

INVITED REVIEW

## Workforce diversity in dentistry – current status and future challenges

Raul I. Garcia, DMD<sup>1</sup>; George Blue Spruce, DDS, MPH<sup>2</sup>; Jeanne C. Sinkford, DDS, PhD<sup>3</sup>; Michael J. Lopez, DDS<sup>4</sup>; Louis W. Sullivan, MD<sup>5</sup>

1 Department of Health Policy and Health Services Research, Boston University Henry M. Goldman School of Dental Medicine, Boston, MA, USA

2 Arizona School of Dentistry and Oral Health, Mesa, AZ, USA

3 American Dental Education Association, Washington, DC, USA

4 University of California San Francisco, School of Dentistry, San Francisco, CA, USA

5 The Sullivan Alliance to Transform the Health Professions, Alexandria, VA, USA

### Keywords

workforce; dentistry; diversity; health disparities.

### Correspondence

Dr. Raul I. Garcia, Department of Health Policy and Health Services Research, Boston University School of Dental Medicine, 560 Harrison Avenue, Boston, MA 02118-2436. Tel.: 617-638-6385; Fax: 617-638-6381; e-mail: rig@bu.edu.

George Blue Spruce is with Arizona School of Dentistry and Oral Health, Mesa, AZ. Jeanne C. Sinkford is with the American Dental Education Association, Washington, DC. Michael J. Lopez is with University of California San Francisco, School of Dentistry, San Francisco, CA. Louis W. Sullivan is with The Sullivan Alliance to Transform the Health Professions, Alexandria, VA.

Received: 1/28/2017; accepted: 3/29/2017.

doi: 10.1111/jphd.12219

Journal of Public Health Dentistry **77** (2017) 99–104

### Abstract

The racial and ethnic diversity of the US oral health care workforce remains insufficient to meet the needs of an increasingly diverse population and to address persistent health disparities. The findings from a recent national survey of underrepresented minority dentists are reviewed and recommendations are made for enhancing diversity in the dental profession.

### Introduction

The need for a diverse US health care workforce, including in dentistry, has been repeatedly noted and the absence of such diversity and its relationship to health disparities have been long recognized to be significant national problems (1-3). It has become increasingly clear that a systematic national assessment of “the diversity of the dental workforce and the relationships between provider diversity, practice patterns, and access to care for underserved populations is critical to inform policymakers, educators, and professional associations about this vital component of the dental workforce” (4). The findings reported in this issue of the Journal of

Public Health Dentistry (5-7), an outcome of a project led by Drs. Elizabeth Mertz and Paul Gates, address this critical need and are based on a national survey of underrepresented minority (URM) dentists in the United States, conducted between October 2012 and March 2013. Dentists responded to questions regarding their demographic characteristics, education, practice history, patient population, volunteerism, experiences with discrimination, and opinions on issues in dentistry. Collectively, these papers provide a comprehensive look at URM dentists in the US workforce and thus represent a major contribution to the field. In our commentary, we briefly describe the sample of dentists surveyed, identify what

we believe to be some of the key findings of these analyses, and recommend ways to address the challenges to enhancing workforce diversity in dentistry.

## Demographic disparities in the dental workforce

A total of 11,382 URM dentists were identified, including 376 American Indian or Alaska Native (AI/AN); 5,784 Hispanic or Latino (H/L); and 6,254 African American (i.e. self-identifying on surveys as “Black/African American”, “Black/African”, or “Black/Afro-Caribbean”; hereinafter abbreviated as AA in this commentary). It is important to note that these URM dentists comprised only 9 percent of the total number of US dentists (8) at the time the survey was administered. In contrast, those URM groups comprised 30 percent of the US population, highlighting the salience of the term “underrepresented.” Also notable is that despite great efforts, the magnitude of this disparity has remained disturbingly high for decades. In 1926, the Carnegie Foundation for the Advancement of Teaching issued a landmark report on “Dental Education in the United States and Canada” authored by William Gies (9). The report described the disparities in oral health and the limited access to care widely experienced by African Americans (AA). It stated that while the ratio of white dentists to population was about 1 to 1,700, the ratio of AA dentists to AA population was 1 to 8,500, with such disparities even greater in many geographic areas. Regrettably, significant disparities persist to the present. While much progress has been made over the past 90 years, the 6,254 AA dentists identified by the survey yield a dentist to AA population ratio of only 1 to 7,307 (10).

