Howard University, one of the nation’s historically black colleges and universities (HBCUs), was founded in the heart of Washington, DC, in 1867. Named after General Oliver Otis Howard, the commissioner of the post–Civil War Freedmen’s Bureau, it has afforded the opportunity for advanced studies in the liberal arts and medicine to a plethora of students. Most of these scholars have been African Americans or of African descent. Howard University Hospital is a level I trauma center affiliated with the university and the college of medicine. It has a rich history of subserving the underserved and training African and African American physicians. Herein we outline the history of its neurosurgical program.

Freedmen’s Hospital to Howard University Hospital

Howard University Hospital was known as Freedmen’s Hospital until 1975 when the current building at 2041 Georgia Avenue was opened (Figs. 1 and 2). This was the culmination of a lengthy process that began when President John F. Kennedy signed a bill on September 15, 1961, authorizing both the transfer of the hospital under the umbrella of Howard University and the building of a new hospital. Freedmen’s Hospital has a storied history as one of the oldest institutions in the world committed to the education, training, and care of African Americans. In fact, during the early part of the 20th century, approximately 50% of African American physicians in the United States were educated at Howard University and Freedmen’s Hospital. The hospital was founded at Camp Barker in 1862, a time of utmost racial tension in the United States with the concomitant zenith of the Civil War, as well as the issuing of the preliminary Emancipation Proclamation earlier in that same year. Freedmen’s Hospital was therefore so named to substantiate its original purpose and the theme that it has stayed true to throughout its time: subserving an underserved population. Despite the closing of the original building and renaming of the institution, the values defined by Freedmen’s Hospital continue to be upheld by Howard University Hospital today.

On November 9, 1868, in a small-frame house near the W Street location of the current medical school building,
the “medical department” of Howard University officially opened its doors for instruction with only five teachers and eight students (Fig. 3). Individuals of all backgrounds regardless of religion, nationality, color, or sex were welcomed. Hence, in 1868, the newly founded Howard University College of Medicine became one of the first institutions in the country to have the foresight and the temerity to affirm diversity, equity, and inclusion. The only true requirements for admission were a possession of strong moral character and the intellectual prowess to keep up with the demands of the field of study. The curriculum was originally 15 weeks in duration but was progressively lengthened until a 4-year curriculum was implemented in 1893, and this still holds true today. The educational advantage afforded to medical students at Howard University was demonstrated by the integration of clinical opportunities at Freedmen’s Hospital into the curriculum. With appropriate guidance, these medical students were taught to study diseases and operative procedures at the bedside and in the surgical amphitheater. 3

Since its inception in 1867, Howard University College of Medicine has been inseparably linked to Freedmen’s Hospital—the hospital that has always been the primary teaching site for Howard’s students. In fact, for many years these students were the primary pupils of medicine at Freedmen’s Hospital because the hospital had few residents and there was insufficient clinical research being performed. However, with the installation of Dr. Numa P. G. Adams as dean of Howard University College of Medicine in 1929, establishing residency training programs and expanding research efforts became top priorities. The first residency program was established in 1936 and many more followed in the subsequent years. The advent of a comprehensive group of residency programs increased research productivity such that by 1958, available research grant funding for the medical school grew to nearly $400,000 (equivalent to more than $4 million in today’s market). Most of this sum was allocated to research activity being conducted at Freedmen’s Hospital, and subsequently publications from the various departments grew from zero to several hundred. Therefore, the legislation that later came to support the role of Freedmen’s Hospital as a center for research, education, and teaching for the students at Howard University College of Medicine simply solidified a symbiotic relationship that had already been thriving for many years. The protection afforded by that legislation ensured that the two entities would forever remain intertwined with the common goal of training African American providers and servicing the local Washington community. 2,3

Dr. Clarence Greene Sr. (1949–1958)

At the behest of Dr. William Halstead, the chair of the Department of Surgery at Johns Hopkins Hospital, Dr. Harvey Cushing, a general surgeon, went to Europe to study the new subspecialty of neurosurgery under noted...
pioneers such as Victor Horsley, Theodor Kocher, and Charles Scott Sherrington. In 1902, Cushing returned to the United States and established the discipline of neurosurgery, thus becoming the father of American neurosurgery. Yet it was not until 1953 that the first African American, Dr. Clarence Sumner Greene Sr., became board certified in neurosurgery (Fig. 4). Because of the color of his skin, Dr. Greene had to complete his neurological training in Canada at the Montreal Neurological Institute (MNI) as he was refused the opportunity to train in the United States.4

Interestingly, after high school, Dr. Greene originally pursued a career in dentistry, graduating with his DDS degree from the University of Pennsylvania in 1926. He was one of the first African Americans to train and receive a degree in dentistry in the United States. Finding that a career in dentistry was not as fulfilling as he had hoped, he decided to pursue a career in medicine. Dr. Greene completed his premedical education at Harvard College and the University of Pennsylvania between the years of 1927 and 1932. He then went on to Howard University College of Medicine where he achieved high academic success, finishing in the top 10% of his medical school class. After receiving his medical degree from Howard University College of Medicine in 1936, Dr. Greene completed a surgical internship at Cleveland City Hospital. He subsequently completed his surgical residency at Freedmen's Hospital.

