. Dorsett, MD (1852-1897) who assists in founding and opening the Tuskegee Hospital Nurse Training School (THNTS) in 1892. The building contains a large nursing school and a small inpatient unit. Served as a teaching facility for nursing students, and an inpatient unit providing care for staff, faculty, and students. The nursing school is the first accredited nursing school in Alabama and later adds programs in midwifery and other nursing specialties.

1888—Sends a “Tuskegee Vegetable Wagon” to rural communities to initiate discussions on cultivation of healthy food. Later, Dr. George Washington Carver heads the school’s Department of Agriculture in 1897, and builds and deploys a revised wagon called a “Jessup Wagon,” a mobile classroom for talks and exhibits on cultivation and cooking of healthy foods, animal husbandry, and sanitation. Brings new farm equipment for demonstration.

1891—Opens an infirmary to provide urgent care for students and staff on campus.

1892—Recruits Halle T. Dillion (Johnson) MD, (1864-1901), the first licensed female MD in Alabama, to increase the level of care in the expanding THNTS teaching hospital. She lived on campus to assist with teaching during her tenure there (1891-1894).

1902—The nursing school continues to grow as the demand for Black nurses is large, especially because of the considerable experience graduates have in Public Health, and the shortage of physicians in mostly rural Alabama. The number of patients seeking care at Tuskegee explodes.

1913—Opens large, modern John A. Andrew Memorial Hospital with Dr. John A. Kenney, Sr. (1874-1950) as Chief Surgeon and Medical Director from 1913-1922, serves as Editor of the *Journal of the National Medical Association* (NMA), and President of the NMA. Pioneers a regional medical program using trained lay health advocates in rural counties to facilitate appointments and transportation to campus for medical care. In 1924, Dr. Kenney is threatened with death, his home is burned down by the Ku Klux Klan, and he flees Tuskegee. He returns in 1939 to head the hospital between 1939-1944.

1915—Washington dies and Robert R. Mouton becomes President. He continues Washington’s health initiatives. In 1927, he successfully obtains full four-year collegiate status for Tuskegee.

McKeon, like Washington, did not identify these entities using the term SDOH. Marmot and associates first used the term SDOH when they published their book, *Social Determinants of Health*, in 1999, and provided data to show that when people improve their social and cultural environments, their disease risk changes as well.⁹ They found a direct and proportional relationship between socioeconomic position and health status in populations. Marmot has been credited as coining the term, SDOH. He concluded that social factors strongly influence wellness and disease.

Since 1999, work has been done to determine which of these social factors are supported by change using statistical analysis. The Kaiser Family Foundation (KFF) has supported research, analysis and communication of these factors and serves as an authoritative resource on health equity in the U.S.¹⁰

A SDOH expert

As documented in *Up from Slavery*, Washington was acutely aware of the effects of the SDOH since childhood and long before their naming and broader recognition. The SDOH he faced in childhood had the potential to adversely influence his own health, and included the deleterious effects of racism, racial violence, poverty, coal mining, hunger, and illiteracy. The average lifespan of a Black male in the South was short. For instance, U.S. census records show that by 1920, 35 years after Washington’s death, the Black man’s average life expectancy was still only 47 years compared to 60 years for White males.

As an adult, Washington acquired some protection from the adverse SDOH. After he entered Hampton Institute, he acquired and continued to have safe housing, healthy food, regular exercise, excellent access to the best health care of the day, and a comfortable income. Because

of his education and skills, he had sustainable employment, and the ability to accumulate generational wealth. These resources were uncommon to African-Americans and Native Americans of the day, and are still lacking in comparison to White adults of European descent.

African-Americans in the South were experiencing the hopelessness that came with the untimely termination of Reconstruction in 1877, and the Jim Crow period (1896-1954+) that was another form of enslavement. Washington made the unlikely choice to spend his most productive years living in the turmoil and racial violence that was Alabama after the Civil War. Washington expressed the same joy of successfully educating African-Americans under equally adverse circumstances in Malden that was continued in his writings and speeches.

Washington's certainty that education, hard work, and marketable skills would bring African-Americans success came from his experiences at Hampton, and led him to promote a stepwise approach to racial equality, rather than a confrontational one. That approach was interpreted by White northern industrialists and philanthropists to mean, "Learn a trade, work hard, and wait in line for equality,"¹¹ a panacea for the shortage of labor in their rapidly expanding industries. That approach was abominable to more militant African-American peers like W.E.B. Du Bois, a college professor and one of the founding members of the National Association for Colored People (NAACP), who wanted immediate racial equality.

Washington's most painful critiques came from Du Bois who bitterly accused his former friend of "accommodation" with the White supremacy of the Jim Crow Era.¹² It was later discovered that Washington had quietly supported the movement for equality with his donations to supporters of civil rights.

