A CALL TO ACTION: INCREASING HEALTH PROVIDERS IN UNDERREPRESENTED POPULATIONS THROUGH THE MILITARY

G.L.A. HARRIS
Portland State University

EVELYN L. LEWIS
W. Montague Cobb/NMA Health Institute

MARGARET CALLOWAY *
Uniformed Services University of the Health Sciences (USUHS)

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ABSTRACT

The state of the nation's health and healthcare disparities looms large and is currently at crisis proportions, so much so, that these issues have been advanced as a national priority. These disparities are known to disproportionately afflict minorities and disadvantaged groups who become predisposed to certain risks. However, in light of the ever increasing racial and ethnic diversity of the American population, the visible absence of underrepresented minorities (URMs) in the health professions needed to meet these growing needs continues to fuel these crises.

The purpose of this paper is thus fourfold. First, to examine the reason (s) for the persistent shortage of underrepresented minorities in the health professions and the associated barriers they encounter in pursuing opportunities in these professions. Second, to determine the degree to which the shortage of URMs contributes to the current state of health and healthcare disparities among certain groups. Third, to identify nontraditional mechanisms like the military as a medium to help increase the number of URMs in the health professions pipeline. Finally, the authors discuss the role of cultural competence as an

essential skill set in rendering quality healthcare to minority patients; the strengths and limitations of their findings; and the implications of these findings for future research.

INTRODUCTION

By any measure, the state of the nation's health and healthcare disparities looms large and has reached such crisis proportions that the issues have been advanced as a national priority (General Accountability Office (GAO) 2003, Institute of Medicine (IOM) 2003). These inequities are known to disproportionately afflict minorities and disadvantaged groups who become predisposed to certain risks. Consider these facts. Minorities are far more likely than whites to experience health problems (Centers for Disease and Prevention Control (CDPC) 2007). Consequently, African American women die disproportionately of breast cancer more than any other racial and/or ethnic group, Native Americans are almost three times more likely than whites to be diagnosed with diabetes and 82 percent of the reported AIDS cases for children in 2001 occurred among African Americans and Hispanics. A recurring theme that is perhaps, at least in part, fueling these crises, is the visible absence of underrepresented minorities (URMs) from the health professions. Minority patients, and specifically URMs, are more likely than patients in other racial and ethnic groups to seek the assistance of health providers of their own race or ethnicity (Smith et al. 2009). And more research has again highlighted the problem (IoM 2003, Sullivan Commission 2004). According to the Sullivan Commission (2004), "The ghost of segregation continues to haunt the health professions" (p.5). Moreover, the acknowledgement and apology by the American Medical Association (AMA) for its role in more than a century of racism against African American physicians (AMA July 2008), along with the

projections for a population shift that will be comprised of 54 percent minority by 2050 (U.S. Census Bureau 2008), underscores the need to move beyond rhetoric to call for concerted action for significant increases of URMs in the health professions.

The purpose of this paper is to analyze the problem of underrepresented minorities' absence from the health professions through the following. First, to examine the reason (s) for the persistent shortage of URMs in the health professions and the associated barriers that they encounter in pursuing opportunities in the professions. Second, to determine to what degree does this shortage of URMs contribute to the current state of health and healthcare disparities among certain groups and why cultural competence is an essential skill set for providers to render quality healthcare to patients. This is of particular importance when clinicians provide care to racial and ethnic minority populations. This effort also serves as a tool to help narrow the health and healthcare disparities gap between majority and minority populations. Third, to identify, that while traditional approaches have had measured success, in the current climate of dwindling funding and sources from which such funds have been secured in the past, the recognition for the employment of more creative and nontraditional mechanisms such as the military to help increase, and more importantly, sustain the number of URMs in the health professions. Finally, the authors discuss the strengths and limitations of their analyses as well as the implications for future research.

THE PROBLEM

Compared to their overall composition in the general population at 25 percent, African Americans, Hispanics and Native Americans combined as a group are underrepresented in the nation's health professions (Sullivan Commission 2004, Grumbach and Mendoza 2008, Thicketts and Gaul 2004). Further, URMs' persistent absence from the health professions has been purported to be one in myriad of causes for the growing gaps in health and healthcare disparities between majority and minority populations. At present, URMs only comprise 9 percent and 5 percent, respectively, of the nation's nurses and dentists (Sullivan Commission 2004) although data for 2008 show a combined increase in the physician pool of 12.3 percent (AAMC 2010). Underrepresented minorities in the health professions only represent 7 percent at the state level and 2 percent at the county level (Thicketts and Gaul 2004). And, they are least likely to be represented in such subspecialties as cardiology, surgery and radiology (Betancourt and Maina 2004). Equally disturbing is that URMs' representation among the faculty of academic institutions that educate and prepare health professionals stands at less than 10 percent in nursing schools, 8.6 percent in dental schools and 4.2 percent in medical schools (Sullivan Commission 2004). More recent data by AAMC (2008) for 2007 for applicants to medical schools as well as underrepresented faculty within these schools are not particularly encouraging. For example, relative to whites, blacks, Hispanics and American Indians/Alaska Natives represent only 7.4 percent, 7.1 percent and .4 percent of applicants to U.S. medical schools whereas the same groups show a dismal 3 percent, 4.2 percent and .1 percent as faculty at these institutions during the same period. Asians, at 4.8 percent of the general population (U.S. Census 2011), continue to be significantly overrepresented

in the number of applicants to medical schools and the number of faculty in medical schools (19.8% v. 13.2%) for the same period (AAMC 2008). In addition, the representation of nurses, physicians, dentists and faculty from nursing, medical and dental schools by race and/or ethnicity as a percentage of the general population reflect similar patterns (AAMC 2008, Human Resources and Services Administration (HRSA) 2006, Sullivan Commission 2004).

At the state level, the picture is grim as well. For instance, in North Carolina in 2002, while 21 percent of the state's population is black and 4.7 percent are Hispanic, only 5.5 percent of the state's physicians are black followed by 1.5 percent who are Hispanic (Thicketts and Gaul 2004). While we do know that the primary reason for this absence is historically based, we may not necessarily be aware of and/or understand the contributing factors that continue to deter URMs from entering the health professions today.

The literature already identifies multiple initiatives that have been launched by various entities, all with the intent of increasing URMs in the health professions. Many such programs strive to foster and identify interests in the health disciplines at the earliest stages of students' education in an attempt to create a continuous pipeline of talent (Thurmond and Cregler 1999, Sono-Greene et al 1999, Thomson and Denk 1999, Fincher et al. 2002). However, at the same time, the research also indicates the pervasive challenges that consistently confront systematic and individual efforts at putting a discernible dent in the under representation of URMs in the health professions. These impediments only highlight the extent to which the problem is so entrenched that any obstacle threatens to undermine what little gains have already been achieved.

Systemic Challenges

Systemic barriers appear to have unleashed the most profound and adverse impact on the ability to increase the number of URMs in the health professions. Funding shortfalls at the federal level (Congressional Black Caucus (CBC) 2005), deficiencies in the public school education system (Grumbach and Mendoza 2008, Sullivan Commission 2004), refusals of and the need for certain institutions of higher learning to integrate (Sullivan Commission 2004) and court decisions citing any use of a race and/or ethnicity based selection as an admissions criterion in higher education as unconstitutional (Lakhan 2003, Hillman and Madison 2003, Pynes 2009); a slippery slope that seem to have taken its early cue from the landmark *University of California Regents v. Bakke, 438. U.S. 265 (1978)* ruling (Cornell University Law School). First, federal funding, which has served as the largest single source for promoting diversity in the healthcare workforce, has been severely decreased (CBC 2005, Smedley et al 2004, Grumbach and Mendoza 2008). This absence is not limited to clinical providers but extends to healthcare administration as well. For instance, many healthcare organizations have also fallen woefully short of providing programs that streamline a career path to recruit, develop and retain healthcare executives of color (Voges 2006). In fact, of 844 healthcare organizations that participated in a joint study, such programs to attract and promote minorities through the executive levels were ranked the lowest. And, of the respondent organizations, 84 percent of the chief executive officers were men and 96 percent were white.

Second, the nation's K-12 public school system has been inadequate in preparing students at the primary and secondary levels of education (Sullivan Commission 2004, Grumbach and Mendoza 2008, Lakhan 2003, Smedley et al. 2004, Erwin et al. 2004). This failure has reverberated system wide to create serious gaps in achievement for low

income and minority students as compared to white students (Smedley et al. 2004). Low income and minority students receive a lower quality of education, under perform on standardized tests and experience disproportionately high dropout rates (Sullivan Commission 2004). URMs are more likely than other students to attend primary and secondary level institutions that are economically segregated and underfunded (Smedley et al. 2004). These institutions are also more likely to have less credentialed teachers and are marred by low expectations (American Psychological Association 2003, Camara and Schmidt 1999). And, among URMs who aspire to high achievement, given the stereotype of low expectations, they may succumb to social and psychological pressures by underperforming, a condition dubbed as stereotype threat (Steele 1997). Additionally, higher education institutions have markedly increased their tuitions while grant funding to these same institutions has decreased (Advisory Committee on Student Financial Assistance 2002).

