Decolonizing Neurosurgery in Black Communities: A Brooklyn Haitian-American Perspective

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Ernest J. Barthélemy, MD, MPH, MA

Chief, Division of Neurosurgery
Assistant Professor of Surgery, Neurology, Orthopedic Surgery and Public Health
SUNY Downstate Health Sciences University
No Disclosures
Son of Haitian Immigrants
~2005-2007

Medicine? Biomedical Research?

Neurosurgery???
Global Health...
January 12, 2010
Global Health... and Neurosurgery

Service in Haiti: 2010

Research in Haiti: 2012-2013

Medical School: 2008-2014
Neurosurgery Residency...  
2014-2021

Global Surgery Fellowships...  
2017-2019; 2021-2022

Neurotrauma Fellowship  
2021-2022
The Flexner Report

• 1910 Report – Addressed to public
  • Changed face of Medicine
  • Scientific Focus
  • Comprehensive Nature
  • Criticized Mediocrity; Profit Motive
  • Praise for University-based medical education of Germany
  • Fueled a popular and political movement that convinced state legislatures across the country to undertake thorough reforms of medical education and licensure along the lines of Flexner’s model.
“The negro must be educated not only for his sake, but for ours. He is, as far as human eye can see, a permanent factor in the nation. He has his rights and due and value as an individual; but he has, besides, the tremendous importance that belongs to a potential source of infection and contagion.”

“The negro needs Good schools rather than many schools, -- schools to which the more promising of the race can be sent to receive a substantial education in which hygiene rather than surgery, for example, is strongly accentuated.”
The Flexner Report: Structural Power

- Commissioned (Financed) by the Carnegie Foundation
  - Published in “Bulletin Number Four” of the Carnegie Foundation for the Advancement of Teaching
- Reinforced by Rockefeller
  - General Education Board – $180M
- Supported and Advanced by the AMA
  - Embraced Recommendations
  - Annual evaluations of medical education reform (JAMA)
  - 40% of US medical schools closed (including 5/7 African American Medical Colleges)
Opposition to hiring black nurses in municipal hospitals:
• “I am sure that colored women would often make excellent trained nurses... But this will mean that colored men who are their friends... will have to appear at the nurses’ parties and receptions and this would be absolutely disastrous to the whole social status of your training school.”
  • Message to Cleveland’s Director of Public Health

Message to his father about a gorilla in the laboratory of Charles Sherrington:
• “…Coal-black — I don’t believe you could have distinguished his ear from a darkies [sic]. He smelled just like a dirty Negro — behaved like one.”

African American Historical Context

• 1896: Separate but Equal (Plessy v. Ferguson) is constitutional (segregation is legalized).

  • Collection of essays
  • Explores, racial equality
  • Seminal work in the history of sociology; cornerstone of Black literature
  • One of the greatest works of nonfiction, of any type, in the English language

"Herein lie buried many things which if read with patience may show the strange meaning of being Black here at the dawn of the Twentieth Century. This meaning is not without interest to you, Gentle Reader; for the problem of the Twentieth Century is the problem of the color line. I pray you, then, receive my little book in all charity, studying my words with me, forgiving mistake and foible for sake of the faith and passion that is in me, and seeking the grain of truth hidden there."

• 1908 (August 14): The Springfield Race Riot begins in Springfield, Illinois. It is considered the first of its kind in a Northern city in more than 50 years.

• 1909 (February 12): In response to the Springfield Riot and a number of other incidents, the NAACP is founded to end inequality.

• 1912: More than 60 Black Americans are lynched this year, part of a larger violent trend in the U.S., as there are nearly 5,000 lynchings throughout the country between 1882 and 1968, mainly of Black men.
Plessy vs. Ferguson Reversed: 
*Brown vs. Board of Education of Topeka* 
1954

Landmark decision of US Supreme Court

Ruled that **US state laws establishing racial segregation in public schools are unconstitutional, even if the segregated schools are otherwise equal in quality.**

Partially overruled Plessy vs. Ferguson, declaring that the "separate but equal" notion was unconstitutional for American public schools and educational facilities.

Paved the way for integration.

Major Civil rights movement victory.