## Building the health professional “pipeline”

Unfortunately, such disparities and lack of diversity are not unique to dentistry and persist across the health professions. The late Herbert Nickens, MD, a champion for social justice and health equity throughout the 1980s and ‘90s, was often reported as saying that “we need a medical profession that looks like America” (11). He was a major advocate for the expansion of URM students in medicine and led the Association of American Medical College’s “Project 3000 by 2000” that was launched in 1991 (12). It aimed to address the critical need for minority physicians and its goal would have nearly doubled the number of URM medical students in a single decade. Importantly, this groundbreaking national program also linked together medicine with other health professions in building the pipeline for URM student recruitment and in eliminating barriers to their entry into health professions schools. While its aspirational goal was not reached, the efforts of the AAMC and other organizations have continued

to make significant impacts on health professions diversity to the present day. In particular, the American Dental Education Association has been recognized as a national leader in such efforts. As but one example, ADEA’s development of new approaches to the holistic assessment of dental school applicants is serving as a model for other health professional education programs (13).

A landmark event in efforts to increase the pipeline of underrepresented minorities in the dental profession was the launching in 2001 of the “*Pipeline, Profession, and Practice: Community-Based Dental Education Program*” (14). It was supported by a partnership of three major foundations – the Robert Wood Johnson Foundation, W. K. Kellogg Foundation and the California Endowment. The “Dental Pipeline Program” was national in scope and operated in 15 universities, or approximately one-fourth of all dental schools in the United States. In addition to increasing the recruitment and retention of underrepresented minority and low-income students to dental schools, the program also aimed to address the critical shortage of dental services for the nation’s underserved and disadvantaged populations (15,16). However, despite successful outcomes at the participating dental schools, the overall impact on URM enrollment nationally was modest.

While important progress continues to be made, increasing the diversity of the practitioner workforce remains a daunting challenge across all URM groups. For example, as reported by Mertz et al. (6), “Blacks make up 13.6 percent of the US population but only 3.3 percent of US dentists.” Their numbers “would have to increase fourfold to reach population parity,” representing an increase of 19,714 Black dentists (6). The disparity is even greater in regard to H/L dentists as “an additional 31,194 H/L dentists are needed to reach parity with the current US H/L population” (7). Moreover, given the anticipated increase in the US H/L population over the coming decades, the disparity in the H/L dentist to population ratio is likely to worsen unless extensive efforts are made to increase the pipeline. Most dramatic is the disparity in the AI/AN dentist to population ratio, as “the number of AI/AN dentists would need to increase 7.4-fold in order to meet population parity” (5). It is clear that we must redouble efforts to promote the entry of URM students into dental schools and that new “pipeline” programs are needed.

## Key findings of the URM survey

The survey results highlight the extensive diversity that exists within each URM group surveyed. Nationally, the H/L population displays significant variation culturally, linguistically, and demographically. Similar variation exists among H/L dentists, with 31.9 percent self-identifying their origin as Mexican, 13.4 percent as Puerto Rican, 13.0 percent as Cuban, and 41.7 percent as another H/L. Fifty percent of H/L dentists are foreign-born and 25 percent are foreign-trained.

This latter finding, in particular the large proportion who are foreign dental graduates, raises concerns about the sustainability of the existing H/L dental pipeline and the role that these dentists may play in providing care to underserved populations.

In regards to assessing the diversity within the Black dentist group, the survey presented three distinct response options – Black/African, Black/African-American, and Black/Caribbean (6). There were 13.2 percent who self-identified as Black/African, and 10.3 percent as Black/Caribbean, in distinction from the 76.6 percent who self-identified as Black/African-American. Overall, 84.5 percent were born in the United States; 5 percent self-identified as being of at least one other race. The Black/African and Black/Caribbean dentists were younger and more likely to be female than those who self-identified as Black/African-American.

As there is in regards to the AI/AN population in the US, there is also extensive diversity among the AI/AN dentists. Over 96 percent reported a tribal affiliation, with over 55 different tribes named; 20 percent also reported a blood quantum (with a mean of 0.21 and a range of 0.008 to 1.0). Blood quantum is a measure of “the degree of American Indian or Alaska Native blood from a federally recognized tribe or village that a person possesses” which, among other things, may determine rights and eligibility for a number of Federal and state programs (5,17,18). As of May 2016, there were 567 Tribal entities recognized and eligible for funding and services from the US Bureau of Indian Affairs (BIA) by virtue of their status as Indian Tribes (19). Several of the tribal affiliations named by AI/AN dentists in the survey do not appear to be on this Federal list.