For URMs who attend college, over 50 percent will have dropped out before completion of the first year (Erwin et al. 2004). Moreover, many medical, dental and nursing schools were slow to integrate their student bodies as well as to actively recruit URMs as both students and faculty (Sullivan Commission 2004). The residual effect of this inaction has been that, although URMs have increased as students and faculty in these institutions over time, especially during the 1960s through 1980s given the baseline, the growth has not been large enough either to offset the losses nor to keep pace with the growth of an increasingly diverse general population. Finally, despite the amalgam of public and private programs that endeavor to support the increase of URMs in the health professions, the lack of coordination among them makes streamlining such efforts daunting (Grumbach and Mendoza 2008).

Legal court challenges to higher education selection criteria have also tested the system's ability to overcome even greater scrutiny. In the wake of the *University of California v. Bakke (1978)*, the U.S. Supreme Court struck down the extent to which race and/or ethnicity can be used in making admissions decisions to that institution's medical school (Riccucci 2007). The High Court concluded that while race may be appropriate as one in a composite of considerations in applying an affirmative action program, using such criterion solely could be suspect when a numerical rating is attached. Besides, such selection criterion was of no "compelling government interest" (Riccucci 2007, p.126-127). More recently, *Grutter v. Bollinger et al., 539 U.S. 306 (2003)* and *Gratz v. Bollinger et al., 5398, U.S. 244 (2003)* provided similar court verdicts (Riccucci 2007, Lakhan 2003, Pynes 2009). Yet, the number of amicus briefs filed, coupled with the presence of such well reputed organizations like Microsoft Corporation and three military academies, signaled the importance of employing a race and/or ethnicity conscious criterion (Hillman and Thomas 2003). According to the senior military leaders present, race is of a compelling government interest because of the country's national security imperative. Race, says Lakhan (2003), must be one in an array of criteria used for selection to medical schools given the demographical population shifts in order to reflect the diversity of that population. Selection criteria should therefore not be limited to academic achievement and should comprise of a complement of such non cognitive components like commitment to serve the underserved, for instance. For that reason, test scores are merely predictors of the likelihood to succeed; they are not designed to measure the full panoply of abilities for success in higher education (Sternberg and Williams 1997). In fact, where URMs have been enrolled in medical schools, they are equally as likely as white students to graduate, secure

board licensures and enter practice despite lower Medical College Admission Test (MCAT) scores, grade point averages and Graduate Record Examination (GRE) results because of poorly developed academic preparation (Grumbach and Mendoza 2008, Erwin et al. 2004). Traditional selection to medical schools in light of a changing and diverse population thus disregards the changing reality in society.

Other legal challenges to affirmative action in higher education such as *Hopwood et al. v. State of Texas et al. (84.F.3d 720, 1996)* and Proposition 209 in California, have both restricted the degree to which institutions of higher learning can use race and/or ethnicity in admissions decisions (Smedley et al. 2004, Pynes 2009, Grumbach and Mendoza 2008). As a result, enrollments of URMs in medical schools in Texas and California have declined precipitously between 1995 and 2000 (Grumbach and Mendoza 2008).

Figures 1 through 1b present data on URMs and women in U.S. medical schools. Figure 1 shows the application, acceptance, matriculation and graduation rates in medical schools by race and ethnicity as a percentage of the U.S. population. Figure 1a describes the acceptance and matriculation rates for women in U.S. medical schools by race and ethnicity. It is important to note that black women significantly exceed the acceptance and matriculation rates of black men. These data demonstrate a trend that is worrisome and is also reflected in the trend of the most recent figures on physicians in the workforce (AAMC 2010). Figure 1b represents medical school faculty by race and ethnicity. While most faculty for all groups are at the Assistant Professor rank, URM faculty tend to be disproportionately concentrated at the lowest levels of the professoriate. For example, Figure 2 shows the distribution of graduates from medical school by race and ethnicity from 1990 through 2007. Unfortunately, the graduation

rates for such allied fields as dental, pharmacy, public health and nursng for URMs during certain truncated periods (1980-81, 1990-91 and 1999-2000) are as bleak (Analysis: U.S. Health Workforce (n.d.). See Figures 3 through 3c below for the distribution rates of URMs graduating from the institutions that train these allied professionals (i.e., dental, pharmacy, public health) (1980-81, 1990-91 and 1999-2000), where data are available, that reflect these similar trends

Figure 1: **Application, Acceptance, Matriculation and Graduation Rates in U.S. Medical Schools by Race and Ethnicity: Percentage of the General Population, 2007**
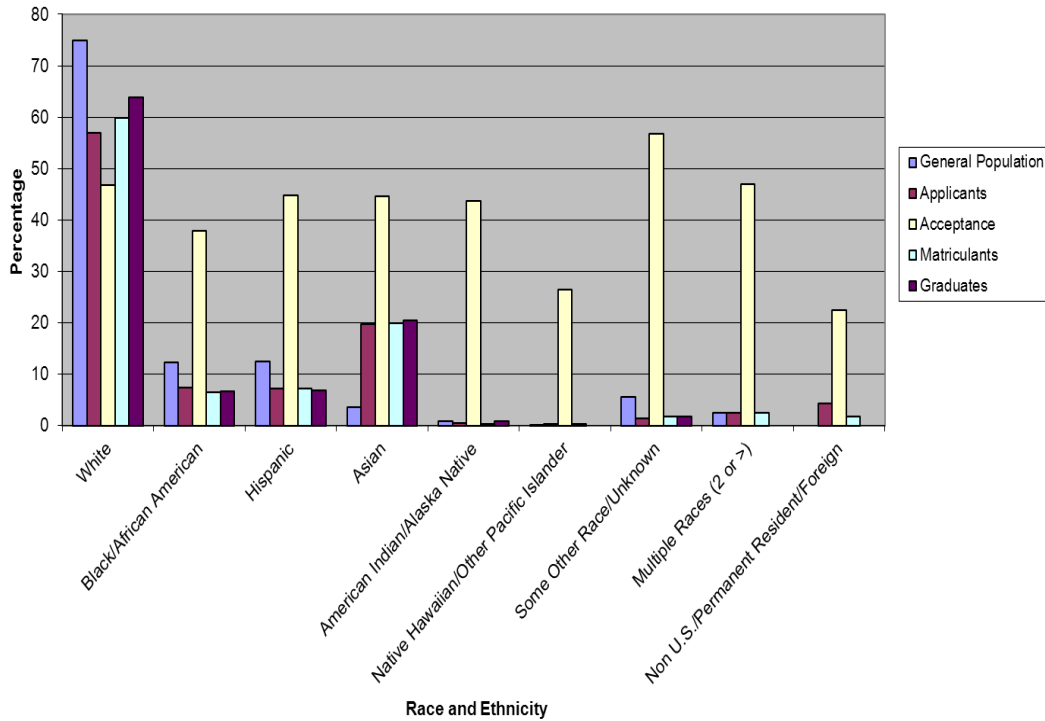Source: U.S. Census Bureau, Census Bureau 2000; Association of American Medical Colleges, 2008

Figure 1a: **Acceptance and Matriculation Rates for Women in U.S. Medical Schools by Race and Ethnicity for 2007**
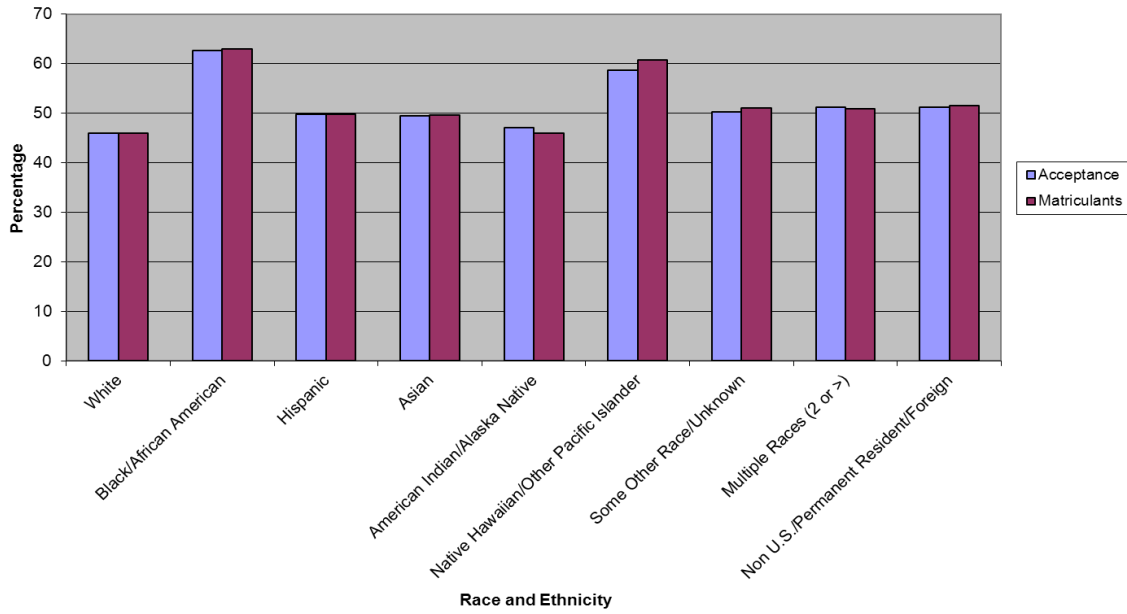<u>Source</u>: Association of American Medical Colleges, 2008

