

UNDERSTANDING DISADVANTAGE
AMONG MEDICAL SCHOOL APPLICANTS

by

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ABSTRACT

The United States is a nation of peoples with highly stratified degrees of healthcare access and coverage, including many individuals with none at all. Exacerbating the problem of widespread health disparities is a persistent shortage of physicians over recent decades. Of most urgency is the need for doctors within already underserved minority communities. Extant research demonstrates that a more racially diverse student body can effectively address the nation's physician shortage and gross health disparities. Yet, the pool of future physicians of color relative to the increasingly racially diverse U.S. population remains incongruent. For medical school admissions committees, this is a formidable challenge, made ever more difficult by legal affronts to affirmative action in postsecondary admissions. Accordingly, the "disadvantaged status" prompt was inserted into the U.S. medical school application as a race-neutral mechanism with potential to help cull a more racially diverse medical student body. This project addresses the interface of minorities with the "disadvantaged status" essay, as there is a relative paucity of literature on the point of entry to medical school, particularly exploring the voices of applicants of color. Utilizing a Critical Race Theory (CRT) framework, this study expands the existing literature involving: (a) the history of minorities in U.S. medical school and the medical community's response to the stark and persistent absence of diversity among medical students and practitioners; (b) affirmative action in higher education and the race-neutral admissions trend; and (c) the enduring construct of "disadvantage" in regard to minorities within the U.S. education system.

CHAPTER 1

INTRODUCTION

“Of all the forms of inequality, injustice in health care is the most shocking and inhumane.” (King, 1966)

A half-century after Dr. Martin Luther King Jr.’s impassioned though keen observation on the health disparities of this country, “inequality,” and thus “injustice,” pervades. Unlike other “first world” entities such as Canada and the European Union, the United States of America (U.S.) has yet to provide universal health care to its citizens. The U.S. remains a nation of peoples with highly stratified degrees of healthcare access and coverage, including many individuals with none at all. A Racial and Ethnic Approaches to Community Health Across the U.S. (REACH) Risk Study found that residents of “mostly minority communities” experienced “greater barriers to health-care access, and greater risks for, and burdens of disease compared with the general population living in the same county or state” (Liao, Bang, Cosgrove, Dulin, Harris, Stewart, Taylor, White, Yatabe, Liburd, Giles, 2011). Perhaps with Dr. King’s observation in mind, in 2010, the Obama Administration succeeded in passing a national health care law, the Patient Protection and Affordable Care Act (PPACA), now commonly referred to as “Obama Care.” Among the foremost intents of the PPACA is to increase health insurance access and coverage to millions of Americans (ASPA, 2015). Yet, in these burgeoning years of Obama Care’s problematic and controversial existence, it has yet to alleviate the “inhumanities” suffered disproportionately by the poor and racial minorities in particular. The U.S. Department of Health and Human Service’s 2012 National Healthcare Disparities Report and National Healthcare Quality Report (Agency for Healthcare

Research and Quality, 2013) found that “none of the disparities in access to care are improving.”

To help address these health disparities, Betancourt, Green, Carrillo & Ananeh-Firempong (2003) recommend a three-tier framework of cultural competence intervention: organizational, structural and clinical. Cultural competence in health care entails “understanding the importance of social and cultural influences on patients’ health beliefs and behaviors; considering how these factors interact at multiple levels of the health care delivery system (e.g., at the level of structural processes of care or clinical decision-making); and, finally, devising interventions that take these issues into account to assure quality health care delivery to diverse patient populations” (Betancourt et al., p. 297, 2003). An *organizational cultural competence intervention* involves increasing the numbers of racial minority health care providers and leaders, so that organizations reflect the patient populations. This is based on research indicating that minorities are more apt to serve communities of color (AAMC, 2014b), and that race concordant patient-physician relationships can yield a host of beneficial health outcomes (Cooper, Roter, Johnson, Ford, Steinwachs & Powe, 2003; Traylor, Schmittiel, Uratsu, Mangione, Subramanian, 2010). A *structural cultural competence intervention* regards improving access to health care for minorities via improvements to the system or design of care delivery. Examples of this include ensuring full access to quality health care via delivery methods and materials that are linguistically and culturally appropriate (Aponte, 2009; Tu, Yip, Chun, Choe, Bastani, & Taylor, 2008). A *clinical cultural competence intervention* involves practicum training and educational initiatives for enhanced interpersonal communication among culturally diverse patient populations. This

intervention recognizes that values and beliefs about health vary among different populations and are relevant for health promotion and intervention (Alden, Friend, Schapira & Stiggelbout, 2014; Keller, Coe & Moore, 2014), and practitioners must be sensitive to these differences as well as their own preconceived or subconscious prejudices regarding diverse patient populations (Green, Carney, Pallin, Ngo, Raymond, Lezzoni, Banaji, 2007; Bogart, Catz, Kelly, Benotsch, 2001).

By examining an important gateway to the medical profession for aspiring racial minority physicians – the U.S. medical school application – this project contributes to an organizational cultural competence intervention. The pool of future physicians of color relative to the increasingly diverse U.S. population remains grossly incongruent, as evidenced by 2014 data on enrolled U.S. medical students: the total enrollment was 85,260, and of those students, 55.6% were white, 20.4% Asian, 6.3% Black, 4% Latino, .24% American Indian, and .13% Native Hawaiian/Other Pacific Islander. Applicants of multiple race/ethnicity made up the remaining 8.3%, unknown race/ethnicity 1.7%, other race/ethnicity 1.4%, and non U.S. citizens 1.9%. The AAMC estimates that the existing pool of active physicians is around 957,659, and is similarly distributed by race/ethnicity: 48.5% white, 29.4% unknown race,¹ 12.5% Asian, 4.6% Latino, 4.2% Black, .4% other races, and .36% American Indian (AAMC, 2014a).

I. Statement of the Problem

Further exacerbating the problem of widespread health disparities, the nation has also experienced a persistent shortage of physicians over recent decades. Of most

¹ The AAMC notes that the percentage of white physicians currently practicing is underestimated in these data and may account for higher numbers in the “unknown” race/ethnicity category, especially among white doctors 65 and older. This is because the data on white physicians was not systematically collected until 1974.

urgency is the need for doctors within already underserved communities, mainly rural and urban areas. As noted, racial/ethnic minority physicians are most likely to serve these populations, but they remain vastly underrepresented in the U.S. physician workforce. Accordingly, the medical community has put forth a variety of organizational cultural competence initiatives, to help recruit and retain more minority physicians, yielding only modest success. Among those efforts is a re-examination of the medical school admissions process. The Association of American Medical Colleges (AAMC) is leading a push toward “holistic” admissions. This burgeoning movement represents a shift in paradigm from admission based heavily upon applicants’ cognitive assets, such as the Medical College Admission Test (MCAT) score and undergraduate grade point average (GPA), to full consideration of the total applicant, including life experiences and personal background. Theoretically, this paradigm shift could facilitate more opportunity for admissions officers to consider the diverse strengths offered by minority applicants. In turn, more doors to medical school would be opened to underrepresented students.

Likewise, the AAMC inserted into the medical school application a safeguard against anti-affirmative action legislation. In 2002, prior to the Supreme Court cases challenging the consideration of race in admissions at the University of Michigan, the AAMC created the “disadvantaged status” question. This prompt asks students whether they want to be “considered disadvantaged” by medical schools, and if so, applicants may describe how they are disadvantaged within a short essay. In this case, “disadvantage” may be a proxy for race, ethnicity, or any other characteristic or life experience. As with holistic admissions, minority students are not specifically targeted, but the

“disadvantaged status” question may facilitate identification of racially/ethnically diverse applicants.