Rev. Oliver Brown
African American Representation in Neurosurgery
Clarence S. Greene Sr., MD, FACS
1901-1957

E. Latunde Odeku, MD, FACS
1927-1974

Alexa Irene Canady., MD
b. 1950

Jesse B. Barber Jr., MD, FACS
1924-2002

M. Deborah Hyde., MD, MS, FACS
b. 1949

Lloyd Dayes., MD, PhD, FICS, FACS
(Dmin, DNB, LMCC, FICA, FRSM, FOANS, DTh,
DRE, DrST, DD, CMI FACFE, DABFM, MBA
DABFE, DRS, FRCS, FRCP)
1929-2022
Global Neurosurgery in Brooklyn: Demographics

- Population: 2.74 million people in 70 neighborhoods – most populous and fastest growing borough
- 2nd largest Black Population of any North American City (730K; larger than Atlanta and Detroit Combined)
- Over 1/3 of Residents born in Another Country
- Speakers of >200 Languages (~50% Households Speak a Language other than English)
- 1/5 Residents living in Poverty
- Most Children in NYC living in Poverty
- Most Public Housing Units in New York City (Brownsville: Highest Concentration in the Nation)

Source: Brooklyn Community Foundation: https://www.brooklyncommunityfoundation.org/brooklyn-facts
# Global Neurosurgery in Brooklyn: Epidemiology

## Leading Causes of All Deaths for Total Population

### Selected Counties: Kings

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Deaths</th>
<th>Heart Disease</th>
<th>Cancer</th>
<th>Unintentional Injury</th>
<th>Diabetes</th>
<th>Pneumonia and Influenza</th>
<th>Cerebrovascular Disease</th>
<th>Unintentional Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>15,990</td>
<td>5,717</td>
<td>3,359</td>
<td>640</td>
<td>628</td>
<td>657</td>
<td>544</td>
<td>19.0 per 100,000</td>
</tr>
<tr>
<td>2018</td>
<td>16,139</td>
<td>5,688</td>
<td>3,569</td>
<td>682</td>
<td>657</td>
<td>657</td>
<td>587</td>
<td>21.7 per 100,000</td>
</tr>
<tr>
<td>2017</td>
<td>16,296</td>
<td>5,437</td>
<td>3,848</td>
<td>673</td>
<td>657</td>
<td>662</td>
<td>587</td>
<td>23.2 per 100,000</td>
</tr>
<tr>
<td>2016</td>
<td>15,978</td>
<td>5,340</td>
<td>3,677</td>
<td>649</td>
<td>657</td>
<td>657</td>
<td>607</td>
<td>22.5 per 100,000</td>
</tr>
<tr>
<td>2015</td>
<td>15,903</td>
<td>5,349</td>
<td>3,699</td>
<td>697</td>
<td>615</td>
<td>615</td>
<td>579</td>
<td>21.6 per 100,000</td>
</tr>
</tbody>
</table>

Source: NYSDOH
Global Neurosurgery in Brooklyn:

Burden of Disease
- Stroke
- Brain Trauma
- Spine Trauma
- Brain Tumors
- Spine Tumors
- Neurodegenerative Diseases
- Spinal Disorders

Care Capacity
- Neuroendovascular/Thrombectomy
- Neurocritical Care
- Trauma Center Diagnostics
- Precision Care/Centers of Excellence
- Radiation/Adjuvant Therapies
- Functional Neurosurgery Access
- Comprehensive Spine Care

Determinants
- Race – History
- Policy – Structure
- SES – Insurance Status
- Immigration Status
- Language
- Education – Health Literacy
- Zip Code
- Diet
- Primary Care
## Challenges of Caring for the Underserved