Figure 1b: Representation of U.S. Medical Schools Faculty by Rank, Race and Ethnicity, 2007
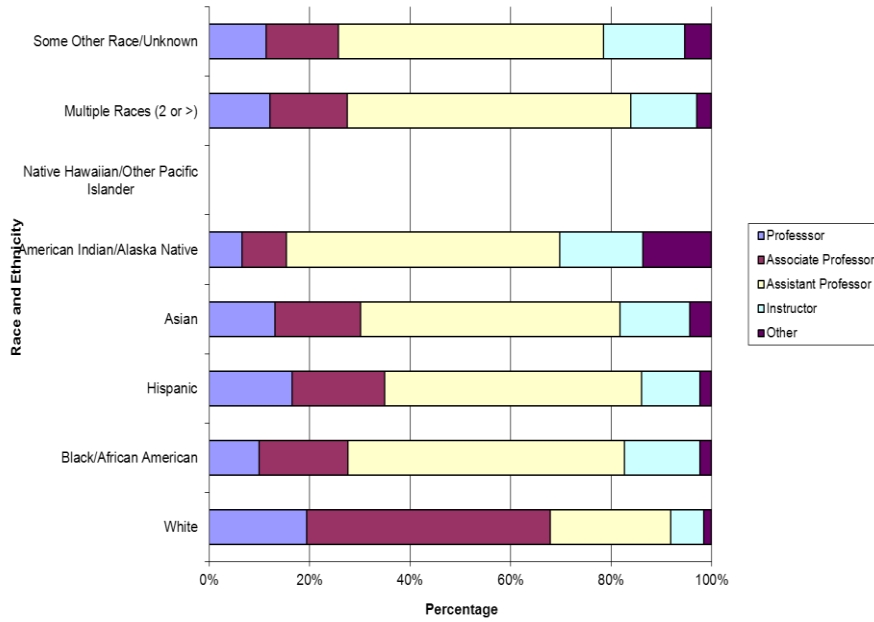Source: Association of American Medical Colleges, 2008

Figure 2: Distribution of Graduates from U.S. Medical Schools between 1990-2007 by Race and Ethnicity
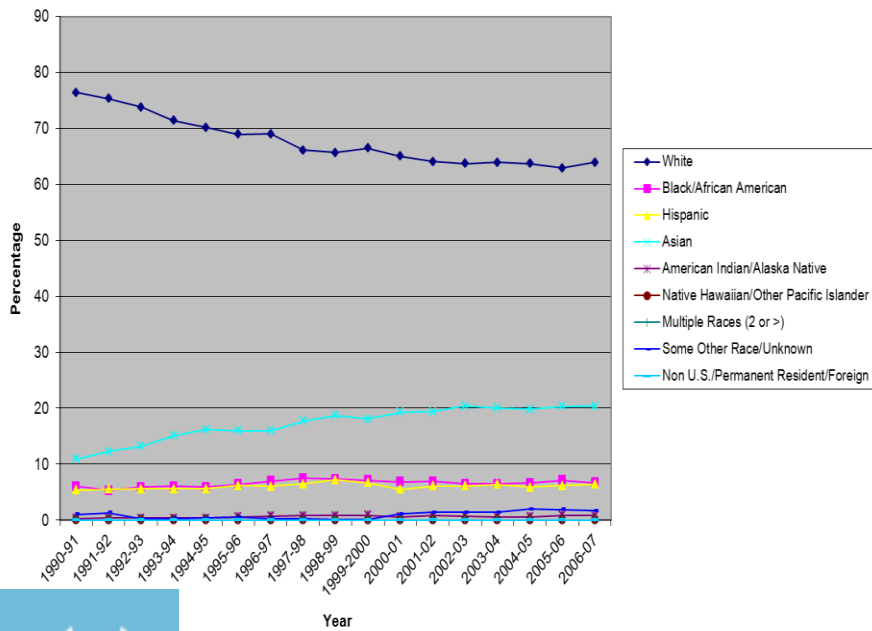Source: Association of American Medical Colleges, 2008

Figure 3. Distribution of Graduates from U.S. Dental Schools between the period of 1980-81,
1990-91 and 1999-2000, by Race and Ethnicity
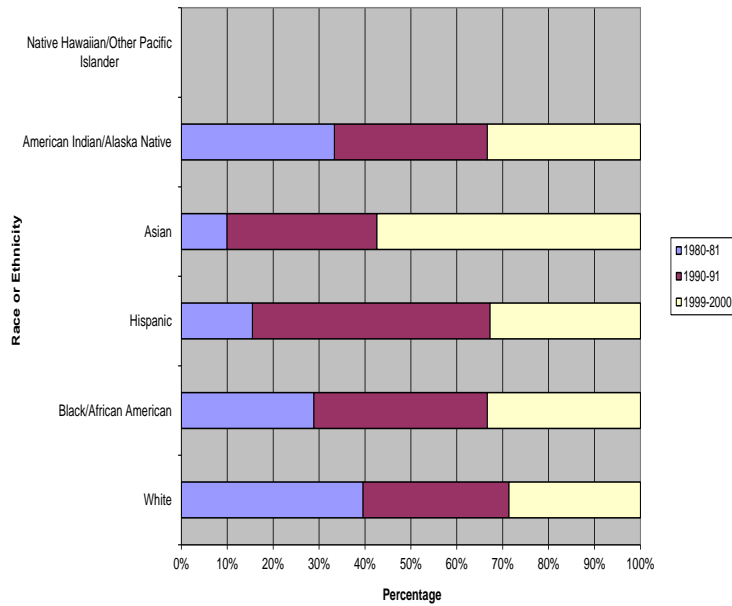Source: National Center for Health Workforce Analysis: U.S. Health Workforce

Figure 3a: Distribution of Graduates from U.S. Schools of Pharmacy between the periods of
1980-81, 1990-91 and 1999-2000, by Race and Ethnicity
Source: National Center for Health Workforce Analysis: U.S. Health Workforce

Figure 3b: Distributuion of Graduates from U.S. Schools of Public Health between the periods of 1980-81, 1990-91 and 1999-2000, by Race and Ethnicity
Source: National Center for Health Workforce Analysis: U.S. Health Workforce
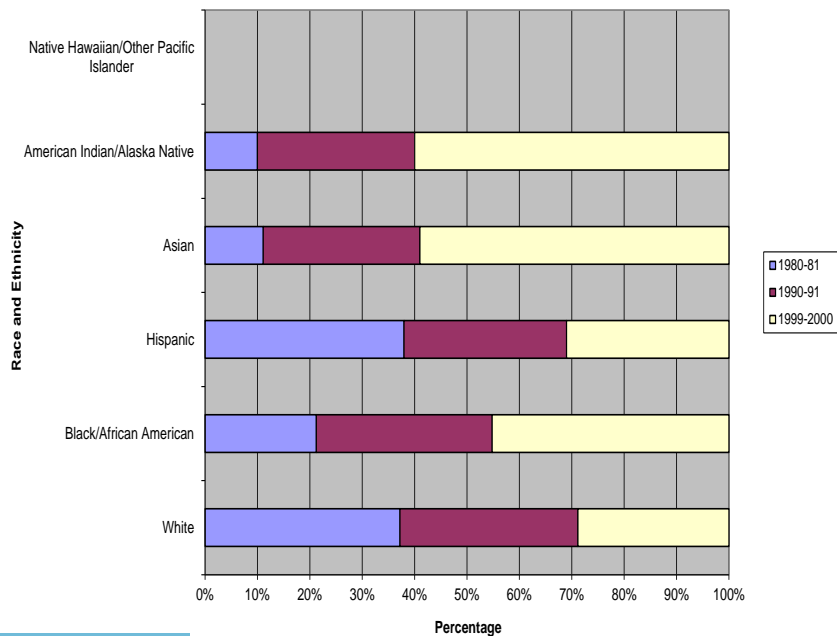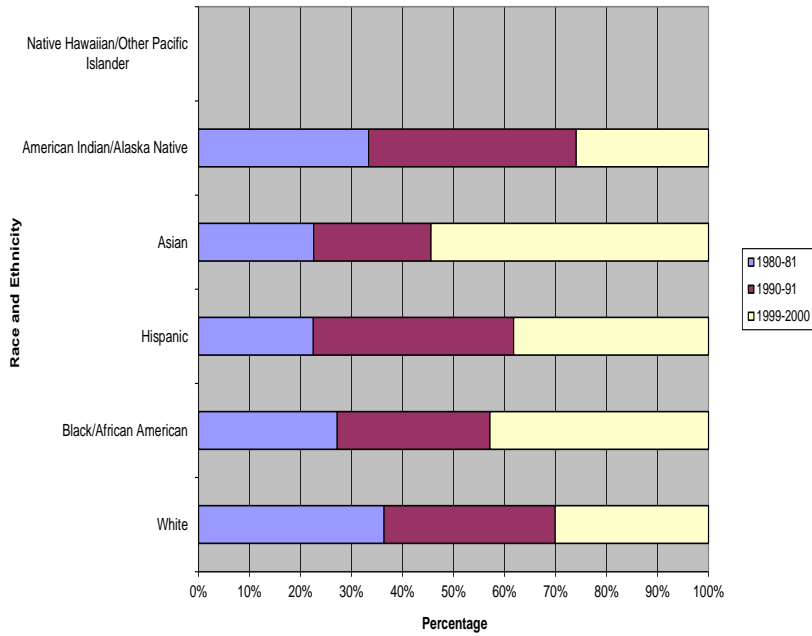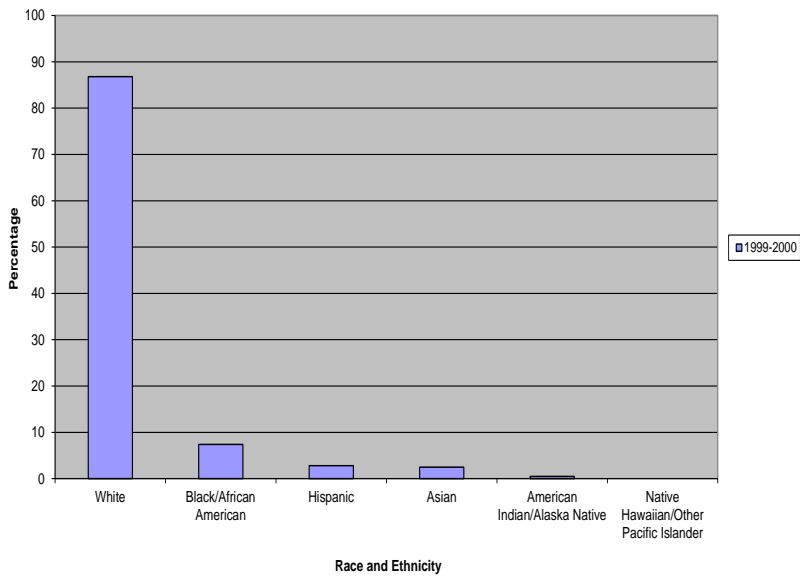

