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Equity of African-American Men in Headache in the United States: a perspective from African American Headache Medicine Specialists (Part 1)

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Abstract

Migraine and severe headache affect approximately 1 in 6 United States (US) adults and migraine is one of the most disabling disorders worldwide. Approximately 903,000 to 1.5million African American (AA) men are affected by migraine in the US. Racial disparities in headache medicine exist. In addition, there are limited headache studies that attest to the inclusion of or have robust data on AA men in headache medicine in the US. Racial concordance between provider and patient may ameliorate some aspects of care disparities. Moreover, it has been demonstrated that diversity and inclusion particularly in leadership of organizations has consistently produced positive change, increased innovation, and long-term success. Most national headache organizations strive to improve the care and lives of people living with headache disorders yet only ~0.5% of their physician members are AA men. Herein, we provide an observation of equity issues from the perspective of AA men in the headache medicine subspecialty. Part one of this manuscript explores inherent and potential challenges of the equity of AA men in headache medicine including headache disparities, mistrust, understudied/lack of representation in research, cultural differences, implicit/explicit bias, and the diversity tax. Part two of this work offers possible solutions to achieve equity for AA men in headache including: 1) addressing head and facial pain disparities and mistrust in AA men; 2) professionalism and inclusion; 3) organizational/departmental leadership buy-in for racial diversity; 4) implicit/explicit and other bias training; 5) diversity panels with open discussion; 6) addressing diversity tax; 7) senior mentorship; 8) increased opportunities for noteworthy and

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important roles; 9) forming and building alliances and partnerships; 10) diversity leadership training programs; 11) headache awareness, education, and literacy with focus to UIM trainees and institutions; and 12) focused and supported recruitment of AA men into headache medicine. More work is needed for equity of AA men in headache medicine.

Introduction:

Migraine and severe headache affect approximately 1 in 6 United States (US) adults[1] and migraine is one of the most disabling disorders worldwide.[2] African American (AA) men make up approximately 13% of the population of all males in the US.[3] Extrapolating from prevalence data, 4.3%-7.2%- of AA men (~903,000-1.5million men) in the US may be affected by migraine.[4] [5] Migraine is one of nearly 300 headache disorders.[6] Thus the true prevalence of headache disorders in AA men is not known. The presence of racial disparities in health care are well documented,[7] but less so in headache medicine. Nevertheless, racial disparities in headache medicine exist.[8-15] Racial concordance between provider and patient may ameliorate some aspects of care disparities particularly effective provider-patient communication.[16]

Given these data and as suggested in the Institute of Medicine report “Unequal Treatment”, actions to increase the number of physicians from groups underrepresented in medicine (UIM) are needed.[7] The Association of American Medical Colleges (AAMC) defines UIM as “those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general populations. Historically, underrepresented racial/ethnic groups include African-Americans, Latinx, Native Americans (that is American Indians, Alaska Natives, and Native Hawaiians) and mainland Puerto Ricans.[17] Increasing numbers of AA, Latinx and Native American/Pacific Islander and mainland Puerto Rican headache medicine providers may contribute to the eradication of headache care disparities not only addressing communication issues, but also access as those providers are much more likely to practice wholly or in part in areas where UIM populations live and receive care.[18] The authors of this paper have a particular interest regarding the presence AA male headache specialists as well as other UIM to meet the needs of their gender/ethnic concordant patient population. We believe UIM populations contribute to the power of diverse leadership and can help to chart a course for positive innovation and change within headache medicine. The crisis of the lack of AA men entering into medicine has been recognized nationally.[19] [20] This issue of practitioners in medicine is more acute within headache medicine.

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Recently, membership of the American Headache Society (AHS) has exceeded over 1000 members, however less than ~0.5% of its physician members are AA men. As of the drafting of this manuscript, we are unaware of any AA male physicians in key leadership roles in any highly respected national headache medicine professional organizations/societies. There is a paucity of data on the representation of UIMs practicing headache medicine, AA practitioners and particularly AA men in headache medicine. Those data would likely highlight a paucity of UIM providers in and of itself. In addition, there are limited headache studies that attest to the inclusion of AA men or have robust data on AA men in headache medicine in the US. We feel the voices of AA men need to be heard in headache medicine.