An important, if not central, aspect of AI/AN identity is whether someone is an “enrolled member” of a federally recognized tribe; i.e. the “person is someone who has blood degree from and is recognized as such by a federally recognized tribe or village (as an enrolled tribal member) and/or the United States” (20). Tribes establish membership criteria based on shared customs, traditions, language, and tribal blood. However, the survey did not specifically ask if the AI/AN respondent was an enrolled tribal member. This omission calls into question the extent to which it may possibly be overestimating the numbers of “true” AI/AN dentists in the United States. Such a distinction may also be important to the extent that it may be related to how and where AI/AN dentists practice. For example, among those AI/AN dentists who reported both being affiliated with a federally recognized tribe and their blood quantum, on average the percent of their patients who were AI/AN was 30.2 percent while those dentists who did not report a blood quantum had an average of 19.6 percent AI/AN patients (5).

A related issue on the meaning of URM “identity” may also be relevant to consider regarding the H/L dentists surveyed. It was striking to see that fully one-quarter were

foreign-trained. It is very likely that their socioeconomic backgrounds and life experiences are quite different from those of the majority of US-trained H/L dentists. Even among US-trained dentists, it is likely that the approach to their practice is influenced by the social-economic experience of their youth. Where a dentist is raised, whether rural or urban, and being first generation or not, likely affect their perspectives on their responsibility to the community. To the extent that such differences matter in important ways, they may affect where and how practitioners work and their professional commitment to caring for the underserved.

In addition, looking just at US-trained H/L dentists, it is evident that there is a distinct and important sub-group underrepresentation – while almost two-thirds of the US H/L population is Mexican American (MA), less than one-third of H/L dentists self-identify as such. Moreover, while it is recognized that H/L dentists remain underrepresented in leadership roles in dental education and practice, the disparity is even greater in regards to US-trained MA dentists. Clearly, there is a need to more deeply explore the pipeline of Hispanic dentists and the different and changing practice patterns based on immigration and foreign trained status versus domestic production. Ideally, such monitoring and analysis could be performed on an ongoing basis by the US National Center for Health Workforce Analysis that already collects detailed healthcare workforce data (21).

Lastly, in regards to the diversity among the Black dentists surveyed, there were close to 25 percent that self-identified as being “Black/African” or “Black/Caribbean” rather than being “Black/African-American.” As in the discussion above regarding H/L and AI/AN dentists, a key question is whether, and the extent to which, such distinctions regarding one’s origins, socioeconomic background and self-identity may affect practice patterns. Interestingly, the survey findings show that Black/African-American dentists reported slightly more AA patients on average (45.5 percent) than the Black/African (43.3 percent) and Black/Caribbean (42.1 percent) dentists. In contrast, Black/African-American dentists were less likely to report working in safety-net settings (9.1 percent) than Black/Caribbean (12.7 percent) and Black/African (13.5 percent) dentists, but more likely to work in a public setting (6.8 percent versus 4.8 percent and 2.5 percent respectively). In this context, the distinction between safety-net and public settings relates to whether dentists are primarily engaged in the practice of clinical dentistry (in “safety-net” settings) versus being primarily engaged in the practice of public health. The Black/African dentists reported seeing a higher average of publicly insured patients (36.6 percent) than did the Black/African-American (30.3 percent) and Black/Caribbean (28.5 percent) dentists.

All three URM dentist groups share several other important characteristics besides their “underrepresentation” though they may differ somewhat in extent. Overall, URM

dentists disproportionately provide care for underserved groups. For example, 42 percent of AI/AN dentists report working in practices that primarily care for underserved patients and over 16 percent work in safety-net settings. They also provide a disproportionate share of oral health care for AI/AN populations; on average 20.4 percent of their patients are AI/AN. Among the H/L dentists, 7 percent work in safety-net settings, 40 percent primarily treat underserved populations, and, on average, 42 percent of their patient population is H/L. Similarly, AA dentists care for a disproportionate share of AA patients, with an average of 37.5 percent AA patients. Importantly, 40 percent of AA dentists reported that over half of their patient population are AA.