II. Purpose of the Study

This project examined the “disadvantaged status” question and its potential for helping medical schools identify a diverse applicant pool. I looked at who identified as disadvantaged, across racial, ethnic and national origins. Other personal characteristics such as gender and socioeconomic status were examined. Moreover, a primary aim of this inquiry was to consider the “disadvantaged status” question from the student’s point of view. The short essays provided an opportunity to investigate how the construct of “disadvantaged” is defined by students across racial, ethnic and national origin. Of particular interest was how minority students regarded “disadvantage,” the extent to which they identified as disadvantaged, and the types of disadvantage they described. Pilot studies examining these short essays consistently yielded the most prominent emergent themes as “financial,” “education,” and “community.” Notably, discussion of race or ethnicity within the essays was comparatively rare.

Additionally, two distinct trends emerged within the essays: (a) applicants *conformed* to a deficit construct through discussions of the types of challenges and disadvantages encountered; and (b) applicants *reframed* the prompt by couching their discussions within narratives of resiliency, determination, and commitment to aiding similarly disadvantaged communities. Accordingly, I pursued closer examination of these “conformer” and “reframer” applicants, as well as any relationship “conforming” or “reframing” had to admission.

Among the primary aims of this project was to provide a study of how minority students conceptualized “disadvantage,” as well as the extent to which they assumed this identity when engaging in the “high-stakes” (Davis, Dorsey, Franks, Sackett, Searcy & Zhao, 2013; Albanese, Snow, Skochelak, Huggett, Farrell, 2003) admissions application. Using AMCAS application data, I examined how minority applicants responded to the “disadvantaged status” essay prompt. I applied a critical theoretical framework to consider how this applicant group approached the concept of “disadvantage” and described the themes that emerged in their essays. I also sought to expand the knowledge base on high-achieving minorities in higher education. Using biographical and essay data derived from their medical school applications, I aimed to construct a story of this student population that furthers an understanding of their academic and personal backgrounds.

III. Research Questions & Methods

Through this mixed methods examination of the responses to the “disadvantaged status question,” I tested the utility of this AMCAS question as a race-blind proxy for considering race in admissions. The applicants’ responses provided insight into educational pathways of high-achieving minority students. The below research questions framed this investigation:

- 1) Who is admitted to medical school?
 - a. What are the academic and background characteristics related to admission?
- 2) Who identified as disadvantaged?
 - a. What are the characteristics of applicants who identified as disadvantaged?

- b. How likely were Underrepresented in Medicine (URiM)² students to identify as disadvantaged?
 - c. Did disadvantaged status predict admission to medical school?
- 3) How did applicants define disadvantage?
- a. How did URiM applicants define disadvantage as compared to non-URiMs?
- 4) In their essay responses, what proportion of applicants “reframed” the disadvantaged construct, and what proportion “conformed”?
- a. How do “reframers” define disadvantage? How do “conformers” define disadvantage?
 - b. Are there distinct profiles for "reframer" versus "conformer" applicants? If so, what are the academic and background characteristics related to "conforming" or "reframing"?
 - c. Does any relationship exist between admission and reframing or conforming?

The data source for this project is derived from the AAMC’s American Medical College Application Service (AMCAS) database. The AMCAS includes demographic and biographical information, as well as academic and institutional information. I examined a sample of pre-existing, de-identified applicant data from the 2002-2008 application cycles. Over 2002-2008, 265,190 students applied to medical school. Of those, 32,192 identified as disadvantaged. For this study, I utilized SPSS software to pull

² Per a 2004 AAMC memo, URiM “means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.” Prior to 2004, the AAMC defined URiMs as: “Blacks, Mexican Americans, Native Americans (that is, American Indians, Alaska Natives, and Native Hawaiians), and mainland Puerto Ricans.” As this data set has data prior to 2004, this project references the AAMC’s pre-2004 URiM definition.

an approximately 2% proportional sample of all disadvantaged applicants over 2002-2008 (n=644). For qualitative analysis of the applicants' essays, I utilized NVivo software.

In terms of qualitative methods for analyses of the applicant essays, I applied an inductive approach of conventional content analysis (Hsieh & Shannon, 2005), to allow insights and categories to emerge freely from the text. To arrive at core coding categories, I repeatedly read the text, recorded notes and highlighted content relevant to the research question. I then compared individual codes and grouped them in relation to each other (Corbin & Strauss, 2008). In terms of Computer Assisted Qualitative Data Analysis Software (CAQDAS) (Bogdan & Biklen, 2007), as aforementioned I utilized MS Word and NVivo to help organize selected essays and coding schemes.

IV. Theoretical Framework

My theoretical framework stems from critical theory, which locates and confronts issues of power alongside social dimensions of difference such as race, class, gender and religion. I utilized critical race theory (CRT) to guide this study. Because of CRT's focus on race, I examined "disadvantage" primarily by race and intersections with race. Solórzano (1998) describes the goals of CRT as follows: a) illuminating the role of race and racism in education; b) challenging dominant paradigms; c) shifting a focus upon the lived experiences of students of color; d) connecting research to social justice; and e) using interdisciplinary methods to frame issues. This framework flips the deficit lens traditionally applied to the study of minority students and their families, giving a voice to the resilience and challenges experienced by minority populations. Examination of the applicants' essays provided a unique opportunity to highlight the voices and experiences

of these students. Because I hope to contribute to work that will provide a basis for practice and/or policy measures that will promote the success of underrepresented students, CRT is also a good fit for this study because of its activist agenda.

CRT posits that racism is intrinsic to social institutions, such as medical schools, which can unintentionally reproduce inequality. While the “disadvantaged status” question was created to help facilitate greater diversity, is it possible that this question (its phrasing, etc.) contributes to the reproduction of racial inequality in medical school admissions? Certainly, the phrasing of the question prompts minority students to perpetuate the constructs of “disadvantage” and a “culture of poverty.” Given the high-stakes nature of the admissions application, it can be argued that minority students are *compelled* to conform to this social space.

Yet, pilot studies demonstrated that some applicants did not simply conform. Rather, they strategically inverted the disadvantaged construct through personal narratives of resiliency, strength and determination. In this study, I examined and compared the conformer and reframer applicants’ essays and academic and personal backgrounds. I considered whether applicants’ strategic construction of conformer or reframer personas resulted in admission to medical school.

V. Significance of the Study

While the benefits of a diverse physician workforce are significant, these cannot be fully realized at the current rate of minority applicants and matriculants to medical school. This study focused on the disadvantaged-status question of the AMCAS, one example of how the medical community is attempting to capture more diversity in their student bodies. The findings offer preliminary insight into the kind of information yielded

by this section of the medical school application. Results of this study also speak to the effectiveness of race-blind initiatives that try to capture diversity while sidestepping race. Overall, I hope to contribute to the literature that speaks to how to increase the representation of underrepresented minorities in such areas of higher education as medical school.

VI. Definition of Key Terms

According to a 2004 AAMC memo, URiM “means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.” Prior to this 2004 memo, the AAMC considered URiMs as belonging to four historically underrepresented groups: “Blacks, Mexican Americans, Native Americans (that is, American Indians, Alaska Natives, and Native Hawaiians), and mainland Puerto Ricans.” As this data set includes data prior to 2004, for this project I utilized the AAMC’s former URiM definition. Additional key terms related to race or nationality that were used interchangeably were black and African American, Hispanic and Latino, international and foreign, Native American and American Indian. The terms minority, racial minority, racial/ethnic minority, underrepresented minority, and students of color were used to refer collectively to these groups. A key term related to admission is “matriculant,” which referred to a first-time, newly enrolled medical student. The terms “student” and “applicant” were also used interchangeably, except when noted to indicate whether a student is admitted or a matriculant enrolled. The terms “background characteristics” are used, particularly with the project’s research questions, and refer to applicants’ race/ethnicity and SES-indicators.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This chapter presents the theoretical framework and literature grounding this research. I begin by outlining the chapter via a brief explanation of Critical Race Theory (CRT) and how it informed the areas of literature consulted. I then provide a thorough discussion of the relevant branches of literature, as well as a more complete description of CRT, its origins and applications.