This is a two-part opinion piece that reflects experiences, opinions and a brief literature review. In this first part, the authors briefly explore inherent and potential challenges of equity for AA men in headache medicine. For patients, these areas include headache disparities and mistrust. Areas of inherent and potential challenges for both patients and providers include understudied/lack of representation in research, cultural differences, and implicit/explicit bias. Lastly, the diversity tax is an area of potential challenge to AA male providers. The authors share a few personal experiences related to headache medicine they have faced likely due to the color of their skin, and explore the importance of the inclusion of AA men in aspects in headache societies including leadership. Although beyond the scope of great detail in this manuscript, these challenges are likely surface issues that are rooted in hundreds of years of systemic racism against African-Americans in the US.[21] Nevertheless, the goal of this opinion piece is to help improve the field of headache medicine and to help make it more inclusive and a welcoming environment for all.

Inherent and potential challenges

"For those who are marginalized, their realities go unnoticed, they are often rendered invisible, and yet these [cultural] dominant beliefs are embedded throughout intercultural communication, beliefs, interactions, and policy."[22]

We feel there are several challenges that may contribute to the current status of AA men in headache medicine. We will discuss a few.

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Headache Disparities

This is not a comprehensive review on headache disparities specifically in AA men, nevertheless race-based disparities in headache and migraine exist in the U.S.[8-15 23 24] For example, severity of migraine disproportionately affects those of low socioeconomic status including underrepresented groups of color in headache medicine..[12] Data from the American Migraine Prevalence and Prevention Study suggest that probable migraine is more frequently diagnosed in AA.[25] Although a specific diagnosis, it is not definitive and may lead to use of less specific migraine abortive therapies, delay in prescribing prevention, and lack of coverage for specific migraine treatments. Migraine prevalence is highest in Native Americans, followed by Whites, African-Americans, Hispanics, and Asian-Americans. In a recent review, the average prevalence of migraine for African Americans (AA) was 14.45%, with AA women with a higher prevalence than AA men. However, studies rarely distinguish between subgroups within ethnicities.[26] Data suggest that African-Americans and Latinx may be receiving less adequate care despite their lower prevalence, as they feature a disproportionately low number of outpatient visits and migraine diagnostic rates in comparison to a generic headache diagnosis.[13] AA may be misdiagnosed or receive delayed diagnoses of other primary headache disorders as well.[14 15] Despite the national priority to eliminate racial and ethnic health disparities, one cross-sectional study showed that more than half of national physician organizations are doing little to address this problem.[27] The Agency for Healthcare Research and Quality reported that "disparities in quality and outcomes by income and race and ethnicity are large and persistent, and were not, through 2012, improving substantially".[28]

Frameworks to guide the approach and phases of health disparities research have been proposed.[29 30] One framework propose four generations of health disparities research and those include: 1) First generation - the documentation of the existence of health disparities, 2) Second generation - the explanation of the health disparities, 3) Third generation - the health disparities research to provide solutions to eliminate health disparities and 4) A fourth generation that involves understanding the social construct of race, structural racism, biases, and prioritizing perspectives of marginalized populations.[29] The authors are not aware of robust research that addresses all of these generations of health disparities research that could ensure equity of AA men (or other UIM populations in the US) in headache medicine.

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Mistrust:

There is often more mistrust of health care systems within the AA community compared to whites. There has been a history of injustices imposed on the AA community by the medical and scientific professions. The AA community have been subjected to several experiences that have been later deemed to be unethical. One such study widely cited is the Tuskegee Experiment Study which the US Public Health Services (PHS) conducted where AA men went untreated for Syphilis for 40 years. In fact, the US PHS went to great lengths to keep treatment from AA men. This experiment stands as an example of how structural and systemic racism allowed perpetuation of the study for 40 years.[31] It has been postulated that this experiment and several others done on AA men are also symbolic, and possibly causal, of continued distrust of the health care system by African-American men, who are less likely to engage in preventive care, enroll in clinical trials, follow physicians' advice, or become organ donors and may contribute to observed racial health disparities.[31] In addition to the mistrust that may arise from the history of these studies, other findings suggest that the difference in trust by race is more likely due to broader historical and personal experience.[32] This may be exacerbated in headache medicine by the challenge of a lower number of headache subspecialists being available and the processes and resources required to receive headache subspecialty care (referral, travel, cost, etc.)[33] Mistrust may even extend to low stake health system generated studies. Within headache medicine, African-Americans are less likely to respond to headache related surveys.[4] As we draft this manuscript, we are not aware of many efforts made by practitioners in the headache community, as a whole, to specifically address or gain the trust of AA. The restoration and building of trust between the health system and the AA community (especially with AA men) is needed.