Figure 3c: Distribution of Graduates from Schools of Nursing for 1999-2000 by Race and Ethnicity
Source: National Center for Health Workforce Analysis: U.S. Health Workforce

Individual Challenges

Collectively, an overwhelming number of factors serve as deterrents at the individual level to prevent the increase of URMs in the health professions. Given the systematic reduction in education funding and the steady and simultaneous increases in tuition, many URM students are left to fend for themselves to secure needed funding for higher education. And where available, such funding is sparsely distributed on an as need basis only and at a time when the need for such funding has exponentially increased (Advisory Committee on Student Financial Assistance 2002). URM students thus see themselves, unlike their white counterparts, as less likely to be able to foresee the likelihood of completing college following their secondary education and less likely to complete college because of the consistent financial burdens (Advisory Committee on Student Financial Assistance 2002, U.S. Department of Education 2003, College Board 2003). Such dismal chances for higher education discourages other URMs from attempting to pursue this path.

Even for URMs who participated in programs in the health sciences as "gifted" (p.448) high school students in the Student Education Enrichment Program (SEEP) at the Medical College of Georgia, an examination of two cohorts between 1984 and 1988 and from 1989 through 1991 showed that although the majority of students expressed an interest in pursuing the health sciences as a career, most with the desire to become physicians, many failed to continue because of intervening factors (Thurmond and Cregler 1999). These factors included students who had either lost interest in pursuing the health track, some transferred to non-health related fields such as engineering, business and accounting, while others lost an interest altogether in pursuing a higher education. Most of the students in the program also cited the following reasons for short circuiting their trajectory towards the health

professions in that they: felt ill prepared to succeed in the sciences, experienced a fear of failure given low grades, were exposed to other interests via internships and mentorships, the length and commitment required to pursue the health professions, developed new interests brought about by taking other courses and being recruited by schools and other disciplines that required changing fields of study. The study concluded that many of the students might have also under reported their challenges with coursework in the health sciences.

Other studies cite similar and additional challenges for URM students' failure to pursue the health professions (Odom et al. 2007, Rao and Flores 2007, Gonzalez et al. 2010). This includes little to no support from family and peers, the perception that racism permeates the health science careers and healthcare organizations in general and the type cast that physicians are white and male (Odom et al. 2007). Other challenges to URMs' entrance into the health professions stem from clashes with perceived cultural norms with reality (i.e., teenage pregnancies and cycles of depression), no direct role models in the fields and a lack of encouragement by their primary and secondary educational institutions in emphasizing the importance of and taking the necessary steps towards pursuing a higher education (Rao and Flores 2007). Still, for others, the discouragement was accompanied by the double jeopardy of also being female (Gonzalez et al. 2010).

Specifically, studies on the Hispanic population mirror those of URMs in general although Hispanics face unique language hurdles that appear to compound the mix (Rios-Ellis and Frates 2005, Robert Wood Johnson 2001). Lack of role models also help to explain the low numbers of Hispanics in the health professions (Grumbach et al. 2003), underachievement at the primary and secondary levels of education (Therrien and Ramirez 2004), and for

those who pursue higher education, they are less likely than whites to graduate from college (Fry 2004). Hispanics are belabored with delayed college enrollments, a disproportionate financial burden for the family, remaining in the family home while pursuing a higher education and being confronted with the rising costs of higher education. And like all URMs, Hispanics are disproportionately beleaguered with attending economically disadvantaged primary and secondary schools in light of their residence in poor locales. See Table 1 for a list, by race and ethnicity, of the top ten factors that students use in determining their selection to attend the nation's medical schools. It is worth noting that only two of the three URM groups, African Americans and Hispanics, consider the student diversity of the institution to be an important factor in making their decisions. Asian Americans, a minority in the population, but overrepresented in the scientific and health professions overall, also consider student diversity to be as important in making this choice. And, while all student groups consider the cost to attend medical school as an important factor in their decision making, all URM groups view financial support as key to their medical school education.

Table 1

The Top Ten Reasons for Matriculating at Specific U.S. Medical Schools by Race and Ethnicity, 2007

White	%	Black/AA	%	Hispanic	%	Asian	%	AI/AN	%
1. Location of school	46.5	**1.** Location of school	43.9	**1.** Location of school	48.4	**1.** Location of school	38	**1.** Location of school	48.4
2. General School reputation	38	**2.** Methods/ Curriculum	40.6	**2.** General school reputation	45.4	**2.** In state school	33.5	**2.** General school reputation	39.9
3. In state school	37.4	**3.** General school reputation	39.5	**3.** In state school	41.8	**3.** Ability to place residents	32.9	**3.** In state school	39
4. Methods/ Curriculum	35.9	**4.** Ability to place residents	36.8	**4.** Ability to place residents	38.8	**4.** General school reputation	32.2	**4.** Methods/ curriculum	37.2
5. Cost to attend	30.9	**5.** Minority programs	36.7	**5.** Methods/ curriculum	35.5	**5.** Methods/ curriculum	29	**5.** Cost to attend	34.2
6. Ability to place residents	30	**6.** Community experience	34.9	**6.** Cost to attend	33	**6.** Cost to attend	27.8	**6.** Faculty mentorship	30.3
7. Faculty mentorship	22.8	**7.** Financial support offered	33.9	**7.** Community experience	32.1	**7.** Faculty mentorship	25.5	**7.** Ability to place residents	28.3
8. Community experience	21	**8.** Cost to attend	33.2	**8.** Student diversity	27.7	**8.** Student diversity	22.3	**8.** Community experience	27.8
9. Advice of parents	19.4	**9.** Faculty mentorship	31	**9.** Financial support offered	23.3	**9.** Advice of parents	21.8	**9.** School research	23.4
10. Advice of alumni	19.2	**10.** Student diversity	30.9	**10.** School research	23.1	**10.** Community experience	20.4	**10.** Financial support offered	23

- % = Percentage
- Black/AA = Black/ African American
- AI/AN = American Indian/Alaska Native

Source: Association of American Medical Colleges, 2008

THE RELATIONSHIP BEWTEEN HEALTH AND HEALTHCARE DISPARITIES AND URMs' ABSENCE FROM THE HEALTH PROFESSIONS

Given the current state of affairs, it then goes without saying that the path to higher education in the pursuit of careers in the health professions for URMs is uniformly bleak. As such, it is primarily suspected that URMs' absence from the health professions is directly correlated with the resultant health and healthcare disparities among these same groups. Their absence appears to amplify and even magnify the rates at which health and healthcare disparities occur. Yet, where available as health professionals, particularly as physicians, URMs are far more apt than whites to serve in underserved and minority communities (Sullivan 2004, Mitchell and Lassiter 2006, Cooper and Powe 2004, U.S. Department of Health 2006). Additionally, the available incentives and/or reimbursements serve as disincentives for majority health providers to practice in these regions (IoM 2003, Morrison et al. 2000). Although URMs are disproportionately more prone to certain health and healthcare disparities due to the lack of health insurance, even when they have on par health insurance as whites, they receive subpar healthcare (IoM 2003, National Healthcare Disparities Report (NDHR) 2007) despite more recent evidence that the gap in insurance coverage between whites and priority populations like blacks has decreased (NDHR 2010). This demonstrates how the cycle of inequities is perpetuated because of patient, provider and system level factors that imbue cultural bias and insensitivity in overall healthcare delivery (Schulman et al. 1999, IoM 2003, GAO 2003). Consequently, URMs are less likely to trust majority physicians, for instance, especially when the physician's race and/or ethnicity differs from their own (Boulware et al. 2003, Collins et al. 2002, Cooper and Powe 2004, Burgess

et al. 2004, Cooper et al. 2003, Johnson et al. 2004) coupled with a system that they inherently distrust (IoM 2003, Graham 2007). Factors such as trust and patient and provider concordance have been found to be crucial to quality healthcare delivery and outcome (Cooper and Powe 2004, Johnson et al. 2004, Collins et al. 2002, Ngo-Metzger et al. 2006, Street et al. 2008, Blanchard et al. 2007).