Dr. Jesse Barber Jr. (1961–1984)

Like Dr. Greene, Dr. Jesse Barber earned his medical degree from Howard University College of Medicine and completed his surgical residency at Freedmen's Hospital (Fig. 5). Because of Dr. Greene's guidance, Dr. Barber was able to receive exposure and training in the field of neurological surgery during his general surgical residency. After Dr. Greene's untimely death in 1958, Dr. Barber followed in his mentor's footsteps by continuing his training in neurological surgery at the MNI between 1958 and 1961. He also had the opportunity to work under Dr. Penfield. Barber became board certified in neurological surgery in 1963, making him the third African American to accomplish this feat. Following his time at the MNI, he returned to Freedmen's Hospital to become the new chief of Neurosurgery at Freedmen's Hospital and eventually Howard University Hospital. For a brief period following Dr. Greene's sudden death of a heart attack, Dr. Harvey Ammerman served as the interim chief of the Division of Neurosurgery. Through his beneficence, the practice of neurosurgery at Freedmen's Hospital was able to be maintained.
of the Division of Neurosurgery, a role he served in for 23 years. Dr. Barber’s experience at the MNI enabled him to establish a stroke model at Freedmen’s Hospital. He was motivated by the high mortality rate in the predominantly African American community that he served and was able to reduce the stroke mortality rate by 50% (from 65% to 15%) within a 3-year span. Dr. Barber also maintained a strong relationship with the National Medical Association. He served as the 77th president of the organization and published countless works on cerebrovascular disease, traumatic brain injury, and inequities in neurosurgical outcomes in African American patients in the *Journal of the National Medical Association*. Beyond making personal accomplishments during his career, Dr. Barber valued training the next generation of neurosurgeons. During his time, he mentored a number of students, including Marx Bowens, Roger Countee, Joseph Epps, Bernard Robinson, Clarence Greene Jr., Alton Roberson, Charles Mosee, Wilbur Sanford, Yonas Zegeye, Gary Dennis, Tyrone Hardy, Isaac Thapedi, Charles West, and Earl Mills, each of whom became successful neurosurgeons. In 1985, Dr. Barber helped co-found the Health Care for the Homeless Project with his colleague and friend, Dr. A. Janelle Goetcheus. As established humanitarians, Drs. Barber and Goetcheus aimed to provide primary care to all residents of Washington, DC, regardless of their ability to pay. In 2013, Unity Health Care began offering residency training program opportunities in multiple sectors of primary care with mandatory rotations at Howard University Hospital. What started as a homeless care clinic in the small room of a local shelter became everything that Dr. Barber stood for: giving back to the less fortunate and educating the next generation of clinicians.


**Dr. Gary Dennis (1984–2007)**

Following Dr. Barber’s retirement, Dr. Gary Dennis served as the division’s chief for 23 years, continuing the legacy of subserving a disenfranchised population (Fig. 6). In 1998, he was appointed as the 97th president of the National Medical Association. His presidency focused on cultivating the next generation of healthcare leaders. Through initiatives such as a National African-American Leadership Colloquium and expanding cooperative agree-
ments with the US Department of Health and Human Services; National Institutes of Health; and Departments of Defense, Commerce, Labor, Transportation, and Veterans Affairs. Dr. Dennis aspired to eliminate healthcare disparities. In this way, he strived to keep the health of African Americans at the forefront of conversations. This passion was also demonstrated in his peer-reviewed research publications. Despite the plethora of options in a post–civil rights era, Dr. Dennis chose to submit the majority of his works for publication to the Journal of the National Medical Association. He underscored topics such as racism in medicine and management and outcomes for African American patients with subarachnoid hemorrhage. He collaborated on multiple projects with the Department of Physiology and Biophysics at Howard University College of Medicine to study the expression of nicotinic acetylcholine receptors. His primary research area of interest was in pain management, particularly in minority populations and in those with intractable pain related to cancer.

During his tenure, Dr. Dennis also mentored another medical student, Babu Welch, who has gone on to become a successful cerebrovascular neurosurgeon. Following Dr. Dennis’s departure, Dr. Charles Mosee served as the hospital’s sole neurosurgeon.