All URM groups reported high levels of indebtedness on graduating from dental school, on average significantly higher than non-URM graduates, with both the H/L and AA dentists completing international dentist programs reporting the highest debt loads. However, overall the “average debt load is greater for AI/AN dentists compared to all dentists” (5). Notably, over 60 percent of AI/AN dentists also reported an impact of educational debt on their immediate practice choice. To the extent that education indebtedness affects career choices, the disproportionately higher debt borne by URM dentists on graduation represents an important problem to the future of the US oral health care workforce. This challenge is not unique to dentistry, however, as similar disparities in URM graduates’ indebtedness has been found in medical education (11).

There were also important generational differences among the URM groups. Younger Black dentists were twice as likely to be raised in the suburbs and half as likely to be raised in rural communities as their older Black peers. For AI/AN dentists, over ten-fold more of those 49 and older reported being “raised on tribal land or a reservation compared to those under age 49” (21.4 percent versus 1.7 percent). Similarly, over 40 percent of younger AI/AN dentists were raised in medium or large cities as compared to only 25 percent of older AI/AN dentists. Over half of those age 49 and older were the first in their family to graduate from college, compared to only 22.0 percent of the younger AI/AN dentists. Overall, 36.8 percent of H/L dentists and 34.6 percent of AA dentists reported being first in their family to graduate from college.

There are also several significant gender-related differences among URM dentists that should be noted. While the majority of URM dentists are male, the proportion of female URM dentists has grown over time. The proportion of URM dentists who are women is twice that of the overall dentist population and is nearing gender parity with URM men dentists. Most striking has been the increased proportion of Black women dentists, now at over 45 percent from just 19.4 percent in 1992 (6). A similar gender shift has been seen in medicine (22,23), where “the trending decline of Black males matriculating to medical school” has raised concerns. Last

and certainly not least, there exist significant income disparities between male and female dentists across all URM groups. While they may be partly explained by male dentists on average having been in practice longer, this income disparity merits closer analysis over time. Importantly, similar issues confront the medical profession, and recently the AAMC has emphasized “how an intersectional analysis of race and gender can aid the field in developing targeted initiatives to address areas of concern” (22).

## Conclusions and recommendations

As Sullivan (23) has highlighted, greater racial and ethnic diversity in the US healthcare system “is essential to providing high-quality care, promoting the cultural competence of health professionals, and developing the trust and confidence in health professionals needed by the people served by the system.” In his compelling commentaries on diversity, Nivet (24,25) describes the different phases, or paradigms, through which our thinking about the issue has evolved. He calls for a “systems upgrade” to a new framework, “Diversity 3.0,” for how we view diversity and inclusion – as integrated into the core workings and mission of institutions “and framed as integral for achieving excellence.” That is, “to move diversity from the periphery to a core strategy” (24).

As an essential next step in promoting the entry of URM students into dentals schools, we need to build on prior successes and make a major re-investment in “pipeline” programs that are national in scope and inter-professional in nature. Early identification of talent and the importance of mentors are documented in the “stories” of URM who have benefitted from pipeline recruitment strategies (26). Such mentoring skills should be evaluated and enhanced in inter-professional programs that focus on the recruitment of URM groups. Dentistry cannot do it alone.

Dental educational institutions must also be made accountable. Formicola and colleagues (15) have earlier emphasized the importance of accreditation standards to “make it clear that the field of dentistry expects dental schools to re-energize their commitment to diversity.” More recently (27), he has reiterated the critical need for dental education to increase its commitment to promoting diversity, including enhancement of financial aid. In this regard, the high cost of dental education can serve as a major deterrent to URM students and also limit their options in practice type and location. In order to reduce the financial barriers to URM dental students, targeted financial aid and loan repayment programs should be developed that can both increase diversity and promote care for the underserved. At the national level, there needs to be greater support for National Health Service Corps scholarships, and increases in the number of career positions for dentists in the US. Public Health Service Commissioned

Corps with special focus on strengthening dental activities in the Indian Health Service.

While such national efforts are needed to increase access to dental careers for URM students and to expand the URM dental workforce, it remains a fact that the oral health care needs of the vast majority of URM patients will still need to be provided by non-URM dentists. It is evident that we need to go beyond “cultural competence” and focus on developing true cultural *proficiency* in both our future and current practitioners. Dental school accreditation standards need to be raised in this area. In addition, schools and professional associations need to provide career-long opportunities for current, and future, dental practitioners to enhance their skills at addressing the needs of underserved populations. Such needs will only increase over the coming decades as the US population itself becomes increasingly diverse.