CRT originates from United States legal scholars who sought to illuminate racial bias and white supremacy embedded within our legal system. Seminal CRT scholars, such as Derrick Bell and Mari Matsuda, posit that U.S. law was cast from and functions within a “master narrative” that inherently privileges whites over racial minorities (Bell, 1987, 1992; Matsuda, 1989). According to Crenshaw (1989), CRT counteracts a master narrative by “shifting the frame” from the dominant, “default” worldview of whites toward the lived experiences of minorities. Matsuda (1993) outlined six CRT tenets:

1. Critical race theory recognizes that racism is endemic to American life.
2. Critical race theory expresses skepticism toward dominant legal claims of neutrality, objectivity, colorblindness and meritocracy.
3. Critical race theory challenges ahistoricism and insists on a contextual/historical analysis of the law... critical race theorists... adopt a stance that presumes that racism has contributed to all contemporary manifestations of group advantage and disadvantage.
4. Critical race theory insists on recognition of the experiential knowledge of people of color and our communities of origin in analyzing law and society.

5. Critical race theory is interdisciplinary.
6. Critical race theory works toward the end of eliminating racial oppression as part of the broader goal of ending all forms of oppression. (p. 6)

Accordingly, I have applied these CRT tenets to guide my project and outline this chapter. With tenets 1 and 3 in mind, I begin with an historical discussion of race and the U.S. medical profession, recognizing that systemic racism is endemic to U.S. institutions, including medicine. Given the past and present racial composition of the physician workforce and medical student body, I explore how the prevalence of racism has “contributed to... contemporary manifestations of group advantage and disadvantage” (Matsuda, 1993). In other words, in this chapter, I address the stark and persistent absence of racial minority physicians and medical students, as well as the resulting consequences. Likewise, I provide some context for the historic relationship between the U.S. medical profession and treatment of and access to healthcare among racial minority populations.

I. The Genesis of U.S. Medical Education

Medicine has been among the top-ranked professions within U.S. occupational prestige index scales (Hauser & Warren, 2008; Institute for Behavioral Genetics, 1989), yet its beginnings were not so illustrious or esteemed. In fact, the practice of medicine in the U.S. was a “learned profession” born from a hodge-podge of non-standardized training. It is estimated that in the early 1800s, there were about 175 free-standing medical schools nationwide. Admission was non-competitive, as applicants were not expected to have prerequisite training, such as a high school diploma, undergraduate degree or scientific background (Thelin, 2004). Training spanned one to three years,

mainly comprised of apprenticeships and a la carte pay-as-you-go seminars on topics of the instructors' choosing. Typically, medical schools were unaffiliated with baccalaureate or research institutions. In response to this varied and often questionable training, in 1910 the Carnegie Foundation funded Johns Hopkins University graduate Abraham Flexner to conduct an expose report on the state of U.S. medical training. The Flexner report discredited medical training unattached to research institutions, and promoted the Johns Hopkins model, requiring medical practice to "be linked to advanced scholarship in biological sciences" (Thelin, 2004, p. 149). The report arguably contributed to the closing of 30% of the country's medical schools, ushering in a new era of standardized medical training connected to academia. U.S. medical schools transitioned from free-standing entities to institutions intimately connected to university campuses, with pre-medical education well-incorporated into undergraduate training and reflecting today's structure and admissions requirements. Currently, U.S. medical education is among the most competitive and highly stratified sects of post-baccalaureate training.

II. Racial Composition of U.S. Medical Schools

For the purposes of the study, and in line with CRT's insistence upon grounding research in historical context, it must be noted that from its genesis through the mid-twentieth century, U.S. medical education was exclusively comprised of white male students and professors. Exceptions included the African American medical schools, Howard University College of Medicine and Meharry Medical College (founded originally as the Medical Department of Central Tennessee College), established in 1868 and 1867 respectively. This exclusionary reality was a manifestation of local and federal law subordinating non-white peoples in all aspects of U.S. society, upholding an

apartheid regime until *de jure* racial segregation was outlawed in 1964 (Civil Rights Act of 1964). Hence, because the U.S. medical institution has consistently reflected a racially segregated society, its current, predominately white composition demonstrates the long-lasting impact of systemic racism and resultant, “contemporary manifestations of group advantage and disadvantage” (Matsuda, 1993).

As late as the 1960’s, there remained a stark lack of diversity within the student bodies of U.S. medical schools, which was reflected in the physician workforce. According to Fischbach & Hunt (1999), “*Boys in White*, a classic sociological study of medical students published in 1961, could accurately have been titled ‘White Boys in White.’” For instance, in 1965, 2.2% of the 32,000 medical students were African American; of those, only ¼ were not enrolled in an historically black institution (Fischbach & Hunt, 1999). In 1968, of the 9,963 students enrolled in first-year medical classes across the U.S., only three were Native American (.03%), 20 Mexican American (.20%), three Mainland Puerto Rican (.03%), and 266 Black (2.6%) (Ready, 2001). Yet, between 1968 and 1974, U.S. institutions, including medical schools, underwent a period of growing racial diversity (Fischbach & Hunt, 1999). The Civil Rights Movement in the U.S. was an impetus for medical schools to take affirmative actions and increase the diversity of their student bodies while also addressing barriers to access for minority students (Cohen, Gabriel, & Terrell, 2001). In 1970, though minorities represented 12% of the total U.S. population, they were only 3% of total physicians (AMSA, 1996). By 1976, students of color represented 9% of all first-time medical students and almost 1400 matriculated that year (AMSA, 1996).

While medical schools reexamined their practices with regard to diversity, the federal government also devoted resources toward recruiting more minorities to the medical profession. In the late 1960s, federal dollars were earmarked to establish offices of minority affairs at the Association of American Medical Colleges (AAMC) and on medical school campuses. Likewise, private foundations such as Josiah M. Macy, Robert Wood Johnson, W.K. Kellogg and the Henry J. Kaiser Family Foundation devoted resources to recruitment and retention of minority medical school students (Ready, 2001). These efforts dramatically increased the numbers of students of color in medical school. The AAMC reports that in the 1950s, Blacks, Native Americans and Hispanics represented less than three percent of U.S. medical school graduates, but by 1998, graduates from these groups increased to almost 15 percent (KFF, 2000). Despite these gains, the nation's minority population surged, and the recruitment of minority medical school students leveled off by 1975. In 1978, the *Bakke* decision barring minority student quotas from postsecondary admissions had a "chilling effect" on the recruitment of minority medical students in the U.S. (Ready, 2001).

By 1991, enrollment of URiMs remained stagnant, and minorities only represented 7% of all U.S. physicians, compared to 3% in 1970 (AMSA, 1996). Thus, the AAMC launched the Project 3000 by 2000 initiative. This initiative came out of recognition that affirmative action alone had not been successful in achieving diversity goals and population parity (i.e., parity of racial minority physicians relative to the numbers of minorities in the general U.S. population). The goal of Project 3000 by 2000 was to enroll 3,000 URiMs in the country's 126 medical schools by year 2000. The initiative facilitated community-based collaboration across the country between medical

schools, undergraduate and high school programs to improve academic preparation of underrepresented minorities (URiMs: Black, Native American, Mexican American and Puerto Rican students), generate more interest in the health professions (Nickens, Ready, & Petersdorf, 1994) and produce more highly qualified minority applicants. Through this mobilization of the medical community and K-12 partnerships, Project 3000 by 2000 built a pipeline infrastructure, largely supported by foundation funding (Robert Wood Johnson and W.K. Kellogg foundations) secured by the AAMC. As a result, between 1990 and 1994, the total number of first-year minority medical students grew by 36.3% and represented 12.4% of the total number of U.S. medical school matriculants (Terrell & Beaudreau, 2003). Yet, through the latter half of the 1990's, Project 3000 by 2000 was somewhat derailed. A new wave of hostility toward postsecondary diversity initiatives was spurred by the University of California regents' 1995 decision to eliminate affirmative action in college admissions. Similarly, anti-affirmative action ballot measures were approved in Michigan, Washington, Texas, Louisiana and Mississippi (Kaufmann, 2007).