Understudied, lack of representation in research

A systematic review of randomized clinical trials in headache medicine between January 1, 2011 and July 31, 2016 demonstrated that no trials in headache medicine analyze safety or efficacy of migraine treatment by race or sex and only two-thirds of RCT report race composition in the study sample size. There were statistically fewer non-White subjects and men in comparison to their proportion of the US populations included in study populations of US-based migraine studies.[34] Often studies are grouped as white or Caucasian without other ethnic or racial groups identified. The nature of this practice could devalue the spectrum of communities within the US. At the same time, this practice may be in some degree a result of unconscious

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(implicit) and conscious (explicit) biases. Regardless of the reasons, this unfortunately excludes essential data sets from other ethnic groups. Without such data, it may be more challenging to understand epidemiology and prognostic factors of headache in AA men as well as other diverse racial and ethnic groups. This is an area where the inclusion of diverse racial/ethnic population, especially AA men is needed.

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Cultural Differences

Culture, as it may relate to headache medicine, has been defined, and recently published.[35] There may be cultural differences that play a role in patient adherence to care and outcomes and examples of how culture may relate to headache medicine have been postulated.[35] To the authors' knowledge, there are no studies evaluating the role of culture in AA men. It should not be assumed that culture of AA men is homogeneous or monolithic. Cultural sensitivity is needed to assimilate cultures and improve cross-cultural communication. When engaging in and examining cross-cultural communication, it is important for people who are members of dominant cultural groups to not only understand what is trying to be communicated, but the cultural context in which observed behaviors are occurring.[22] However, it should be noted that the evidence for improved outcomes and belief changes due to cultural awareness workshops does not appear to be strong.[36] Challenges to that type of training include over-generalization, practicality of access to training and superficial nature of its content presentation. However, questions that seek to understand how culture may play a role in illness states may have value. A theory of headache literacy which incorporates several cultural domains such as personal characteristics (perceptions, beliefs, knowledge, communication skills) and social resources (impact of disease) may lead to better understanding of patient populations, improve outcomes and ameliorate disparities in headache medicine has been proposed but has yet to be tested.[37] There is a difference between social construct of race and culture. There is a need to understand how culture and headache medicine interact at community levels.

Implicit/Explicit Biases (microaggressions, macroaggression)

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Although there is much written and explored on the subjects of microaggression, macroaggressions and other racial social injustices in multiple disciplines, to the authors' knowledge nothing exists on this topic in headache medicine. Microaggressions have been considered "the chief vehicle for pro-racist behaviors" and are "...subtle, stunning, often automatic, and non-verbal exchanges which are 'put downs' of blacks by offenders"[38] While microaggressions can be inflicted against any group, they are particularly used against culturally marginalized groups. In fact, the term microaggression has its origin based on the observations and descriptions of non-black Americans behaviors and interactions against AA from a psychiatrist and Harvard professor, Charles M. Pierce.

Professor Pierce, who coined the term "microaggression" in the 1970s recognized that: "These [racial] assaults to black dignity and black hope are incessant and cumulative. Any single one may be gross. In fact, the major vehicle for racism in this country is offenses done to blacks by whites in this sort of gratuitous never-ending way. These offenses are microaggressions. Almost all black-white racial interactions are characterized by white put-downs, done in automatic, preconscious, or unconscious fashion. These mini-disasters accumulate. It is the sum total of multiple microaggressions by whites to blacks that has pervasive effect to the stability and peace of this world."[39] Microaggressions may be the result of implicit or unconscious biases. Osanloo et al. reiterates that microaggressions are "exemplified by dismissive and often innocuous comments, behaviors, or beliefs that minimize, exclude, or render insignificant and can be difficult to depict. These aggressive behaviors may not be overtly physically violent; however, they do create social/cultural conditions in which people may not feel as safe as members of a dominant cultural group."[22]