**Dr. Damirez Fossett (2010–Present)**

The current chief, Dr. Damirez Fossett, has served in this role since 2010. Unlike his predecessors, he did not get his start at Howard University (Fig. 7). He earned his undergraduate degree from Yale University in 1985 and went on to receive his medical degree from Johns Hopkins University in 1989. He completed his residency in 1996 at George Washington University under the tutelage of Dr. Edward Laws and subsequently Dr. Laligam Sekhar. He authored his first text while early in residency addressing treatment paradigms for the management of subarachnoid hemorrhage.

After graduating from residency, Dr. Fossett joined the faculty at George Washington University where his early career centered on the treatment of skull base and vascular pathology. While there, he wrote several peer-reviewed articles on intracranial neurovascular anatomy and authored a second textbook on operative neurosurgical anatomy. This was based on a course he taught to neurosurgical residents from a myriad of programs in and around the Washington, DC, metropolitan area while serving as the director of the Harvey Ammerman Microneurosurgical Laboratory. Dr. Fossett transitioned into private practice after leaving George Washington University; however, he found private practice to be uniquely unfulfilling because of his lack of engagement in academic medicine. Thus, when the opportunity arose to return to a university setting as chief of the Division of Neurosurgery at Howard University Hospital, he embraced it openly.

Since Dr. Fossett’s arrival, the division has experienced significant clinical expansion while simultaneously increasing research productivity and championing academic growth and development. His current practice encompasses craniotomies for brain tumors, stroke, and traumatic brain injury. He also has a robust spine service that manages degenerative spondylotic arthropathies, spinal oncological pathologies, and spine trauma. He participates in the training of orthopedic surgery residents at Howard University Hospital by offering them a dedicated spine rotation, a requirement for graduation from their program. Dr. Fossett’s current research activities are focused on delineating outcome disparities, elucidating how socioeconomic factors impact decision-making in patient care, and underscoring how postoperative disposition can affect overall outcomes despite standard of care surgical management of disease.

Under Dr. Fossett’s guidance, a medical student chapter of the American Association of Neurological Surgeons (AANS) has been established at Howard University College of Medicine. As the chapter’s sponsor, Dr. Fossett helped build a relationship with the Mayo Clinic, which has culminated in a combined neurosurgery lecture series and journal club. The main goal of this initiative has been to expose students from HBCUs to the discipline of academic neurosurgery. Along with establishing the AANS student chapter, Dr. Fossett has made connections with organizations such as the Epilepsy Foundation and ThinkFirst. Collaboration with the former has led to the launching of an annual Seizure First Aid course open to all students in the college of medicine; partnering with the latter has enabled Howard University Hospital
to be established as the Washington, DC, area chapter of ThinkFirst, the renowned injury prevention organization. Dr. Fossett’s most recent endeavor with the AANS student chapter involved formulating an Annual Neuroscience Research Symposium, an event with the primary goal of giving medical students interested in the neurosciences an opportunity to present their research to an audience of their peers. Finally, during his brief tenure as chief of the division, five students have matched into neurosurgery residency programs across the country. Following the Howard tradition of upholding the ideals of diversity, equity, and inclusion, all of these students are minorities; one is a Black man and 4 are women, 3 of whom are Black (Table 1).

### The Future

There are many visions for the future of neurosurgery at Howard University Hospital; first and foremost is the creation of a Neuroscience Center of Excellence. The center will be a department that combines neurosurgery, neurology, and neurocritical care. Primary goals in the development of this center will be offering superlative clinical care, promoting innovation in neuroscience research, and continuing the academic enrichment of our students and faculty through didactic conferences, multidisciplinary rounds, and quality improvement discussions among other initiatives.

Howard University has always been recognized in Africa and the Caribbean as a mecca of educational enrichment for the diaspora. To that end, establishing an international presence in neurosurgery is of utmost importance. Scholarly enrichment will be accomplished through a physical presence as well as the use of various virtual platforms for communication. Intentions include creating an international fellowship or observership for surgical trainees and the establishment of a telemedical consultative service. Combined educational experiences such as case presentation sessions, joint grand rounds, and mortality/morbidity conferences will serve as cornerstones of the didactic curriculum. Finally, from a purely clinical perspective, overseas surgical missions to both perform surgery and see patients in the clinic setting will be conducted. The international effort will conclude with an ability for complex cases to be brought to Howard University Hospital for treatment.