In response, medical school leadership bodies previously engaged in Project 3000 by 2000 activities, shifted their focus to “the immediate threat to diversity posed by affirmative action bans and away from supporting the hard work and careful planning needed to effectively ‘grow’ the applicant pool” (Ready, 2006, p. 40). This political and legal climate contributed to a decline in minority medical students in the late 1990s, and between 1994 and 1997, minority matriculants dropped by 12% (Terrell & Beaudreau, 2003). By 2000, only 1,700 URiMs had matriculated to medical school (Cohen, 2000). Aside from the 65% increase in URiM applicants over 1990-1995 (Ready, 2006), the

legacy of Project 3000 by 2000 includes the continuation of the Health Professions Partnership Initiative (HPPI) and the Minority Medical Education Program (MMEP) (in 2003, the MMEP's name was changed to the Student Medical Education Program (SMEP) and in 2006, to the Summer Medical and Dental Education Program to reflect the inclusion of dentistry (SMDEP)). The HPPI supports medical school-K-12 pipeline partnerships and the SMDEP provides an intensive summer program to prepare underrepresented students for medical education (Terrell & Beaudreau, 2003).

III. Consequences of Racial Segregation in U.S. Medical Education

In recent years, there have been no significant strides in the racial/ethnic composition of the U.S. medical student body, and it remains incongruent with an increasingly diverse nation. For instance, though Latinos are estimated to comprise 17% of the U.S. population, in 2014 they represented a mere 4% of students enrolled in medical school. Likewise, African Americans comprise an estimated 13% of the U.S. population and only 6% of medical students in 2014 (AAMC, 2014c). This is a bleak trajectory, especially given research demonstrating that the affirmative action bans in six states have resulted in a 17% decrease in minority medical school matriculants (Garces & Mickey-Pabello, 2015).

As a consequence of persistently racially homogeneous student bodies in U.S. medical schools, people of color in the U.S. have been limited to healthcare predominately provided by white physicians (Chen, Fryer, Phillips, Wilson & Pathman, 2005). This presents a challenge to the cultivation of trust within the physician and patient relationship, as racial minorities may be inherently distrustful of white physicians (Smedley, Stith and Nelson, 2003; Stepanikova, Mollborn, Cook, Thom, Kramer, 2006;

Johnson, Saha, Arbelaez, Beach & Cooper, 2004; Doescher, Saver, Franks & Fiscella, 2000; Malat & Hamilton, 2006; Boulware, Cooper, Ratner, LaVeist & Powe, 2003). This distrust stems from the historic landscape of the U.S., indelibly marred by the nation's history of *de jure* and *de facto* racial segregation, its origins as a genocidal colony of white Europeans who appropriated the land of indigenous Americans (Gamble, 1997; Myers, 1988), and unethical health care practice among communities of color, exemplified by the egregious 1932-1972 Tuskegee Experiment (Thomas & Carran, 1999; Jones, 1981). The Tuskegee Experiment was a 40-year longitudinal study, conducted by the U.S. Public Health Service, in which researchers and doctors knowingly withheld treatment for syphilis, with the goal of observing the disease's natural progression among approximately 600 participating African American men of Macon County, Alabama, who had believed the government was providing free treatment for syphilis and other "bad blood" illnesses (Nelson, 2012).

On top of this historical landscape, research indicates that feelings of distrust stemming from a race-discordant patient-physician relationship pose real consequences for minority patients' health outcomes (Bogart, Bird, Walt, Delahanty, & Figler, 2004; LaVeist, Nuru-Jeter, and Jones, 2003; Doescher, et al., 2000) and non-white patients may actually receive sub-par care compared to white counterparts (Smedley, et al., 2003; Stepanikova, 2012; Ferguson & Candib, 2002; Gordon, Street, Sharf & Soucek, 2006; Siminoff, Graham & Gordon, 2006). Many white medical students were raised in racially segregated communities (Atkinson & Pelfrey, 2005; Gurin et al., 2002), and when they graduate, often lack meaningful personal relationships with non-white people outside of their medical practice (Proctor & Davis, 1994). In their 11-year longitudinal study of a

multicultural curriculum at a U.S. medical school, Zanetti, Dinh, Hunter, Godkin & Ferguson (2014) found that white students (more than three generations removed from immigration) had lower initial ratings for “empathy towards serving culturally diverse populations” than their racial minority peers. Unconscious bias among white physicians may also account for disparities in treatment for minority patients (Green et al., 2007; Bogart, Catz, Kelly, Benotsch, 2001). Martin and Cooper (2013) posit that it is important to examine effects of such race-discordant physician and patient interaction, because most racial minority patients have race-discordant relationships with their doctors. The paucity of racial minority physicians limits consumers’ choice to white doctors.

IV. Benefits of Racially Diverse Medical Schools & Physician Workforce

Earlier in this chapter I discussed how the persistent disparities in healthcare that exist for non-white patients, along with the booming racial minority population in the U.S., have not gone unrecognized by the U.S. medical community. In 2006, AAMC President Jordan Cohen announced that “increasing the number of physicians and increasing diversity are equally important and inseparable goals” (Cohen & Steineke, 2006). They are inseparable because more URiM physicians are expected to help alleviate the impact of the physician shortage on already underserved populations. Racial minority physicians are more likely to practice in communities comprised of patients of the same racial or socioeconomic background (Carlisle, Gardner, & Honghu, 1998) and are also more likely to serve patients who are economically disadvantaged, uninsured or who receive Medicaid (Rumala & Cason, 2007; Carlisle et al., 1998). The medical community has also acknowledged the need for more sociocultural competency training in the medical education curriculum (AAMC & ASPH, 2012; LCME, 2012). While this

points to the need for curricular change, it also highlights another benefit of a racially diverse class of medical students. Diversity within the student body is increasingly valued for enhancing the educational experiences of racial majority medical students through cross-cultural exchange with diverse peers and the development of cultural sensitivity (Rumala & Cason, 2007; Whitla, Orfield, Silen, Teperow, Howard, & Reede, 2003; Hung, McClendon, Henderson, Evans, Colquitt, & Saha 2007).

As described above, increased access to medical school among racial minorities “converges” with the interests of the majority. Increased numbers of physicians of color are expected to help alleviate a national burden, as this group of doctors are more likely to serve poor and underserved citizens in rural and urban communities, who without care, pose a potential strain on the current U.S. healthcare system and economy, as they are more likely to utilize emergency or urgent care, suffer more costly illnesses, and risk potential family bankruptcy (Doty & Holmgren, 2006). Because a racially diverse medical student body is expected to yield a multitude of benefits, this presents an example of the CRT “interest convergence principle.” According to seminal CRT scholar Derrick Bell, the “interest convergence” holds that “the interest of blacks in achieving racial equality will be accommodated only when it converges with the interests of whites” (Bell, 1980). A CRT lens lends understanding to how the powerful advantages yielded by a racially diverse physician workforce have given rise to the medical community’s re-examination of the admissions processes of U.S. medical schools. The next section addresses the admissions criteria of U.S. medical schools, as well as influential political and social factors.