The immediate observed effect of microaggression is stress. However, long term effects of microaggression can include depression and anxiety, loss of self-confidence, embarrassment, exhaustion, and limited social and academic progression.[40] A systematic review demonstrates most health care providers appear to have implicit bias in terms of positive attitudes toward non-Latinx whites and negative attitudes toward people of color and that implicit bias was significantly related to patient---provider interactions, treatment decisions, treatment adherence, and patient health outcomes.[41] In a multi-headache specialty clinic study, AAs with chronic headache disorders were more likely to be diagnosed with major depressive disorders and anxiety than White counterparts.[42] We are unaware if microaggression is an underlying factor to this headache disparity or if this relationship has been investigated.

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Explicit biases are thoughts and feelings that people deliberately think about and can make conscious reports about.[41] Macroaggressions are purposeful, deliberate, and blatantly damaging acts that make an impact at the individual level. Macroaggressions are different from structural racism as structural racism is integral to everyday, ordinary interactions. Those who engage in oppressive practices of structural racism speak as though there is one vision of the ideal society. However, such elitism, with one group determining what is "right," suggests exerting power and promise offers ways to leverage efforts to perpetuate oppressive practices and policies.[22]

AA male Headache Providers- Experiences and Biases

Not only are AA male patients subjected to these inherent challenges and biases, AA male headache providers may face similar challenges and biases professionally whether as transference from patients, or from colleagues in the workplace or in professional meetings. Challenges may occur with professional medical industry relations as well. There are colleagues who may be in some form compensated for services that AA male providers may be asked or expected to perform without compensation in headache medicine (e.g. consulting, advisory services). As of the drafting of this manuscript, there are no AA men in key leadership or decision-making positions in any well-established headache organizations (e.g. National Headache Foundation or the American Headache Society). Application processes may not be required for key positions and opportunities (i.e. position by appointment). Certain meritorious scholarly work may be by invitation only (e.g. manuscripts, book chapters, moderating, speaking/presentation opportunities). Another inherent challenge is the lack of diversity on scientific committees, study sections, etc. where these biases can remain unchecked. Authors have often witnessed peers offered more career, leadership, meritorious and noteworthy opportunities in Headache Medicine. Table 1 contains a sample of actual experiences of the authors that may help illustrate potential biases experienced by authors.

Table 1 Authors' Experiences, Identifying Bias Related to Headache Medicine

Setting	Experience	Likely Bias/Construct	Key problem	How to handle	What should a Bystander do.
National US	My turn after waiting	Implicit	This attendee is a	Address by name	Very

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headache organization annual scientific meeting	in line to ask a question following a presentation at a national Headache Scientific Conference. When at the microphone the Moderator of the conference addressed me with a basketball reference and other comments irrelevant to headache medicine. There was one headache medicine leader who approached me afterwards to make sure I was ok.	Bias/Microaggression	board-certified neurologist and fellowship trained headache specialist at a scientific meeting at in specialty, with a well-thought out question.	(if known) or professional title.	challenging because very few people have a microphone. In this case a co-moderater could have said I'm sure Dr. X has worked hard throughout his medical career and is here due to scientific queries and to assist patients.
National US headache scientific organization	Not offered a committee appointment following my fellowship similar to my co-fellows of the same training year.	Implicit bias, microaggression	After asking I was placed on a society committee that was dissolved 6 months later. Surprised that my mentor didn't make this happen upon graduation or at least within my first year of being in practice.	Treat fellows equitably and support all as upcoming leaders within the subspecialty.	I'm sure this was an oversight. Dr. X would be a great fit for your committee. (comment by sponsor to organization leadership)
National US headache organization meeting	Never invited to speak or lead a small group session on any topic.	Implicit bias, microaggression	Spoke at this meeting as part of my Interest group and received excellent formal reviews from the participants.	Invited to speak or present something based on interest, knowledge, expertise and positive feedback	Dr. X has received favorable reviews when he has given talks and