Another related and less informed but troubling pattern that appears to complicate the health and healthcare disparities dilemma among URMs and thereby the immediate need for their presence in the health professions, is the almost absence of URMs in clinical trials. These low numbers may be indicative of the socioeconomic factors that render information about clinical trials inaccessible given the lack of quality healthcare, lack of information about the importance of participating in clinical trials and the lack of availability of "culturally appropriate" materials that promote clinical trials (Christian and Trimble 2003, p.278s). Moreover, because socio-economic status (SES) factors play a vital role in the likelihood and the degree to which certain at risk groups access healthcare and information about healthcare (NDHR 2010), they are less likely to become participants in clinical trials. This situation is akin to a vicious quandary as it is exacerbated by the few URMs who serve as health professionals, particularly in research. The low number of URMs in clinical trials can also be attributed to mistrust of the research community and the healthcare system at large. Research shows a primal distrust of the healthcare system, especially with regard to the government by African Americans, given the legacy of the Tuskegee syphilis experiment (Graham 2007). One study that measured the attitudes of African Americans about participating in clinical trials for cancer related diseases signified that level of distrust (Stark et al. 2002). In fact, many of the study's participants cited the Tuskegee syphilis experiment as their

primary reason for distrust. Further, the need that either the health providers and/or clinical trial researchers share the same race with participants was another often cited important factor that would increase subjects' likelihood of participating in clinical trials. Yet, African Americans disproportionately suffer from cancer related illnesses more than whites (Freimuth et al. 2001). Therefore, researchers from racial and/or ethnic minorities are believed to be better positioned to contend with these challenges (Powell and Fleming 2000).

The additional challenge is the still abysmally low presence of URMs who either enter and/or hold tenured faculty positions in academic medicine (Christian and Trimble 2003). This same pattern extends to URMs, who as researchers, hold few National Cancer Institute (NCI) sponsored grants. It is surmised that by having more URMs involved in research, particularly as principal investigators, protocols can be so designed to study those disorders that disproportionately impact minorities and more can be employed as a means to assist in recruiting minorities for clinical research trials.

The Role of Cultural Competence

The evidence is thus irrefutable that the shortage of URMs as health professionals significantly contributes to the dual crises of health and healthcare disparities among minority groups. However, it is believed that in addition to drastically increasing the number of URMs in the health professions to help mitigate the crises while addressing the health related needs of an increasingly diverse population, it is vital that such efforts are complemented with cultural competence training, for all providers, particularly providers of different racial and ethnic backgrounds to ensure that they are rendering quality healthcare to minority patients. Cultural competence has evolved as a viable response to address health and healthcare disparities that

disproportionately plague at risk populations. The term is defined as acknowledging, assessing, incorporating and adapting the role of culture through cross cultural relations, understanding cultural differences and expanding cultural knowledge to address unique cultural needs in the delivery of healthcare (Betancourt et al. 2003). Cultural incompetence then on the part of health providers in tandem with a culturally insensitive healthcare system serve as fodder for enabling systemic inequities in healthcare (IoM 2003, Chen and Bargh 1997, Burgess et al. 2004, Collins et al. 2002, NDHR 2003, Ngo-Metzger et al. 2006, Street et al. 2007, Cooper and Powe 2004, Street et al. 2008, Blanchard et al. 2007, Saha et al. 2003, Johnson et al. 2004). Thus, racial and ethnic minorities are much more likely than whites to delay seeking healthcare until symptoms become acute (Edwards et al. 2005). This fact is heightened by at risk groups' susceptibility to certain diseases and/or congenital conditions (Tuckson 2004, American Heart Association 2006) as well as the simultaneous widening of health and healthcare disparity rates (NDHR 2010).

Requiring that health providers possess requisite skills in cultural competence is one medium through which, it is hoped, to have a stabilizing effect on health and healthcare disparities, if not to eradicate them altogether (IoM 2003, Blanchard et al. 2007, Harris 2009). However, developing culturally competent health providers cannot be limited to securing knowledge in an academic setting (i.e., textbooks and classroom lectures) (Cohen et al. 2002). Utilizing a holistic approach is key in showing the interdependency between cultural and societal factors while capitalizing on the existing range of provider skills as leverage (IoM 2003, Blanchard et al. 2007) and a conduit for helping to change health professionals' behaviors (Horner et al. 2004). While there have been a plethora of ways in which cultural competence can be achieved such as

those espoused by Betancourt et al. (2002) and Mayberry et al. (2006), for instance, a more inclusive and comprehensive approach has been devised by Horner et al. (2004). The researchers highlighted 5 interconnected activities in developing cultural competency skills. They include classroom training in cultural competence, the responsibility of healthcare organizations to develop systems that trigger those practices most prone to result in disparities to serve as warning signals, cultural competence should become a requirement for professional certification and institution accreditation, a diverse representation of groups on governing and accrediting boards and increasing the diversity of health professionals. These steps are believed to be the most promising modalities to date for inculcating a culturally competent workforce, primary among them, increasing the number of URMs in the field. Hence, these steps serve as the basis for patient provider concordance that is characterized by respect and cooperation on the part of both the patient and the provider to facilitate positive healthcare delivery outcomes for the patient (IoM 2003, Street et al. 2007, Saha et al. 2000 and 2003, Johnson et al. 2004). See Table 2 for a composite of the stages towards developing a culturally competent healthcare workforce.

Table 2.
Recommended Stages toward Developing a Culturally Competent Health Provider Workforce

Type Program	Description	Target Audience	Responsibility for Implementation	Timeline
Cultural Competence Education	Evidence based training in cultural competence	All health and healthcare professionals in training and practice	Educational organization (i.e., medical school) Continuing education organization	Identify or create programs of study in cultural competence w/in 2 years Implement w/in 3 years
Monitoring and Evaluation of healthcare processes	Collection, analysis, dissemination of information according to information on the processes of care according to race, ethnicity, social class and language of patient population	All health and healthcare professionals in practice	Healthcare organization	Develop instructions (i.e., programs) w/in 1 year Implement w/in 3 years
Certification and Accreditation	Certificate of Cultural Competence training Healthcare professional certified as culturally competent	All healthcare professionals in Practice Healthcare organization	Professional society (i.e., AMA) Accrediting body (i.e., JCAHO)	Develop criteria for evaluation w/2 years Implement criteria w/in 3 years
Clinical practice governing boards	Oversight board on cultural competence. Should be representative of all stakeholders (i.e., healthcare providers, administrators, 3rd party payers, members of professional organizations and societies, patients)	Healthcare organizations	Healthcare organizations	Create and implement governing boards w/in 2 years
Promotion of Workforce Diversity	Mentoring and support programs for pre-college, undergraduate and	Healthcare professional schools and healthcare	Healthcare professional schools	Identify or develop a mentoring support program

graduate URM students	organizations		w/in 2 years and implement w/in 3 years
		Federal government	
Utilize interpreters		Federal government	Enforce immediately
Enforcement of Title VII provisions		Local, state or federal government	Enforce immediately
Monetary incentives to healthcare organizations to recruit minority healthcare professionals			Identify or develop incentive programs w/in 2 years for implementation w/in 3 years

Source: Horner et al, 2004

USING NONTRADITIONAL MECHANISMS FOR INCREASING URMS IN THE HEALTH PROFESSIONS: ADVANCING THE MILITARY MODEL

The term "pipeline" has become synonymous with increasing URMs in the health professions through early intervention and exposure to the health fields and sciences by way of education, scholarships, training, recruitment and retention and placement and counseling in the pursuit of these careers among the underserved and in underserved communities (Rickettes et al. 2004, p.383). While there have been numerous purposeful attempts at increasing the number of URMs in the health professions via traditional media such as those at medical schools like Howard University and Meharry University (Thurmond and Kirch 1998), according to Smedley et al. (2004), these altruistic efforts have been met with limited success. The largest single source of funding for these initiatives, the federal government, has drastically curtailed its financial support (CBC 2005, Smedley et al. 2004, Grumbach and Mendoza 2008) at a time when the need for and barriers to such

funding are the greatest along with the increasing costs to institutions of higher learning. However, health professional educational institutions (HPEIs); federal, state and local government and foundation initiatives; have often functioned as a bridge in an effort to ameliorate the negative effects of some of these barriers to supplement funding.