V. Gatekeeping: Admissions Criteria for U.S. Medical Schools

Using CRT tenets 1 and 3 as guides, the previous section presented an historical context for the contemporary racial composition of U.S. medical schools, as well as the medical community's efforts to bolster racial diversity within their student bodies. In line with CRT tenet 2, this study brings into question the "neutrality, objectivity, colorblindness, and meritocracy" of the U.S. medical school admissions criteria, as well as the utility of the disadvantaged-status question for identifying a racially diverse applicant pool. Accordingly, this chapter critically considers the current and historic system of evaluation for U.S. medical school applicants. I also discuss the social and political contexts that have challenged affirmative action and given rise to "colorblind" policies in higher education. Further, I discuss how the disadvantaged status question is a prime example of the colorblind trend.

VI. Quantitative Bias versus Holistic Admissions

For aspiring medical students, there exists a long-established formula for admission to U.S. medical school, including a high GPA and excellent MCAT scores. Though most U.S. medical schools do not identify these quantitative components as most influential to admission, these cognitive variables are among the most critically considered by admissions officers. Yet, whether the MCAT effectively predicts desirable qualities for competent future physicians is questionable. Similar to the volume of research on the Scholastic Aptitude Test (SAT), the baccalaureate gateway exam, the MCAT's utility for measuring ideal medical student characteristics has been scrutinized in the literature. While the MCAT is effective for predicting student success within the medical school curriculum as well as the US Medical Licensing Examination (USMLE)

(Donnon, Paoluci & Violato, 2007; Julian, 2005; Dunleavy, Kroopnick, Dowd, Searcy & Zhao, 2013), there is no evidence that it can identify those future physicians motivated to address acute medical needs of the U.S. population (Nickens & Cohen, 1996). The MCAT is not a tool for measuring “non-cognitive” factors that can assist in assessing “key personal characteristics such as altruism, empathy, integrity and compassion” (Donnon et al., 2007, p. 105; Albanese et al., 2003).

Also, like the SAT, the MCAT has been examined for racial bias, with research consistently finding that both Blacks and Latinos score lower than Whites (Davis et al., 2013; Koenig, Sireci, Wiley, 1998). Despite this, Davis et al (2013) posit that the exam does not pose racial bias because “corroborating evidence” is “insufficient to prove” bias exists (Davis et al., 2013). Yet, while the gap between minority and non-minority MCAT scores has narrowed since the 1970s, the overall acceptance rate for minorities has been declining (AMSA, 1996). Because there is an enduring disparity in the exam scores of minority students and white students, and given the critical nature of the MCAT for admission to medical school, a CRT lens would call into question its “neutrality, objectivity, colorblindness, and meritocracy,” as per CRT tenet 2. Similarly, in their essay on meritocracy and standardized testing, Haney & Hurtado (1994) critiqued the true utility of standardized tests, acknowledging that they “enable ranking and numbering systems to be developed that provide convenient mechanisms for allocating opportunities and rewards,” but by focusing on individual meritocracy and performance, standardized tests such as the MCAT, “draw public and political attention away from the structural legacies of slavery and racism” (Haney & Hurtado, 1994, p.244).

Yet, the MCAT remains among the chief metrics for evaluation of U.S. medical school applicants, and endures alongside GPA because it offers “easily quantified factors” (Tekian, 2000) not offered by qualitative application components such as the personal statement and interviews. Also, high MCAT scores and undergraduate GPAs of incoming students boost the prestige of individual medical schools in the influential *U.S. News and World Report* rankings (Albanese, Farrell & Barnet, 1999). Given the MCAT’s seemingly objective appeal and long-standing tradition, researchers such as Ready & Nickens (1996), have suggested that the MCAT not be altogether abandoned, but applied as a “minimal threshold requirement.” Likewise, AAMC President Jordan Cohen urged admissions committees to begin “the screening with an assessment of personal characteristics and leave the GPAs and MCAT scores ‘til later” (Cohen, 2001).

Since 2001, the AAMC has encouraged medical schools to give more weight to personal characteristics not captured by the MCAT and GPA, and is leading a movement toward a unified “holistic review” approach to admissions in U.S. medical schools. Holistic review refers to an evaluation system that is a “flexible, individualized way of assessing an applicant’s capabilities by which balanced consideration is given to experiences, attributes, and academic metrics and, when considered in combination, how the individual might contribute value as a medical student and physician” (AAMC, n.d.). In 2007, the AAMC convened an Advancing Holistic Review Initiative, intended to provide mission-centered, admissions-related tools for medical school admissions committees to utilize in expanding the diversity of their applicant and matriculant pools. The holistic review framework espouses four core principles: (1) selection criteria are broad-based, mission-driven, and promote diversity for institutional excellence; (2)

application of the “Experiences-Attributes-Academic Metrics (E-A-M)” model, which is intended to help create a “richly diverse interview and selection pool and student body” by using evidence-based non-cognitive selection criteria; (3) individualized consideration of applicants’ potential contributions to the medical school learning environment as well as the medical profession; and (4) narrowly-tailored, admission-related consideration of race and ethnicity “when considered as part of a broader mix of factors,” as permitted by federal and state law (AAMC, n.d.).

VII. Colorblindness in Higher Education

As described above, among the emphases of holistic review is to create and implement student diversity policies that are mission-driven and narrowly-tailored to the goals of individual medical schools. This “narrow” approach is in line with the 2003 Supreme Court ruling on *Grutter versus Bollinger* in which the Court ruled that “when race-based action is necessary to further a compelling governmental interest, such action does not violate the constitutional guarantee of equal protection so long as the narrow-tailoring requirement is also satisfied... when using race as a “plus” factor in university admission, a university’s admission program must remain flexible enough to ensure that each applicant is evaluated as an individual and not in a way that makes an applicant’s race or ethnicity the defining feature of his or her application” (*Grutter v. Bollinger* 539 U.S. 306, 2003). Hence, the Supreme Court curtailed the broad application of affirmative action by specifying that students’ racial or ethnic background should be considered only among a host of other applicant characteristics. Likewise, in the 2013 *Fisher v. University of Texas* Supreme Court case, the first challenge to affirmative action since *Grutter*, the “core principles” of *Grutter* were sustained so that “institutions retain discretion to define

educational-mission driven diversity goals,” but must “show serious consideration of workable neutral alternatives” (The College Board, 2014).

Consequently, these rulings have prompted a trend in higher education in which diversity programs and policies targeting students by race have been replaced with race-neutral initiatives. While there remains a pronounced desire to increase diversity within higher education, the predominant methods to meet this end are ironically “color blind.” For example, foundations with long-standing commitments to making higher education more accessible to underrepresented minorities have notably revised their grants programs. From 1979 to 2004 the Ford Foundation administered the largest PhD minority fellowship program in the U.S. supporting nearly 2,300 Black, Mexican American, Puerto Rican and American Indian students in the fields of physical science, engineering, life science, social science, and humanities (Roach, 2005a; Solórzano, 1993). Competitive students were typically awarded four years of funding, as well as access to a national network of scholars and annual conferences. In 2004, following the *Grutter* ruling, the Ford Foundation Minority Fellowship program came to a close, and was re-born the Ford Foundation Diversity Fellows Program, opening support to white students for the first time since its inception.

In the same way, the Andrew W. Mellon Foundation’s Mellon Minority Undergraduate Fellowship, established in 1988 and supporting over 158 racial minority fellows in pursuit of the PhD, expanded eligibility to students of all racial backgrounds, and in 2003, was re-named the Mellon Mays Undergraduate Fellowship program (Roach, 2005a). Though both the Ford and Mellon fellowships maintain the goal of broadening racial diversity and eradicating racial disparity in academe, the foundations responded to

the anti-affirmative action current and revised the programs according to the “spirit of *Grutter*” (Roach, 2005b). Likewise, the Robert Wood Johnson Foundation’s Summer Medical and Dental Education Program (SMDEP) mentioned earlier in this chapter, had changed its name from the Minority Medical Education Program (MMEP) following *Grutter*, and expanded its recruitment to all students from low-income backgrounds (Roach, 2005a).