In current efforts to promote diversity in health professions education and practice, an important area of interest is in implementing effective ways to address “unconscious bias” in admissions and employment matters. “Unconscious biases are social stereotypes about certain groups of people that individuals form outside their own conscious awareness. Everyone holds unconscious beliefs about various social and identity groups, and these biases stem from one’s tendency to organize social worlds by categorizing” (28). Tests have been developed to identify and measure hidden, automatic or unconscious biases. A variety of training programs and interventions have been designed to help individuals and organizations understand and manage unconscious bias in order to build diverse and inclusive social, educational and work environments (28). At the national level, organizations such as the American Dental Education Association and the Association of American Medical Colleges are playing leading roles in addressing unconscious bias in health professions education (29).

However, we must always keep in mind that health professionals’ education and practice occur within a larger societal context, where unconscious bias exists alongside very conscious, overt and purposeful bias founded on racial/ethnic animus. If any doubt about this pernicious fact remains in anyone’s mind, they only need to examine the consequences of the US Supreme Court decision in 2013, *Shelby County (Alabama) versus Holder* (30) regarding the constitutionality of two provisions of the Voting Rights Act of 1965 that required certain states and local governments to obtain Federal preclearance before implementing any changes to their voting practices. That decision effectively gutted the 1965 Federal law and unleashed a torrent of restrictive state laws across the nation, purportedly aimed at addressing “voter fraud” but whose underlying intent was to hinder the ability of URM to vote. This blatant effort was recently highlighted in a Federal Appeals Court reversal of the state of North Carolina’s law as being unconstitutional. In their decision, the appellate bench starkly noted that its provisions deliberately “target African-

Americans with almost surgical precision” in an effort to depress their turnout at the polls (31,32). The court further wrote that “we cannot ignore the record evidence that, because of race, the legislature enacted one of the largest restrictions of the franchise in modern North Carolina history.”

It is clear that the challenges we face in our efforts to promote workforce diversity in dentistry are many. Sustainable progress will only be possible through multipronged efforts that target obstacles at multiple levels in our society. Nevertheless, such concerted efforts are essential in order to eliminate health disparities and achieve health equity for all Americans. As Sullivan (23) has aptly noted, “changing the makeup of the health care workforce could change how care is delivered to vulnerable patients” and “help address the startling health disparities observed between whites and people of color.”

## References

1. Sullivan Commission on Diversity in the Healthcare Workforce. *Missing Persons: Minorities in the Health Professions*. 2004. Available from: <http://www.aacn.nche.edu/media-relations/SullivanReport.pdf>
2. Smedley BD, Butler AS, Bristow LR. In the Nation’s Compelling Interest: Ensuring Diversity in the Health Care Workforce. 2004. *Committee on institutional and policy-level strategies for increasing the diversity of the U.S. Healthcare workforce*. Washington, DC: The National Academies Press.
3. IOM (Institute of Medicine) and NRC (National Research Council). 2011. *Improving access to oral health care for vulnerable and underserved populations*. Washington, DC: The National Academies Press.
4. Mertz E, Wides C, Cooke A, Gates P. Tracking workforce diversity in dentistry: importance, methods and challenges. *J Public Health Dent*. 2016;**76**(1):38–46.
5. Mertz E, Wides C, Gates P. The American Indian/Alaska Native dentist workforce in the United States. *J Public Health Dent*. doi:10.1111/jphd.12186
6. Mertz E, Calvo J, Wides C, Gates P. The Black dentist workforce in the United States. *J Public Health Dent*. doi:10.1111/jphd.12187
7. Mertz E, Wides C, Calvo J, Gates P. The Hispanic/Latino dentist workforce in the United States. *J Public Health Dent*. doi:10.1111/jphd.12194
8. U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. *The U.S. Health Workforce Chartbook*, Rockville, Maryland; 2013. Available from: <http://bhpr.hrsa.gov/healthworkforce/supplydemand/usworkforce/chartbook/chartbookpart1.pdf>
9. Gies WJ. *Dental Education in the United States and Canada*. Carnegie Foundation for the Advancement of Teaching, Bulletin No. 19. New York; 1926.
10. US Census Bureau 2016. [In the US, there were 45.7 million African Americans, either alone or in combination with one