For example, at the federal level, the Health Resources and Services Administration (HRSA) has been a major source of funding for such efforts as well as the Health Careers Opportunity Program (HCOP) that complements many initiatives (Smedley et al. 2004, Thurmond and Kirch 1998). The state of North Carolina is one of many states that actively engages collaborations between multiple educational institutions to introduce URM students to the health professions as early as elementary school (Ricketts et al. 2004). State Colleges like the Medical College of Georgia runs programs with high school students in the SEEP (Thurmond and Cregler 1999) and New Jersey runs minority enrichment programs through the Partnership for Health Professions Education with high schools, universities, community organizations, schools that prepare health professionals and the federal government (Soto-Green et al. 1999). The Junior Fellows Program of New York, where a partnership between the New York Academy of Medicine and high schools around the boroughs of Manhattan and medical centers, proactively seek to motivate and increase students' interest in the health sciences, medicine and research, is an example of a thriving effort at the local level (Marcelin et al. 2004). Local programs include the Latino Healthcare Professionals Project (LHPP) in California, a privately run effort to increase first generation Latinos in healthcare administration (Rios-Ellis and Frates 2005). The AAMC has also launched partnerships with many state medical schools as part of its Project 3000 by 2000 initiative to

increase URMs in the health professions (Thomson and Denk 1999) continues today (Terrell and Boudreau 2003). And foundations like the Pew Health Professions Commission, W.K. Kellogg, Robert Wood Johnson and Josiah H. Macy, Jr., are some examples of private endeavors at work that share an interest in diversifying the health professions (Thomson and Denk 1999, Ricketts and Gaul 2004).

According to the most recent data by AAMC (2008), the number of URM applicants to medical schools is showing steady increases. Yet, despite these increases, African Americans and Hispanics are still underrepresented relative to their composition in the general population (AAMC 2010). And, African American matriculants to medical schools still represent the smallest of any racial and/or ethnic group. Growth of URM faculty in medical schools continues to be of concern as well. Further, available URMs tend to be situated at the lowest faculty rank (i.e., assistant professor). Still, in spite of the overall promise for the status of URMs, the AAMC concluded that "…Black or African American men are not entering medicine in comparable numbers" (AAMC 2008, p.38). And, data on the physician workforce shows a retrenchment of black male physicians (44.7%) as compared to their black female counterparts (55.3%) (AAMC 2010). In essence, the work of continuing the recruitment, increase and retention of URMs into the health professions is an ongoing challenge.

Medical Education and the Military
The literature is teeming with the plethora of approaches that are already being employed, all with the goal of increasing URMs' representation in the health professions. However, in the wake of declining funding for such programs coupled with the increasing costs of higher education, it therefore becomes an imperative to seek

alternative and nontraditional pathways towards this pursuit. The purpose of this section of the paper is to identify and advance non- traditional mechanisms to help increase the number of URMs in the health professions' pipeline.

The military is one nontraditional avenue through which URMs can attain a quality education in the health professions and to offset the costs of attending such institutions through obligation for military service.

Uniformed Services University of the Health Sciences (USUHS)

The Uniformed Services University of the Health Sciences (USUHS) is the only multi-service institution in the United States that is solely dedicated to the formal education, training and preparation of the health professions for the military (http://www.usuhs.mil). This mode of education also includes U.S. Public Health Service personnel and selected civilians from the federal government. Specifically, for entrance to USUHS' medical school, each branch of the military is allotted a limited number of billets annually for incoming medical students (USUHS Summary of Admissions Data, January 2011). A total of 171 students from the military branches combined are matriculated annually to the F. Hebert School of Medicine (USUHS subject matter expert (SME)1, February 2009). USUHS derives its student bodies each year from a combination of sources including but may not be limited to colleges and universities around the country, the military academies, and a select few members from the military's enlisted corps. The Department of Defense (DoD) offers financing for medical school through the Health Professional Scholarship Program (HSPS) (HSPS website). This program provides financial assistance for pursuing terminal degrees in medicine, dentistry, optometry and as physician assistants. Recipients of these scholarships attend

civilian medical schools, complete rotations at civilian or military medical facilities and receive a monthly stipend for living expenses (SME 1, February 2009; HSPS website). Upon completion of medical school or those with training from the allied disciplines, officers are required to complete residency requirements along with an additional year of training before deployment to their respective duty assignments. Those who graduate from training at USUHS are far more likely than other officers to remain in the military. Additionally, by way of an initial $6.5 million grant from the National Institutes of Health (NIH), USUHS established a Center for Health Disparities Research for the purpose of research, education and training about health and healthcare disparities and to provide outreach services to underserved and minority communities (USUHS, SME2, January 16, 2009). However, like its civilian counterparts, USUHS struggles to attract and retain qualified URMs to its medical school and faces additional and unique challenges that are not being borne by like institutions within the civilian sector.

First, USUHS is constrained by the nature of its mission, and in doing so, it mandates a quid pro quo agreement with those who join its ranks. Moreover, as part of receiving a medical education courtesy of the Department of Defense (DoD), recipients must serve in the military, and by extension, do so in military uniform for a specified period of time as a way of remunerating DoD for medical school. Particularly during times of war or major campaigns, however, it becomes even more difficult to make the case for military service as compelling as during peacetime. In the current era of Operations Enduring Freedom (Afghanistan) and New Dawn (post Operation Iraqi Freedom), attracting high quality recruits to the military, even if the incentive means defraying the expense of a medical education, becomes almost impossible. Moreover, there has been a steady decline in the number of

URMs who have traditionally looked to the military for a career (Regan 2005, Armour 1996, Baldor 2007) as well as among white men between the ages of 18 through 24 (White 2005). Junior Army officers, for instance, are leaving the military at disturbing rates (Shanker 2006). Second, USUHS is equally hampered by having to compete for the same applicant pool for its medical school as civilian medical schools. In this case, association with the military becomes a liability. Third, as part of military service and upon completion of medical school, graduates may be geographically placed to serve in areas of conflict. Unfortunately, these assignments over time may only result in a fourth disadvantage for the military; that is, following the completion of military service, physicians and healthcare professionals trained by the military may leave the institution to leverage their skills in the civilian sector. In some respects, and especially during times of conflict, the military finds itself in an almost untenable position in this regard. Finally, once trained as health professionals, the military strives to compete with the civilian sector to retain its best and brightest given the more lucrative compensation packages that the civilian sector can offer.

Recruiting Experienced Civilian Providers

The military strategically mitigates these disadvantages through other avenues including the employment of certain incentives. For example, the military recruits health professionals who are already physicians in the civilian community (SME1, February 2009) through direct commission to the military. In turn, the military offers such safeguards as the recruits' malpractice insurance to continue practicing as physicians in the military, assumes the costs of outstanding student loans and provides bonuses to recruits to help equalize the salaries offered in the civilian sector. Recruits are commissioned as officers to selected branches of the

military and are compensated according to rank and years of experience, regardless of healthcare specialty. Unlike in the civilian sector, commissioned officers' clientele are both military and their civilian dependents who have health insurance. Consequently, military physicians and other healthcare professionals need not spend time in discerning whether or not clients have health insurance or the ability to pay for services rendered since all clients secure healthcare through an equal access system courtesy of the Department of Defense.

Commissioning Select Members of the Enlisted Corps

The military encourages its members who are already in the enlisted corps to become commissioned officers to pursue careers in the health professions (SME 1, February 2009). Many members of the enlisted corps are already working and trained as technicians within the healthcare field in the military. Parlaying their skills as commissioned officers provides an opportunity to leverage these skills. For this reason, the military targets "high quality" recruits from the civilian population who are college bound (Segal and Weschler Segal 2004) and are motivated in the sense that they know what they want. Other recruits who are uncertain about their career aspirations may have been mentored by senior military personnel or have been influenced by others in the military to pursue a college education. Others initiate their college education through their own efforts, perhaps out of curiosity. Some are commissioned to USUHS (SME 1 March 1, 2011). And, still others join the military as a means to an end by making a conscious decision to join the military as a conduit for financing a college education. By doing so, they eventually accrue two years, four years or six years of an initial enlistment in the enlisted corps towards retirement several years later as officers in the commissioned corps. As well, the military can continue to

capitalize on this group, for as borne out by research, those who are commissioned from the enlisted corps through Officer Training or Candidate School (OTS/OCS) are as likely as those who are commissioned through the military academies to become career military officers (Smith et al. 2001, Stone et al. 1998).

Historically Black Colleges and Universities (HBCUs)

The military has had a long standing relationship with many of the nation's historically black colleges and universities (HBCUs) (DoD 1999) that act as a key resource for bringing in African Americans to the commissioned corps. Thus, HBCUs already function as feeder groups for the military which can markedly leverage its use of these resources to recruit, train, promote, retain and thus sustain an ongoing complement of African American healthcare professionals. Of noteworthy mention is that the military too must be mindful of an increase in health and healthcare disparities within certain segments of its own population since this population represents a subset of the larger general civilian population (Harris 2011). Additionally, as research has already shown, access to on par healthcare for civilians does not translate into quality healthcare for certain groups (IoM 2003). Likewise, the military, despite the presence of an equal access healthcare system, is equally vulnerable to these disparities (Harris 2011). As such, having a cadre of qualified health providers to meet the growing needs of URMs in the military as well as their families would be a prudent approach in keeping any and all health and healthcare disparities at bay.