This response to the 2003 *Grutter* decision was not novel; the prohibition of affirmative action in the late 1990s had also sparked race-neutral policies and programs in higher education. For example, following the enactment of California’s Proposition 209, which outlawed affirmative action in admissions, hiring, and contracting practices, both flagship universities of the University of California system experienced significant drops in minority student enrollment, especially among Blacks and Latinos (Martin, Karabel, Jacquez, 2005; Geiser & Caspary, 2005; Santos, Cabrera & Fosnacht, 2010). In response, a substantial amount of public funding was put into pre-college intervention programs. While these programs did not overtly target students of color, they were intended to serve “at-risk” students – many who are thought to be ethnic minorities (Gandara, 2002).

Similarly, in the late 1990s, both the states of Texas and Florida enacted colorblind, merit-based law targeting aspiring undergraduates. Passed in 1997, the Texas House Bill 588 or the “Texas Top 10% Rule,” attempts to increase college access for a diversity of high-achieving high school seniors, but does not select recipients by race. Students graduating in the top ten percent of their high school classes are guaranteed admission to any public higher education institution in Texas. The Top 10% Rule was

motivated by the 1996 *Hopwood v. Texas* ruling by the 5th Circuit U.S. Court of Appeals. *Hopwood* holds that any consideration of race or ethnicity in admissions decisions is unconstitutional. Accordingly, Texas lawmakers passed HB 588 with the expectation that college admission would increase among high-achieving students from a diversity of racial backgrounds (Niu & Tienda, 2010). In the same way, the One Florida Plan and the California Four Percent Plan guarantee undergraduate admission to students in the top 20% and 4% of their high school classes. Despite these efforts, there is no evidence that such color-blind programs have had any impact on increasing the diversity of students enrolling in higher education (Long & Tienda, 2008; Kain, O'Brien & Jargowsky, 2005) nor who are pursuing medical studies (Commission on Civil Rights, 2000).

In terms of this project, the race-neutral mechanism examined is the “disadvantaged status question,” introduced by the AAMC in 2002 to the American Medical College Application Service (AMCAS)’s standard application for admissions to U.S. medical schools. This prompt asks students, “do you wish to be considered a disadvantaged applicant by any of your designated medical schools that may consider such factors (social, economic or educational)?” and was inserted just prior to the 2003 *Grutter v. Bollinger* and *Gratz v. Bollinger* Supreme Court rulings. Accordingly, there is speculation that the “disadvantaged status” question is meant to serve as a safeguard, should a time arise when race cannot at all be considered in medical school admissions decisions or divulged within admissions applications³. As a contingency, the disadvantaged status question provides an opportunity for students of color to identify

³ From 2006 – 2008, the author had a research internship at the AAMC, at which time insights about the project’s data, including the genesis of the “disadvantaged status question” were shared anecdotally by the internship supervisor. Per the internship supervisor, the AAMC inserted this question in the midst of the 2003 Supreme Court cases involving affirmative action, and as a potential safeguard in the event that racial information is completely omitted from the AMCAS.

themselves as such. This is because applicants who identify as disadvantaged may provide a brief essay defining “disadvantage” and the different ways in which they have experienced this in their lives, possibly including racism.

Ironically, a pilot study of 2002-2008 applicant data, revealed that the majority of students who identified as disadvantaged are white. Further, of those students of color who identified as disadvantaged, only 12% discussed race in their essays. Thus, by those pilot results, the disadvantaged-status question represents another example, like those discussed above, in which a colorblind mechanism is ineffective at generating racial diversity.

VIII. “Disadvantage” as a Racial Microaggression

The disadvantaged-status question is examined as an exemplar of colorblindness, but also as a means to discuss the enduring presence of institutionalized racism within the realm of U.S. higher education. As discussed earlier in this chapter, a CRT framework affirms that racism is endemic to U.S. society. Accordingly, this section examines the U.S. medical school application’s “disadvantaged-status question” as a form of racial microaggression. Microaggressions are among the “chief vehicles” of racism (Pierce, Carew, Pierce-Gonzalez and Willis, 1978), “stem[ming] from unconscious attitudes of white superiority” (Davis, 1989). They are embedded within everyday micro- and macro-social exchanges, transmitted in “preconscious or unconscious fashion” (Pierce, 1974, p. 515). While some racial microaggressions are “seemingly innocuous,” as in the phrases “highly qualified black” and “articulate” person of color (Pierce, 1974; Pierce et al, 1978; Solórzano, 1997; Delgado & Stefancic, 1992), their “cumulative weight” (Pierce et al, 1978) poses a “dramatic impact on the lives of people of color” (Pierce, 1974, p. 15).

Racial microaggressions are conveyed non-verbally, in gestures and body language, as well as in “automatic acts of disregard” or exclusion (Davis, 1989). They also manifest within “code- or buzz-words” such as: affirmative action, quotas, preferences, at-risk and reverse discrimination (Williams, 1991). Within the field of education, the term “disadvantaged” emerged as such a “code-word” among studies of racial minorities’ academic underperformance in K-12 education (Urban, 2009). The term “disadvantaged” stems from the cultural deficit model, which posits that low educational attainment of minorities results from a cultural upbringing that inhibits educational mobility and fails to assimilate to dominant group values (Kretovics & Nussel, 1994; Persell, 1977; Solórzano, 1991). Given this context, “disadvantaged” is not a neutral term, as it regards racial minorities in U.S. education. Rather, it fits within a lexicon of racial microaggressions.

As described earlier in this chapter, the “disadvantaged status question” prompts all U.S. medical school applicants, “do you wish to be considered a disadvantaged applicant by any of your designated medical schools that may consider such factors (social, economic or educational)?” While all applicants encounter the disadvantaged-status question, racial minorities are uniquely confronted with a “racial microaggression” and the decision of whether to put on a disadvantaged persona or “mask” with historically, racially oppressive weight. According to Rodriguez (2006), masks are “the inherited legacy of submission... in particular to Whites” (p. 1069). People of color are “compelled to wear our *mascaras* (“mask” in Spanish; Anzaldúa, 1990) in a white supremacist world,” and do so as a survival tactic and defense “against racist educational institutions in which we try to maneuver” (Rodriguez, 2006, p. 1069-1070). Though

masks offer protection, they are also marginalizing because they “conceal part of our identities,” engendering internalized oppression (Rodriguez, 2006; Anzaldúa, 1990).

Yet, through critical consciousness, people of color can be liberated from masks and the marginalizing impact of racial microaggressions can be mitigated. According to Rodriguez (2006), self-actualization and resistance are rooted in “a deep understanding about how social structures work to dominate one’s life” (Rodriguez, 2006, p. 1070). Liberation comes from “the ability to undo or break through these masks” (Rodriguez, 2006, p. 1070). Similarly, Pierce (1974) posits that it is important for a black person to “be taught to recognize these microaggressions and construct his future by taking appropriate action at each instance of recognition” (p. 520). Likewise, Solórzano (1998) says that “we need to continue to search for and document additional voices and other subtle and unrecognized forms of racism and sexism throughout the educational pipeline” (p. 132).

In line with CRT tenets 4 and 6, this study attempts to “recognize” and “document” the presence of subtle forms of racism within the U.S. medical school application. In particular, the disadvantaged-status question is examined as a racial microaggression. As described in the Introduction of this paper, medical school applicants who choose to “be considered a disadvantaged applicant” are invited to submit a short essay in which they define disadvantage and explain how it has manifested in their lives. As per CRT tenet 4, in a pilot study I examined the “experiential knowledge” imparted by racial minority applicants in their short essays or narratives. Narrative is highlighted by CRT theorists as among the powerful tools for chiseling away masks. Through narrative, people of color can resist racial microaggressions and other marginalizing affronts by

subverting “the colonizers’ definitions of us” (Cordova, 1998, p. 39). According to Crenshaw (1989), CRT counteracts the majoritarian narrative by “shifting the frame” from the dominant, “default” worldview of whites toward the lived experiences of minorities. Thus, CRT gives rise to “voice scholarship,” subverting majoritarian stories by “unmasking” racial privilege through minority counter-stories (Crenshaw, 1989; Rodriguez, 2006; Solórzano & Yosso, 2002).