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			Constantly being asked by patients and colleagues why I am not speaking at these meetings.	from participants.	connects well with audiences. It would be nice to hear lectures and learn more from him.
During outdoor reception at a national US headache organization national US headache scientific organization meeting	Fellow attendee/colleague gives me their plate full of their trash, even though I have my conference badge on and am professionally dressed.	Microaggression/ Macroaggression	It should not be assumed that because one is black they are only present in a professional meeting to serve them and take their trash away. If this was done unconsciously it demonstrates an implicit bias, if it was done purposefully it would then be macroaggression/explicit bias.	Avoid assumptions due to race.	Dr.X is a colleague an esteemed colleague and serves the headache medicine community in many ways but I don't imagine he would want to take your trash at this time. Why are you giving your trash to Dr. X? There are tables and trash receptacles along the perimeter in which to set your trash, perhaps you should see if Dr. X has any trash and offer

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					to discard his as well.
Physician- Patient visit	"I'm sure you can dance, I hope you're not upset, I have black friends who can dance."	Implicit Bias/Microaggression	The statement has nothing to do with the presentation of his headache disorder	This patient said other racially charged remarks and was dismissed from clinic.	I can't imagine Dr. X medical school, residency, or fellowship program provided any dance training to care for patients. Let's focus on why you are presenting in Dr. X clinic today
Physician-patient interaction	Patient complains that physician A (AA) is inefficient; other physician in group (White) is frequently delayed because they are "so busy because they are so good"	Implicit bias, microaggression	Workflow data reveal no significant difference in patient flow or wait times between physicians	Politely acknowledge the time and assure the patient all the time will be taken to address their concerns	Mention to patients all physicians run late at times usually due to complex patient issues during earlier appointments
Physician Interaction with a leader in the professional medical Industry (pharmaceutical/bio-technological)	"I'd like to tell you more about our product." Yet, eventually spend over 45mins of a supposedly brief meeting that turned into an hour asking for advice.	Possible Microaggression or Macroaggression	The pretense or framing of the interaction was to share details on their product to help patients, not to gather advice. Many non-AA colleagues are asked about advice in advisory boards and consultative roles and	Industry personnel should be upfront with all physicians with the purpose of meetings. The physician should be alerted upfront and given time to decide how they would like to proceed.	I see that you are asking and gleaning for more information from Dr. X than expected. Perhaps, the focus of his time should be on his

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			are compensated for their time and expertise. The tenor of interaction did not treat the physician as a thought leader in headache medicine and meeting made on false pretense.		questions of how the company and products may best suit the needs of his patients.
Neurology residency	Discouraged from pursuing a career in headache medicine. Didn't understand why I was interested in a subspecialty with little of no people like me represented.	Explicit bias, macroaggression	AA physician Informed there was no future in the specialty because of my race. The specialty lacked diversity and diverse leaders.	Encourage hard work with the idea that decisions would be made based on merit not race or bias. There is room for growth and change within the specialty regarding representation.	Dr. X is highly intelligent and has accomplished much. I'm sure headache medicine would benefit greatly from having him.
Interviewing for fellowship	During an interview visit for fellowship, I was on my own for dinner. I went to an Italian restaurant nearby (~20min walk) and was not served. Initially, there were only 3 parties in the entire restaurant then a fourth party, came in and were waited on and served. All of the parties/patrons were white except	Macroaggression	A medical doctor, neurologist presents for a fellowship interview to a prestigious institution and doesn't get served dinner the night before at a local restaurant because he is African-American.	This was a challenging situation as it was not done by the interviewing institution and quite frankly, the institution was genuinely and highly upset and very apologetic and may have even called the restaurant after learning of the incident following	Programs could recognize that African-Americans especially men may face undue injustices. Perhaps, inform African-American candidates that there could be