### *The Service Academies and the Reserve Officer Training Corps*

While the data is limited to active duty officers and only up to 1997, the military academies represent the least likely source of commission for URMs (DoD 1999). Blacks

and Hispanics are more likely to enter the military through the Reserve Officer Training Corps (ROTC). No data is available for Native Americans. Accordingly, two percent of military academy graduates pursue the medical profession (SME 1 March 1, 2011). Data on active duty and reserve officers show that sizeable numbers of URMs are placed in the healthcare professions (Population Report 2009), although as stated, it is difficult to discern specifically what occupations comprise this healthcare category. Additionally, officers in both the active duty and reserve components in healthcare under the unknown and multiple race demographic categories command the largess of where many officers are placed. Many URMs from ROTC also tend to be concentrated in support occupations like the health related fields (DoD 1999).

Below, Figure 4 shows the distribution rates for application, acceptance and matriculation at USUHS' medical school by race and ethnicity as a percentage of the general civilian population from 2003 through 2009. African Americans continue to significantly lag behind in all three categories (applicants, acceptance and matriculants) as compared to the two remaining URM groups. More striking is how closely the rates at which Asians apply, are accepted and matriculated in medical school in the military mirror those of civilian medical schools despite their disproportionately small representation within the general civilian population. Note, however, that USUHS, unlike civilian medical schools, does not aggregate Asians and Other Pacific Islanders as separate racial and ethnic groups but as one group. As a result, the data for this group is skewed given the inclusion

Figure 4: Application, Acceptance and Matriculation Rates for USUHS' F. Hebert School of Medicine by Race and Ethnicity: Percentage of the General Civilian Population, 2003-2009
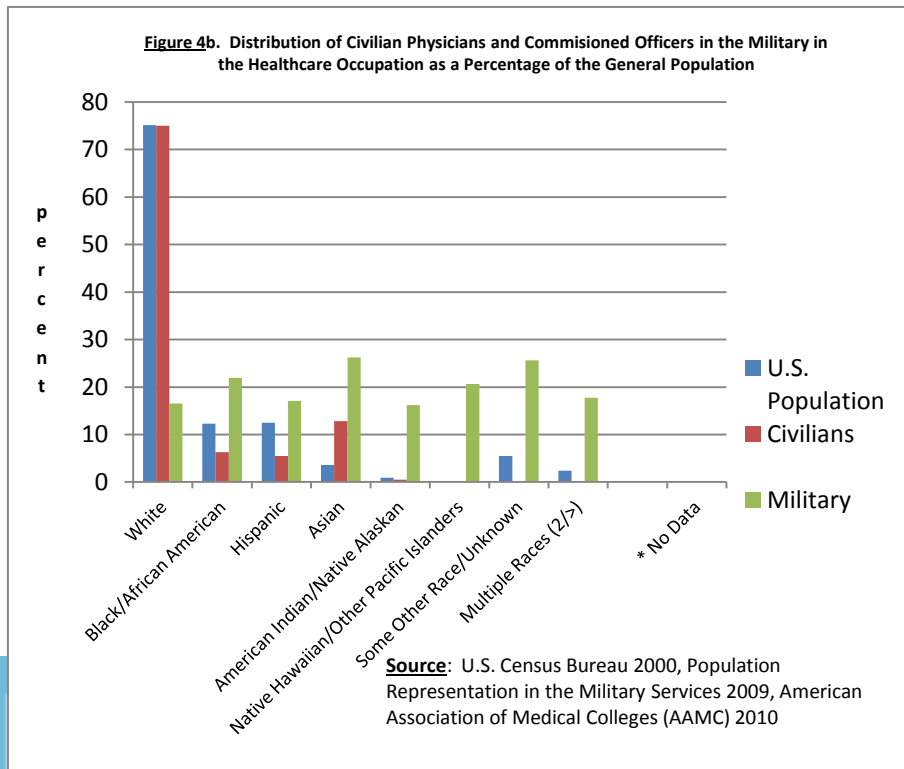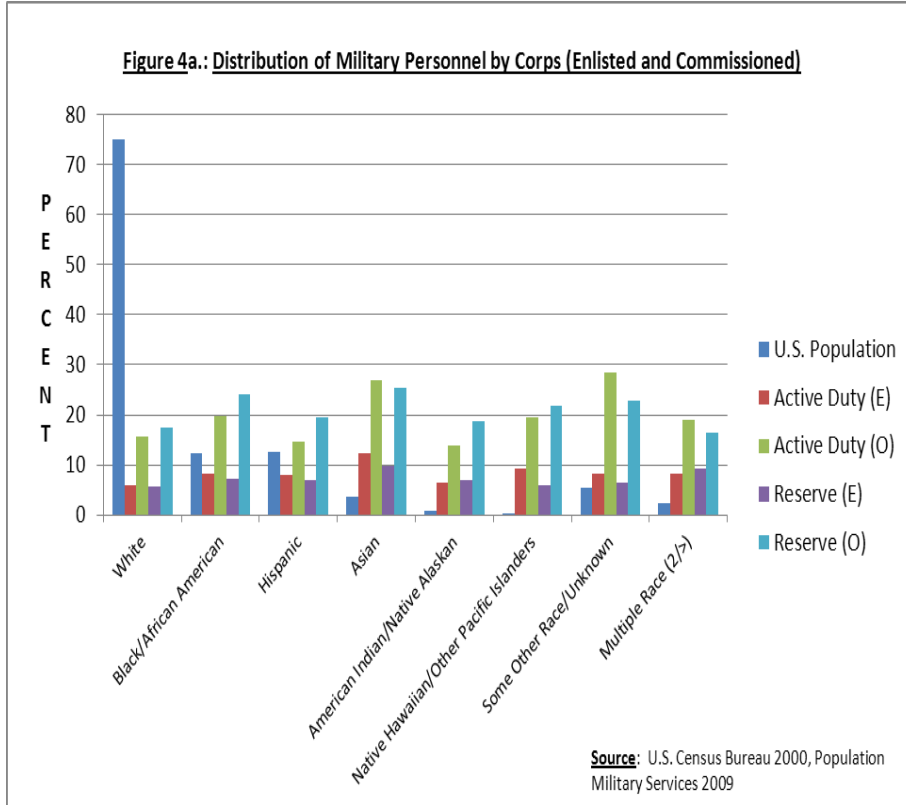
Source: U.S. Census Bureau 2000, USUHS
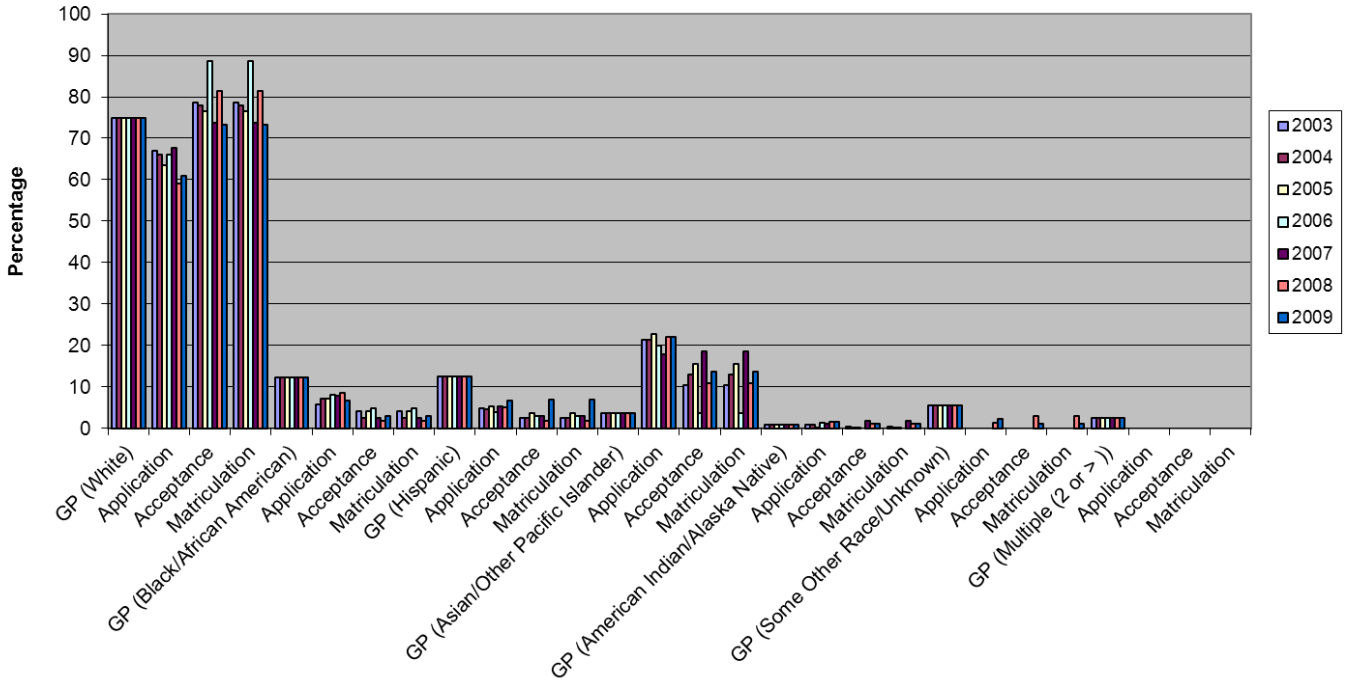
Application, Acceptance and Matriculation Rates by Race and Ethnicity

of Asians who are overrepresented in the health professions as a percentage of their population in both the civilian sector and the military.