Washington's health initiatives

Although Washington's leadership in education was unparalleled, his initiatives in health and wellness for underserved populations were novel, far ahead of his time, and helpful in attracting the wealthiest of philanthropists. Fortunately, a relatively unrecognized and authoritative source of what happened at Tuskegee in the area of health exists.¹³ Washington's immediate actions were targeted at an African-American population caught in a worst-case scenario of overt racism and associated social factors that seemed impermeable to most.

Rather than trying to address all SDOH underlying the poor health of African-Americans

in Alabama all at once, Washington chose education and time as the best starting place. He assessed the variables that would control his success, and sought the best available model of what might work. The optimal model was his alma mater, Hampton Institute, and a Black leader from the Blackbelt of Alabama. Fortunately, the request for help was for education rather than for more tangible things and the request came from the African-American majority population of the county where he worked. If he was successful, he was sure of ongoing local support and protection.

Washington carefully chose those to help him with his endeavor. Perhaps the most important hire was George Washington Carver, a brilliant chemist and agronomist trained and employed by a top agricultural institution, The University of Iowa.

Carver became Washington's partner, and never aspired to be his competitor. The numerous health professionals he chose were experienced Black nurses and Black physicians from Black medical schools and hospitals with family connections to his own. The construction of a pace-setting nursing school, and a state-of-the-art 180-bed hospital, was a remarkable tribute to donors and Washington. After his death, President Franklin Roosevelt visited the school in recognition of the research and testing on the Salk polio vaccine, and the rehabilitation programs at the Tuskegee Institute Hospital for Children with Polio.

Washington recruited surgeon JA Kenney, Sr., MD (1874-1950), to become the resident physician for the 35-bed Pinecrest nurse teaching hospital which opened in 1902. Wealthy east coast donors continued to support Washington's call for help with the medical needs of many sick-poor Blacks coming to Tuskegee.



John A. Andrew Memorial Hospital, Tuskegee Institute during a visit from President Franklin D. Roosevelt, March 30, 1939. Courtesy, State of Alabama Visual Archives. Public Domain

The wizard of Tuskegee

There are a few who will disagree that the title of “The Wizard of Tuskegee,” given Washington by his contemporaries, is well deserved. Although he did not aggregate the SDOH by personal experience and in his writings, he identified all 11 of them, and began the unfinished work of improving them. In the case of African-Americans, access to education, jobs, and health care are among those SDOH that have improved, but people of color have less opportunity to health education and wealth than do White Americans.¹⁴

Organized medicine has been focused on treatment of disease rather than prevention of it. Washington’s passion to prevent disease and improve the quality of all those we serve is a skill that can be taught, and learned. It is our duty to get on with that.

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References

1. Ludmerer K. Learning to Heal: The Development of American Medical Education. New York: Basic Books; 1985.
2. Library of Congress. Booker T. Washington Papers Collection. <https://www.loc.gov/item/mm78044669/>.
3. Washington BT. Up from Slavery. Oxford (UK): Benediction Classics; 2020.
4. National Park Service. Booker T. Washington: An Appreciation of the Man and His Times. https://www.nps.gov/parkhistory/online_books/bowa/mackintosh/sec2.htm.
5. Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health/>.
6. U.S. News and World Report. U.S. News Best Colleges. Tuskegee University. USNews.com. <https://www.usnews.com/best-colleges/tuskegee-university-1050/academics>.
7. Farmer P. Pathologies of Power: Health, Human Rights, and the New War on the Poor. Berkeley (CA): University of California Press; 2005, 323.
8. McKeown T, Record RG, Turner RD. An interpretation of the decline of mortality in England and Wales during the twentieth century. *Popul Stud (Camb)*. 1975; Nov; 29(3): 391-422.
9. Marmot M, Wilkinson R, editors. Social Determinants of Health (2nd edition). Oxford (UK): Oxford University Press; 1999.
10. Artiga S, Hinton E. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. May 10, 2018. KFF.org. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>.

Eleven General Categories of the Social Determinants of Health (SDOH)⁵

- Income and social status
- Employment and working conditions
- Education and literacy
- Childhood experiences
- Physical environment
- Social supports and coping skills
- Healthy behaviors
- Access to health services
- Racism, discrimination, and violence
- Access to nutritious foods and physical activity
- Polluted air and waste

Adapted from <https://health.gov/healthypeople/priority-areas/social-determinants-health>

11. Norrell RJ. Booker T. Washington: Understanding the Wizard of Tuskegee. *The Journal of Blacks in Higher Education* 2003-2004: 42 (Winter); 96-109.
12. Kilson MK. The Washington and Du Bois Leadership Paradigms Reconsidered. *Ann Am Acad Pol Soc Sci*. 2000; 568: 298-3313.
13. Chandler DR, Powell E. To Raise Up the Man Farthest Down: Tuskegee University’s Advancements in Human Health, 1881–1987. Tuscaloosa (AL): The University of Alabama Press; 2018.
14. Bundy JD, Mills KT, He H, LaVeist TA, et al. Social determinants of health and premature death among adults in the USA from 1999 to 2018: a national cohort study. *The Lancet Public Health*. 2023; 8(6): e422-31.

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