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	me. The owner, waiter was in direct sight as there was a square bar almost in the middle of the restaurant and just would not come over to take my order. I do not believe I was even given water. I waited nearly ~15-20 mins. until other parties seated nearby begin to recognize what was going on and shrugged their shoulders/supinate their hands as to indicate "I don't know what's going on". I then left the restaurant. This occurred in the 21st century.			the interview. It does not represent the institution, but it does highlight at least the attitude of a business in a surrounding community.	racial tension in certain areas.
Physician-staff interaction	"I thought you were a clerk"	Implicit bias, microaggression	Despite name badge with title, white coat and addressed as doctor in presence of others no acknowledgement of role by worker	Introduce self to worker and role on health team	Dr. X has been on faculty for a number of years and is a valued member of our staff
Inpatient consultation	Attending of primary service does not make eye contact with you while teams interact on rounds; directs questions to senior resident	Explicit bias, macroaggression	Possible bias versus poor manners on part of counterpart on primary service	Following rounds ask colleague if there is an issue that needs to be discussed to avoid interference with the care of the	Intercede by asking the African American attending directly for his/her opinion

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	(White) and when resident defers judgement call to you and you speak still no eye contact by colleague			patient	and the other attending for theirs.
Manuscript submission	Opinion manuscript concerning DEI experience of authors within subspecialty; number of comments	Possible microaggression	Extraordinary number of reviewers (seven); lack of content experts	Treat manuscript as other submissions; seek reviewers outside subspecialty if needed for content expertise/perspective	Add a Diversity, Equity and Inclusion assistant editor to editorial board; set standard for number of reviewers and review process for all submissions

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Diversity Tax

The potential peril for members of UIM faculty/clinicians, due to their “unicorn” status (low group representation within their organization), is the expectation they develop, lead and in many instances implement the diversity equity and inclusion (DEI) programming now sought by most

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healthcare organizations and academic medical centers. These tasks do not replace but are added over and above the primary responsibilities of their position at worst or being placed in the position of “speaking for the race” at best. This has been called a “minority tax” or “diversity tax”.[43] In for profit practice scenarios, this means completing DEI work while production of RVU’s remains on par with other partners/associates. In academia, this means completing DEI work while keeping steady creative productivity (research grants and publications)/clinical RVU production/teaching to create income, promotions and climb the academic ladder. In organizations, it could mean being the individual(s) responsible for anything and most things related to diversity or underserved issues, often with little to no support, substantial attention, recognition or tangible value given by the organization in recognition of the effort expended. Although there is a growing acknowledgement of the value of equity-diversity work, tangible credit in the form of RVUs and/or serious consideration of this work in academic promotion actions varies greatly across organizations.[44] This “tax” of doing DEI work places many UIM individuals in the quandary of wanting to improve their own situation, a sense that they are best qualified to lead these efforts and the obligation to increase opportunity for those who may follow their path versus just doing the work for which they were hired. DEI work is historically un- or under-funded to accomplish desired outcomes. Though likely a less commonly held opinion, some UIM physicians have no desire to do DEI work but feel pressure to engage with it just based on group identity. They may also feel that their decline of the tasks would give their employer an “out” in addressing DEI issues (“Well if the Black guy doesn’t think it’s important….”). This situation differs significantly from the ever present requirement of “community service“ in academia for faculty to serve on committees that are focused on governance of the enterprise or academic mission. Those fiduciary assignments to all faculty member may not have direct connection to the majority faculty members' creative work but they likely do not carry the same implications if they choose not to engage or ask for another assignment. Either situation is not fair when it places the UIM physician in jeopardy of not meeting their primary responsibilities for longevity and advancement with their organizations.

Table: 2 Summary of Potential Challenges to Equity of African-American Men In Headache Medicine

Summary of Potential Challenges to Equity of African-American Men In Headache Medicine

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Headache Disparities*
Mistrust*
Lack of Representation in Research*
Cultural Difference*
Implicit and Explicit Biases*
Diversity Tax*
*(*All likely deeply rooted in years of systemic racism in US history)*

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Conclusions

Migraine and headache is common in AA men. Potential challenges in the equity for AA men in headache medicine may be found in headache disparities, underrepresentation in headache research, and mistrust. Cultural differences may contribute to headache care inequities and cultural humility and sensitivity may be needed to assimilate culture's role in headache medicine. AA men, patients and providers, may experience microaggression and macroaggression as a result of implicit and explicit biases. Diversity tax is another challenge that may limit equity in those UIM. Table 2 summarizes the potential challenges discussed. In part two, we will opine possible solutions that may help achieve equity for AA men in headache medicine.

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