Indeed, in the pilot study, I found two distinct patterns in the narratives of students of color: (1) they either put on a “mask,” conforming to the default, deficient paradigm pertaining to minorities in education, or (2) they reframed this social space by putting forth an “oppositional worldview” or counter-story (hooks, 2003). Rather than simply depicting their deficiencies or unfortunate circumstances as this essay prompt so compels applicants, some students of color resisted that mold. Instead, they cast personas that were empowered, insightful and even more determined by the various challenges they had overcome. Likewise, many demonstrated a critical consciousness for “how social structures work to dominate one’s life” (Rodriguez, 2006, p. 1070).

IX. Chapter Summary

This theoretically guided study expands the existing literature involving: (a) the history of minorities in U.S. medical school and the medical community’s response to the stark and persistent absence of diversity among medical students and practitioners; (b) affirmative action in higher education and the race-neutral admissions trend; and (c) the enduring construct of “disadvantage” in regard to minorities within the U.S. education system. Specifically, this project addresses the interface of minorities with the medical school application, as there is a relative paucity of literature on the point of entry to

medical school, particularly exploring the voices of applicants of color. Rarely in the literature is there an opportunity to learn about the disadvantages experienced by minority medical school applicants via their own written words. To that end, this project provides a unique perspective.

In the pilot study, preliminary analysis of the disadvantaged essays yielded 12 emergent themes or types of disadvantages discussed by applicants, including: community, educational, family/home life, financial, gender, give back, health/injury, immigration, language, medically underserved, overcome, and race. As mentioned in the Introduction chapter, two distinct types of essays also emerged from the pilot study. I observed that applicants either (a) *conformed* to the construct of disadvantage by enumerating deficiencies and challenges they have experienced, or (b) enumerated various difficulties, but then *reframed* the disadvantaged construct by describing how challenges have had a motivating, transformative or otherwise positive impact on their lives.

For this project, I have drawn from CRT to better understand the content and emergence of these two types of essays. The CRT framework has been applied in research focusing on minorities as well as examinations of systemic oppression and institutional racism. Central to CRT is an emphasis upon bringing to light covert, systemic racism and stereotyping. Within the context of this high-stakes admissions application, the disadvantaged status prompt is encountered by all applicants of various racial backgrounds. Yet, in applying CRT, it is notable that the decision of whether or not to identify as disadvantaged – therefore conforming to a deficient racial stereotype – is uniquely faced by racial minority applicants. This project provides a unique examination

of how students either deflected or applied a deficit lens to themselves via their written words. As per CRT, by diverting from or “reframing” the disadvantaged construct, the reframer essays flipped the deficit lens typically applied to racial minorities. The reframers portrayed a picture of themselves that conveyed empowerment, determination, an ability to overcome and motivation to serve similarly disadvantaged communities. According to Yosso (2005), CRT highlights an “array of cultural knowledge, skills, abilities and contacts possessed by socially marginalized groups that often go unrecognized and unacknowledged” (Yosso, 2005, p. 69). Within the reframer essays, applicants demonstrated these kinds of skills and abilities, while this type of explanation is not present within conformer essays. Thus, AMCAS applicants’ responses to this essay prompt may inform medical school admissions staff on the applicants’ level of determination, resilience, problem-solving capabilities, and cultural knowledge and sensitivity among diverse communities. The methods used to address the research questions are explained in Chapter 3.

CHAPTER 3

DATA AND METHODOLOGY

The methodology applied in this study was both qualitative and quantitative. This chapter details the mixed methods employed, which involved descriptive statistical analyses, regression analyses, and critical content analysis of text. I detail the data sources, key variables, and methods utilized. First, I introduce the research questions that guided this inquiry, and then I outline my strategy of inquiry. After a thorough treatment of the methodology, I provide additional details on the data sources and variables. I conclude the chapter by reflecting upon my positionality as a researcher and discuss the limitations to my methodological approach and data set.

I. Purpose of the Study

In this study, I broadly examine the characteristics of disadvantaged medical school applicants and their responses to the AMCAS disadvantaged status prompt. As discussed in Chapters One and Two, I am particularly interested in the extent to which underrepresented students identified as disadvantaged and whether they discussed race. I sought to understand the meaning of disadvantage as defined by minority applicants as well as in relation to medical school admission. To that end, I explored the following research questions:

- 1) Who is admitted to medical school?
 - a. What are the academic and background characteristics related to admission?
- 2) Who identified as disadvantaged?

- a. What are the characteristics of applicants who identified as disadvantaged?
 - b. How likely were Underrepresented in Medicine (URiM)⁴ students to identify as disadvantaged?
 - c. Did disadvantaged status predict admission to medical school?
- 3) How did applicants define disadvantage?
- a. How did URiM applicants define disadvantage as compared to non-URiMs?
- 4) In their essay responses, what proportion of applicants “reframed” the disadvantaged construct, and what proportion “conformed”?
- a. How do “reframers” define disadvantage? How do “conformers” define disadvantage?
 - b. Are there distinct profiles for "reframer" versus "conformer" applicants? If so, what are the academic and background characteristics related to "conforming" or "reframing"?
 - c. Does any relationship exist between admission and reframing or conforming?

II. Justification

The results of this study primarily benefit higher education practitioners, to include medical school admissions officers and researchers focused on minority students.

It is currently assumed that admissions officers do not utilize the disadvantaged status

⁴ Per a 2004 AAMC memo, URiM “means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.” Prior to 2004, the AAMC defined URiMs as: “Blacks, Mexican Americans, Native Americans (that is, American Indians, Alaska Natives, and Native Hawaiians), and mainland Puerto Ricans.” As this data set has data prior to 2004, this project references the AAMC’s pre-2004 URiM definition.

question among the primary metrics for evaluating medical school applicants. Yet, findings of this study provide admissions officers with an overview of the kind of information yielded, should the disadvantaged prompt become more important. There is potential that the AMCAS applicants' responses to this essay prompt could provide medical school admissions staff with deeper insights on the applicants' level of determination, resilience, problem-solving capabilities, cultural knowledge and sensitivity among diverse communities. These results are especially relevant for the AAMC and other players within the medical community involved in the push to recruit more minorities to the physician workforce. Furthermore, the study results have implications for race-blind admissions initiatives and their effectiveness for identifying and admitting increased numbers of minority applicants.

The lack of research involving the AMCAS medical school application creates an opportunity to bring to light the high-stakes dynamics of this point of entry for U.S. medical schools. Understanding the AMCAS disadvantaged status question within the context of minority applicants helps to provide clarification for the purpose of this prompt. Examining minority applicants' responses also provides insights into the kinds of experiences and perspectives that these students can bring to the medical profession.

The remainder of this chapter describes the methodology applied to answer the research questions guiding this study. First, an overview of the data source is provided. I then describe the analyses employed to address each of the research questions.

III. Data Source

The primary data source for this study was accessed from a pre-existing, de-identified archive system of the AMCAS, administered and maintained by the AAMC.

Since the 1970's, the AAMC has stored all information submitted by AMCAS applicants, including demographic, biographical, academic and institutional information. Access to this database was secured via a data agreement between the AAMC, the researcher and my faculty advisor. The researcher was initially granted access to the AMCAS database over a two-year graduate student internship at the AAMC. Following the internship, I was granted continued access to the 2002-2008 applicant data.