Overall, however, the military disproportionately assigns its URM officers to support positions that include those in the healthcare professions (Hosek et al. 2001). The most recent population data for both active duty and reserve officers confirm this finding that shows that for the occupational category of healthcare, the military assigns URM officers at 42.66 percent and 83.17 percent,

respectively (Population Report 2009). However, these data are not disaggregated according to the different occupations within healthcare so it is difficult to discern specifically to what positions that URM officers are being assigned. Similarly, the military makes a nominal assignment of URMs to the occupational category of scientists and professionals. Again, this category is not disaggregated and so it is difficult to ascertain what professions, if any, in healthcare that may constitute this category. Figures 4a and 4b show the racial and/or ethnic distribution rates of military personnel to the medical and healthcare occupations by corps for active duty and the reserve components. More specifically, Figure 4a describes the distribution rates for military personnel within the enlisted and commissioned corps by component (active duty and reserve) while Figure 4b compares personnel already in the workforce, primarily as physicians, in the civilian sector with those in the healthcare occupation in the military relative to each groups' representation within the general population. While this appears to be an uneven comparison in the sense that those under the healthcare occupation in the military are not disaggregated to identify the specific healthcare occupations within that group, it is presumed that given the requisite education level (s) for officers, that is an undergraduate degree or higher, this comparison, at least at some level, is justified.

Figure 4a.: Distribution of Military Personnel by Corps (Enlisted and Commissioned)

Source: U.S. Census Bureau 2000, Population Military Services 2009

Figure 4b. Distribution of Civilian Physicians and Commisioned Officers in the Military in the Healthcare Occupation as a Percentage of the General Population

Source: U.S. Census Bureau 2000, Population Representation in the Military Services 2009, American Association of Medical Colleges (AAMC) 2010

CONCLUSION

Research on the under representation of URMs in the health professions has recently gained much needed momentum. This pace is warranted in light of the dual crises levels of health and healthcare disparities between majority and minority populations. Further, the country's increasingly diverse population makes the topic of this paper all the more urgent. We have presented what we believe to be overwhelming evidence to support a continued and concerted push for the increase of URMs' representation in the health professions as one crucial way to directly address the crises. In doing so, we have once again identified the problem and the systematic and individual forces at play that make it seemingly intractable. In view of its prevalence and the direct correlation that has been established between the absence of URMs in the health professions and the present levels of health and healthcare disparities among minorities, cultural competence has been found to be a critical ingredient for providers, particularly those providers who care for these populations. This provides a pathway for the delivery of quality healthcare to minority patients and over time is one way of controlling and reducing the rates at which these disparities occur within minority populations.

While traditional mechanisms have been employed towards the increase of URMs in the health professions, the current state of decreased funding in higher education coupled with other prevailing obstacles that URMs encounter, some nontraditional mechanisms are offered as an important conduit for these pursuits. One such nontraditional mechanism is via the military where URMs will not be burdened with the financial debt that short circuit their career aspirations like their civilian counterparts following the completion of medical school education, for instance. The Uniformed Services University

of the Health Sciences (USUHS) F. Edward Hebert School of Medicine has been identified as one such route in the military through which URMs could pursue their medical education. Other avenues that the military employs for increasing the number of personnel who pursue the health professions include the Health Professions Scholarship Program (HPSP), directly commissioning experienced health professionals from the civilian sector to any branch of the military, commissioning select members of the enlisted corps who may or may not already be in craft or technician healthcare positions in the military, recruiting from the military academies and ROTC and expanding on long held relationships with HBCUs.

However, although URMs would forgo the cost of their education by attending USUHS, for example, the prospect of the obligation for military service, especially during wartime, becomes a disincentive and is another unique challenge for the military in recruiting and retaining URMs. Yet, DoD's own data show that URMs are already disproportionately assigned to the healthcare professions although their specific occupations within healthcare are unknown. Below, we present the strengths and limitations of our analyses as well as the implications for future research on increasing URMS in the health professions.

Strengths

The strength of this paper is multi-pronged. First, the paper serves as yet more evidence of the dearth of URMs in the health professions. Without a corresponding increase of URMs in the health professions, the dual crises of health and healthcare disparities within these groups are likely to widen. Second, to our knowledge, this is the first paper of its kind to present the military's experience with recruiting and retaining URMs in the health professions as a viable alternative approach to those that have already been explored in the civilian sector. While information

about URMs in the general civilian population is grim, data on the military is even more sobering despite the obvious lure for prospective students to receive an all-expense paid medical education. Unfortunately, while the military is identified as a nontraditional method for pursuing a medical education, its benefits may be outweighed by the perceived risks such as the condition for military service. Third, and directly related to the above, highlighting the military's experience with URMs in the health professions could present a unique opportunity for the military to strategize for the long-term to better compete for talent with the civilian sector by expanding on its relationship with HBCUs to recruit African Americans to the commissioned corps as one of such strategies. As indicated, the data consistently point to the lack of funding for URMs in the civilian sector who short circuit their career aspirations in the health professions. The military can therefore demonstrate that over time, unlike its civilian counterparts, upon completion of their education, URMs will not be burdened with debt and can immediately begin to put their education, training and preparation into practice.

Fourth, the military does encourage and experience a modest modicum of success in steering some of its enlisted personnel toward careers within the health professions. Besides, those in the enlisted corps who may already be in craft or technician positions within the medical field can serve as a feeder group for the military's commissioned corps and thus leverage their experiences as medical practitioners to better position themselves for more formal and advanced training in the health professions. In turn, the military benefits from already realized investments in training, makes continual investments in human capital and, while doing so, indoctrinates an unquestioning patriotism in its personnel. Fifth, USUHS' establishment of the Center for Health Disparities Research can continue in its endeavor to introduce and prepare URM students at the

high school, undergraduate and graduate levels, who would ordinarily not have considered the sciences to pursue these professions as long term careers. This ensures that the pipeline of URM talent continues to be replenished. Finally, even if URMs who are trained in the medical and healthcare fields as technicians and healthcare professionals from the enlisted and commissioned corps voluntarily separate from the military to what they deem as the greener pastures of civilian life, this loss to the military will not necessarily translate as a loss to the health professions altogether. As civilians who remain within the healthcare field, these URM professionals still serve to contribute to the growth of the pipeline's bottom line.

Limitations

We recognize that there are a number of limitations with these analyses. Foremost is that this unearthing of data may not be viewed as bringing any more new information to light beyond what is already known. Second, although the military route is offered as a novel and nontraditional approach to increase URMs who pursue the health professions in the military, the military is already employing these approaches but should expand the scope at which these techniques are used. Further, despite the military's success in utilizing these approaches, some may not be well documented in the literature such as those of USUHS and the knowledge about these programs may be limited to the DoD community. Third, in some respects, particularly with regard to data on the military, comparisons between the rates of medical school admissions and medical school faculty in the military with those of their civilian counterparts, are uneven. This unevenness, we believe, maybe a function of how the Department of Defense collects and records its data. As a result, some of the data vital to these analyses are inaccessible, and as such, limits our ability to determine the

diversity of the faculty, for instance. Fourth, and related to the above, because USUHS records some of its demographic data for medical school admissions differently from the U.S. Census, it is difficult to make an even comparison for certain groups. For example, USUHS aggregates Asians and Other Pacific Islanders as one group whereas Asians and Other Pacific Islanders are disaggregated by the U.S. Census.

Finally, in light of current major military operations around the world and because of the perceived and real liabilities attached, advancing the case for increasing URMS to the health professions via the military may not be viewed as a viable option at this time. Likewise, recruitment and retention remain a challenge for the military and more recently have become more pronounced among those groups on which the military has traditionally relied, like African Americans (Baldor 20007, White 2005). Retention, even amongst officers, especially at the junior and mid management levels, is a concern given the rates at which officers are leaving the military in general (Shanker 2006). As a result, skill shortages in certain career fields have been experienced (National Security Advisory Group 2006; U.S. General Accountability Office (GAO) 2001, 2005)

Implications for Future Research

While there has been a groundswell of research about the shortage of URMs in the health professions, more research is needed to see if, given the current and anticipated demographic shifts within the civilian population and the accompanying health and healthcare disparities, whether increasing the number of URMs in the health professions will make discernible differences in either the rates at which they occur or result in a decline in disparities overall. Research on the military given its equal access system through DoD could also provide further

insight into the impact of increasing URMs in the health professions on the rates at which health and healthcare disparities occur among military personnel and their families, particularly among new URM recruits.

NOTES

1. Underrepresented minorities (URMs) are primarily comprised of African Americans, Hispanics and American Indians/Alaska Native although other groups such as Native Hawaiian/Other Pacific Islanders can be included given their disproportionate absence from the health professions as well.
2. Health professions represent a panoply of professions within the health or healthcare fields ranging from clinicians to administrative roles.

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