<table>
<thead>
<tr>
<th>Subspecialty</th>
<th>Lead author(s)</th>
<th>Summary of findings (compared with White patients, Black patients have...)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>Otite⁹¹</td>
<td>Less access to acute treatments such as thrombolysis and thrombectomy</td>
</tr>
<tr>
<td></td>
<td>Levine⁹²</td>
<td>Poorer poststroke access to medications and physician care</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Esenwa⁹³</td>
<td>Higher rates of stroke</td>
</tr>
<tr>
<td></td>
<td>Elkind⁹⁴</td>
<td>Higher stroke mortality</td>
</tr>
<tr>
<td>Parkinson disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>Chan⁹⁹</td>
<td>Less access to deep brain stimulation</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Xiee¹⁰⁰</td>
<td>Increased mortality and less likely to receive treatment</td>
</tr>
<tr>
<td></td>
<td>Hemming¹¹¹</td>
<td>Delays in diagnosis and greater disease severity</td>
</tr>
<tr>
<td>Epilepsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>Begley⁹⁵</td>
<td>Poorer access to epileptologists</td>
</tr>
<tr>
<td></td>
<td>Thompson⁹⁶</td>
<td>Poorer access to surgical treatment</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Bautista⁹⁷</td>
<td>Lower rates of antiseizure medication adherence</td>
</tr>
<tr>
<td></td>
<td>Wilson⁹⁸</td>
<td>Increased mortality from epilepsy</td>
</tr>
</tbody>
</table>

*Robbins et al, 2022*
Challenges and Opportunities for Diversity in Neurosurgery
Diversity in Neurosurgery - Trends in Gender and Racial/Ethnic Representation Among Applicants and Residents from U.S. Neurological Surgery Residency Programs

Figure 2. Racial/ethnic distribution and composition of neurosurgery applicant cohorts from 2009 to 2018.

Gabriel et al. 2021
OPPORTUNITIES

• Pathway/Pipeline Programs
  • E.g. DR MMEN (McNeill et al., 2022)
• Diversity Initiatives (AANS, CNS)
The Death of Daniel Prude —
Reflections of a Black Neurosurgeon

The email message's first words — “Daniel Prude. Say his Name.” — seemed to tell me all I needed to know. Then, my heart racing, I learned that Prude was murdered in my city, where he'd been admitted to my hospital and seen by my colleagues the day before he died.

His death hit me hard: another Black victim of police brutality, he was also a patient harmed address both disparities in mental health care and police brutality, we are all responsible for my cousin's death. These incidents are not caused by a “few bad apples”: the problem is baked into every facet of our society. When 13% of our population but only 2% of psychiatrists and 3% of health service psychologists identify as Black or African American, there is a bigger problem.¹

“As a society, we can elect leaders committed to dismantling systemic factors that…”
 Normalize the abnormal… justify the unjust

“We can advocate for more resources…”

“We can hold health care systems… accountable…”

“As a Black community, we can encourage our children to pursue careers in…”
  (medicine… surgery… neurosurgery…)

“Medical and graduate schools can promote a more diverse workforce and build bridges with the community.”

“When we march in the streets, we should also march in the halls of the academy…”

Historical determinants of neurosurgical inequities in Africa and the African diaspora: A review and analysis of coloniality


Published: February 6, 2023  •  https://doi.org/10.1371/journal.pghp.0001550

https://www.sylvianediouf.com
Table 1. Comparison of current neurosurgical workforce.

<table>
<thead>
<tr>
<th>Former Colonial Power/Current HIC</th>
<th>Former Colony/Current LMIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nation</strong></td>
<td><strong>Pop (x1M)</strong></td>
</tr>
<tr>
<td>Portugal</td>
<td>10-401</td>
</tr>
<tr>
<td>Brazil</td>
<td>212-559 [27]</td>
</tr>
</tbody>
</table>

Comparison of current neurosurgical workforce: Former colonial power vs. former colony. Former colonial metropolises which are currently High-Income Countries (HIC) are matched to their former colonies which are currently low- and middle-income countries (LMIC). Where an HIC historically colonized more than one nation, its row intersects with both former colonies, e.g., France and Portugal. Where LMIC has been colonized by more than one HIC, it has been positioned so that its row appears at the intersection of its corresponding former metropolises, e.g., Cameroon and Rwanda. Legend: Pop (x1M) = Population in millions. #NS = quantity of neurosurgeons. NWD = Neurosurgeon Workforce Density per 100,000-population. YTS = Year neurosurgery training began. Data is from the 2016 WFNS Neurosurgery Workforce map except where indicated.