The ultimate objective of the Division of Neurosurgery is the establishment of a neurosurgical residency program based at Howard University. This would be the first and only neurosurgical residency program based at an HBCU, a monumental occurrence in organized neurosurgery. Achieving this goal is attainable, but much work needs to be accomplished. Partnering with surrounding community hospitals and hospital systems will afford us enhanced clinical volume, additional adjunct faculty, and diversity in hospital settings and populations. Combining this community care-based experience with that of our urban-centered population in a level I tertiary care hospital should provide a collection of phenomenal instructional opportunities. This will not only make a Howard University neurosurgery residency program competitive but also provide a brilliant and sound educational experience for graduates from the program.

#### TABLE 1. Graduates of Howard University College of Medicine who trained in neurosurgery

<table>
<thead>
<tr>
<th>Name</th>
<th>Year of Howard University College of Medicine Graduation</th>
<th>Neurosurgical Residency &amp; Year of Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarence S. Greene Sr.</td>
<td>1936</td>
<td>MNI, 1949</td>
</tr>
<tr>
<td>Jesse B. Barber Jr.</td>
<td>1948</td>
<td>MNI, 1961</td>
</tr>
<tr>
<td>E. Latunde Odeku</td>
<td>1954</td>
<td>University of Michigan, 1960</td>
</tr>
<tr>
<td>Marx G. Bowens Jr.</td>
<td>1963</td>
<td>Neurological Institute of New York, 1972</td>
</tr>
<tr>
<td>Joseph M. Epps Jr.</td>
<td>1965</td>
<td>MNI, 1975</td>
</tr>
<tr>
<td>Isaac M. Thapedi</td>
<td>1966</td>
<td>Royal University Hospital, 1971</td>
</tr>
<tr>
<td>Roger W. Countee</td>
<td>1968</td>
<td>Columbia University, 1975</td>
</tr>
<tr>
<td>Earl Mills</td>
<td>1969</td>
<td>Henry Ford Hospital, 1974</td>
</tr>
<tr>
<td>Tyrone L. Hardy</td>
<td>1971</td>
<td>MNI, 1975</td>
</tr>
<tr>
<td>Bernard J. Robinson</td>
<td>1973</td>
<td>Walter Reed Army Medical Center, 1980</td>
</tr>
<tr>
<td>Clarence S. Greene Jr.</td>
<td>1974</td>
<td>Brigham and Women’s Hospital, 1980</td>
</tr>
<tr>
<td>Wilbur S. Sanford</td>
<td>1975</td>
<td>University of Southern California, 1981</td>
</tr>
<tr>
<td>Gary C. Dennis</td>
<td>1976</td>
<td>Baylor University, 1981</td>
</tr>
<tr>
<td>Arthur Neil Cole</td>
<td>1981</td>
<td>The Ohio State University, 1987</td>
</tr>
<tr>
<td>Babu Welch</td>
<td>1997</td>
<td>George Washington University, 2004</td>
</tr>
<tr>
<td>Menarvia Nixon-Gaddis</td>
<td>2010</td>
<td>Louisiana State University, Shreveport, 2017</td>
</tr>
<tr>
<td>Silvia Gesheva</td>
<td>2011</td>
<td>Louisiana State University, New Orleans, 2018</td>
</tr>
<tr>
<td>Brian Oliver</td>
<td>2017</td>
<td>University of Texas, Galveston, 2025</td>
</tr>
<tr>
<td>Remi Wilson</td>
<td>2020</td>
<td>University of Texas, Southwestern, 2027</td>
</tr>
<tr>
<td>Diana Nwokoye</td>
<td>2022</td>
<td>University of Texas, Southwestern, 2029</td>
</tr>
</tbody>
</table>
Conclusions
The history of neurosurgery at Howard University is the history of African Americans in neurosurgery. The goals of the future are reflective of the original goals of Freedmen's Hospital: excellence in clinical care for a disparate population and unparalleled educational enrichment for students of diverse backgrounds.

Acknowledgments
Thank you to all of the African American neurosurgeons who have paved the way for our future.

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Disclosures
Dr. Fossett reported that he is a full-time faculty member at the Howard University College of Medicine and is currently Chief of the Division of Neurosurgery and an Assistant Professor in the Department of Surgery.

Author Contributions
Conception and design: both authors. Acquisition of data: both authors. Analysis and interpretation of data: both authors. Drafting the article: both authors. Critically revising the article: both authors. Reviewed submitted version of manuscript: both authors. Approved the final version of the manuscript on behalf of both authors: Fossett. Administrative/technical/material support: both authors. Study supervision: both authors.

Supplemental Information
Previous Presentations
Portions of this paper were presented as a poster at the Howard University Research Month, Washington, DC, April 27, 2022.

Correspondence
Damirez T. Fossett: Howard University Hospital, Washington, DC. damirez.fossett@howard.edu.