- or more other races, on July 1, 2014.] Available from: <http://www.census.gov/newsroom/facts-for-features/2016/cb16-ff01.html>
11. AAMC. Reflections on Diversity and Inclusion in Academic Medicine: Commemorating Dr. Herbert W. Nickens' Legacy. 2014. Association of American Medical Colleges, Washington, DC. Available from: <https://www.aamc.org/initiatives/diversity/427854/reflectionsondiversity.html>
  12. Terrell C, Beaudreau J. 3000 by 2000 and Beyond: next steps for promoting diversity in the health professions. *J Dent Educ.* 2003;**67**(9):1048-52.
  13. ADEA. Holistic review. 2017. Available from: <http://www.adea.org/HolisticReview/About.aspx>
  14. Bailit HL, Formicola AJ, Herbert KD, Stavisky JS, Zamora G. The origins and design of the dental pipeline program. *J Dent Educ.* 2005;**69**(2):232-8.
  15. Formicola AJ, D'Abreu KC, Tedesco LA. Underrepresented minority dental student recruitment and enrollment programs: an overview from the dental pipeline program. *J Dent Educ.* 2010;**74**(10, Suppl):S67-73.
  16. Sinkford JC, Valachovic RW, Weaver RG, Harrison SG. ADEA/WKKF Access to dental careers program: supporting a dental pipeline concept and program. *J Dent Educ.* 2010;**74**(10):1166-9.
  17. Association of American Indian Affairs. Frequently asked questions. Rockville, MD: Association of American Indian Affairs; 2017. Available from: <http://www.indian-affairs.org/general-faq.html>
  18. Office of Public Affairs, Indian Affairs, U.S. Dept. of the Interior. Frequently asked questions. Washington, DC: U.S. Department of the Interior; 2017. Available from: <http://www.bia.gov/FAQs/>
  19. Bureau of Indian Affairs, U.S. Dept. of the Interior, 2016. Federal Register. Vol. 81, No. 86/Wednesday, May 4, 2016/ Notices (pp. 26826-32). Available from: <http://www.bia.gov/cs/groups/xraca/documents/text/idc1-033010.pdf>
  20. Bureau of Indian Affairs, U.S. Dept. of the Interior, 2016. Tribal membership and enrollment. Available from: <https://www.doi.gov/tribes/enrollment>
  21. U.S. Dept. of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. The U.S. Health Workforce Chartbook, Rockville, Maryland; 2013.
  22. Castillo-Page L. Diversity in Medical Education: Facts & Figures 2016. Association of American Medical Colleges, Washington, D.C. Available from: <http://www.aamcdiversityfactsandfigures2016.org/>
  23. Sullivan LW. Grasping at the moon: enhancing access to careers in the health professions. *Health Affairs.* 2016;**35**(8):1532-5.
  24. Nivet MA. Diversity 3.0: a necessary systems upgrade. *Acad Med.* 2011;**86**(12):1487-9.
  25. Nivet MA. A Diversity 3.0 update: are we moving the needle? *Acad Med.* 2015;**90**(12):1591-3.
  26. ADEA. Growing Our Own: Diversity Profiles from the Academic Dental Pipeline. Available from: <http://www.adea.org/MDFD/Growing-Our-Own.aspx>
  27. Formicola A. Current State of Dental Education. Advancing Dental Education: Gies in the 21st Century. *J Dent Educ.* Forthcoming 2017.
  28. University of California San Francisco, Office of Diversity and Outreach. 2017. Unconscious bias. Available from: <https://diversity.ucsf.edu/resources/unconscious-bias>
  29. AAMC. Unconscious Bias Training for the Health Professions. Available from: <https://www.aamc.org/initiatives/diversity/322996/lablearningonunconsciousbias.html>
  30. US Supreme Court. Shelby County v. Holder, No. 12-96. 570 U.S. (2103). Available from: [https://www.supremecourt.gov/opinions/12pdf/12-96\\_6k47.pdf](https://www.supremecourt.gov/opinions/12pdf/12-96_6k47.pdf)
  31. US Court of Appeals, Fourth District. NC State Conf. NAACP v. McCrory, No. 16-1468. Available from: <https://assets.documentcloud.org/documents/3001376/Aaacarolina.pdf>
  32. Wines M, Blinder A. Federal Appeals Court Strikes Down North Carolina Voter ID Requirement. NY Times, July 29, 2016. Available from: <http://www.nytimes.com/2016/07/30/us/federal-appeals-court-strikes-down-north-carolina-voter-id-provision.html>

Copyright of Journal of Public Health Dentistry is the property of Wiley-Blackwell and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.