https://doi.org/10.1371/journal.pgph.0001550.t001
Table 3. A decolonial lexicon for global neurosurgery.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Violence</td>
<td>Structural violence refers to harm that comes to people who, by virtue of social structures, governments, economies, religions, laws or policies, face significant barriers to having their basic needs met. Examples of these barriers include institutional or structural racism, elitism, ethnocentrism or nationalism [93]. It is therefore distinguished from other forms of violence by (1) the relative invisibility of its source and (2) the absence of one or more identifiable aggressor(s).</td>
</tr>
<tr>
<td>Structural Racism</td>
<td>Structural racism refers to legislation, policies and societal norms that are based on facilitating economic advantage and prosperity for members of a favoured race, such as people of “fair” or “lighter” skin colour who appear to descend from Western Europe, while codifying barriers to prosperity and access for people of darker skin colour who appear to descend from Sub-Saharan Africa [11, 94].</td>
</tr>
<tr>
<td>Anti-Racism</td>
<td>As the term implies, anti-racism refers to approaches that expose discriminatory perspectives, policies, practices and behaviours that are based on racial differences. Anti-racist approaches advance health equity by prioritizing solutions that favour groups of people who suffer most because of their racial background or identity [94].</td>
</tr>
<tr>
<td>Conscientization and Critical Consciousness</td>
<td>The related terms “conscientization” and “critical consciousness” are concepts from the field of adult education advanced by the late Brazilian philosopher and educator, Paulo Freire, in Pedagogy of the Oppressed, and related work on transformative education. Critical consciousness refers to a reflective awareness of the differential power dynamics and privileges that underlie societal inequities [95] The development of this form of awareness is a process that Freire calls, “conscientization,” and is distinguished as an approach to education that liberates participants in the educational process rather than perpetuating the “oppressor/oppressed” dichotomy in traditional forms of education [30].</td>
</tr>
</tbody>
</table>

A Decolonial Lexicon for Global Neurosurgery. Terms were selected by the authors based on their recurrence in relevant literature as emerging themes in the decolonization movement [9, 11, 30–38].

https://doi.org/10.1371/journal.pgh.0001550.1003
Table 4. A guide for reflection, dialogue and project analysis to decolonize global neurosurgery.

In scientific endeavours:
- Will authorship order and work distribution empower the team members who represent the marginalized population?
- Is the research question primarily shaped by local priorities?
- What impact will publications have on the local culture and society versus the careers and home institutions of HIC stakeholders?
- Does the publication plan accommodate the local language and accessibility requirements that maximize the usefulness of the publication to LMIC partners and stakeholders?
- Are there disparities in research capacity that would be addressed with initiatives that prioritize the advancement of scientific equity?
- Do local IRBs exist? Have local IRBs reviewed the ethical soundness of the research plan?

In clinical educational initiatives:
- What neo-colonial dynamics are introduced into new international educational relationships and partnerships?
- Have local leaders in existing clinical education initiatives been identified and engaged in educational processes?
- Have local needs and preferences been comprehensively solicited, fully understood, and authentically prioritized in the development of educational programs?
- What is/are the language(s) of instruction and how are they being used?
- How are institutional partnerships being generated, and what pathways for bidirectional education have been explored?
- Examine underlying assumptions of the power dynamics in international education partnerships (teacher/student, attending/resident, mentor/mentee): Are HIC practitioners or experts explicitly, or implicitly assumed to be “superior” to LMIC practitioners or experts?
- What steps can be taken to dismantle neo-colonial power structures of the project or initiative?

A practical guide for GN partnerships to support reflection, dialogue and project analysis that prioritizes decolonial humanism in GN and GH.

https://doi.org/10.1371/journal.pgph.0001550.1004

https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0001550


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• http://t3.gstatic.com/licensed-image?q=tbn:ANd9GcSrsrD341M945unSXp26gUDn9YliFUCjZyjOcCPywP_PTZa_fZn00GITSt8JOF0GXVocceo4JwFJ3dMk

• https://en.wikipedia.org/wiki/General_Education_Board
Thank You!

ernest.barthelemy@downstate.edu