Figure 1a in the Appendix is an actual screen shot of what this part of the AMCAS application looks like. It is a 2007 screen shot, but the prompt remains the same today. The screen presents the “disadvantaged status question”: do you wish to be considered a disadvantaged applicant by any of your designated medical schools that may consider such factors (social, economic or educational)? The two response options are “Yes” or “No.” If applicants are unsure of what “disadvantaged” means, the page provides a pop-up window with the AAMC’s definition of what “disadvantage” entails. As Figure 1b demonstrates, the pop-up window mentions being medically underserved or receipt of federal or state aid. If applicants decide to click “Yes,” they are taken to the next screen with eight “disadvantaged status” sub-questions (Figure 1c).

The sub-questions primarily focus on the socioeconomic background of the applicant’s immediate family or household. With the exception of one question that asks whether the applicant was medically underserved, all other questions solicit information about the student’s and his/her household’s finances. As with the pop-up window, the sub-questions ask whether the applicant or applicant’s family has received public aid. Applicants are also asked if they have been employed before 18, contributed to their families’ income, the size of their households, their families’ total income, and how

applicants funded post-secondary education. At the bottom of the sub-questions page is the open-ended essay prompt: “Explain why you should be considered a disadvantaged applicant by your designated medical schools.”

For this study, I focus on applicants’ responses to the open-ended essay prompt over the 2002-2008 application cycles. In each of these seven application cycles, there were roughly 36,000 applicants, totaling 265,190 students. Of those, 32,192 (12.1%) applicants identified as disadvantaged.

IV. Methodological Approach

This section outlines the analytic approach utilized to address my research questions. I reiterate each question, and then describe the methods best aligned to the nature of the question and data.

Analytic Approach to (RQ1): Who was admitted to medical school?

a. What are the academic and background characteristics related to admission?

The first research question relates to the overall aim of this project: increasing the diversity of admitted minority students within U.S. medical schools. To begin this investigation, it is appropriate to obtain a descriptive snapshot of the admitted applicants over 2002-2008. Accordingly, I utilized the SPSS statistical package to run a series of descriptive analyses including frequencies and crosstabs, to determine the academic and personal background characteristics of admits. The following variables were chosen to provide a good overview of the total population of admitted students: disadvantaged status, gender (male/female), race, ethnicity or nationality (Native American, Hawaiian, Black, White, Non-Hispanic, Asian, Mexican American, Puerto Rican, Cuban, Foreign), academic background (GPA and MCAT score), and socioeconomic indicators (parents’ occupation and educational level). These variables provided an accurate picture of the

diversity, or lack thereof, of the medical school applicant pool for the cycles studied. As my study focuses particularly on racial diversity, I want to speak to the composition of the racial categories. They are not exclusive of one another. For instance, applicants coded as “Hispanic” were those individuals who identified as “Hispanic,” though she or he may have also identified with other racial categories, too. For instance, someone coded as “Black,” may have also been coded as “Hispanic,” or “White,” or any other racial/ethnic category the applicant selected. Though, there are certainly multiracial students among this pool of applicants, there is no distinct “Multiracial” category on the AMCAS, and I chose to utilize monoracial categories (such as “Hispanic” and “Black”) in the analyses. This is discussed further within the “limitations and future research directions” section of the last chapter.

Analytic Approach to (RQ2): Who identified as disadvantaged?

- a. What are the characteristics of applicants who identified as disadvantaged?*
- b. How likely were URiMs to identify as disadvantaged?*
- c. Did disadvantaged status predict admission to medical school?*

Over 2002-2008, 32,192 applicants identified as disadvantaged. To discern the characteristics of students who identified as disadvantaged, the second research question also called for a series of descriptive analyses. Frequencies and crosstabs were performed to observe the distribution of applicant characteristics listed under (RQ1). I further disaggregated the minority student group according to whether applicants are “underrepresented” (URiM) in medicine, as classified by the AAMC (see Definition of Key Terms in Chapter 1). To address (RQ2c) and discern whether being disadvantaged predicted admission among applicants, I utilized SPSS to run a binomial logistic regression analysis in three blocks, with admission (acceptance) as the dependent variable and the following variables as independent variables:

Dependent Variable	Independent Variables		
Acceptance Indicator	<u>Block 1</u> Sex Race Variable Parent1 Education Status (highest degree held)	<u>Block 2</u> Applicant's Highest Degree Held MCAT Score Cumulative Undergraduate Science GPA	<u>Block 3</u> Disadvantaged Status

The purpose of this model was to compare the variables found to be influential in affecting admission to medical school. By using the block-entry format of regression analysis, the individual contribution of students' background characteristics, academic indicators, and disadvantaged status can be tracked by observing the change in the coefficients explained with each new block of variables entered. Also, it is possible to see how the variables interact with one another as each new block of variables is entered into the equation.

Analytic Approach to (RQ3): How did applicants define disadvantage?
a. How did URiMs define disadvantage as compared to non-URiMs?

The analytic approach to this question was informed by a pilot study involving a 1% random sample of all 2002-2008 disadvantaged applicants. In total, I examined 320 essays. The units of analysis were the themes that emerged within the essays. The analysis was guided by the research questions immediately stated above. The qualitative methods employed involved the inductive approach of conventional content analysis (Hsieh & Shannon, 2005), which allowed insights and categories to emerge freely from the text. No predetermined codes or theory were imposed. In terms of Computer Assisted Qualitative Data Analysis Software (CAQDAS) (Bogdan & Biklen, 2007), I utilized MS Word and NVivo to help organize selected essays and coding schemes. NVivo is a qualitative data analysis software package that was used to code, retrieve and review the textual data, as well as to help identify patterns in coding.

To arrive at core coding categories, I repeatedly read the text, recorded my notes and highlighted content relevant to the research question. I then compared individual codes and grouped them in relation to each other (Corbin & Strauss, 2008). Core themes emerged by the frequency with which they arose in the data (Merriam, 2009). From this pilot qualitative analysis, 11 themes emerged from the essays and were most frequently discussed by applicants, as listed in Figure 2 in the Appendix.

For the present study, I performed a similar qualitative examination to explore how applicants defined disadvantage. However, I utilized SPSS software to pull a larger sample size of 644 students or 2% of all 2002-2008 disadvantaged applicants. Also, I employed proportional sampling (Van Dalen, 1979) for greater representativeness in the sample of the population, particularly to ensure maintenance of gender and racial/ethnic sub-group populations. For example, to reflect the proportions of female and male applicants within the total disadvantaged applicant pool, I randomly selected for the sample 277 males (43%) and 367 (57%) females. Likewise, the sample reflected the proportion of disadvantaged applicants accepted over 2002-2008, 38%, as well as the proportion of URiMs in the larger disadvantaged population, 40%.

To discern how these applicants defined disadvantage, I utilized as my coding categories the recurring themes from the pilot study. I examined the essays for the frequency with which these dimensions of disadvantage were discussed by students. The development of themes was also congruent with a Critical Race Theory (CRT) framework. As I read the essays and devised coding categories, I considered such CRT-grounded questions as, “do the applicants’ essays challenge dominant paradigms regarding minority students?” and “do the essays illuminate the role of race or racism in

education?” To address the second part of the research question, I compared the responses of URiM and non-URiM applicants according to the core themes that emerged amongst each group. To do this, I used SPSS to run crosstabs analyses with the URiM variables against the defined coding categories.

Analytic Approach to (Q4): What proportion of applicants “reframed” the disadvantaged construct, and what proportion “conformed”?

- a. *How do “reframers” define disadvantaged? How do “conformers” define disadvantaged?*
- b. *Are there distinct profiles for “reframer” versus “conformer” applicants? If so, what are the academic and background characteristics related to “conforming” or “reframing”?*
- c. *Does any relationship exist between admission and “reframing” or “conforming”?*

Across the aforementioned 11 coding categories, I found that two distinct types of essays emerged from the pilot study: (a) essays that *conformed* to the construct of disadvantage by enumerating deficiencies and challenges in the applicants’ lives, and (b) essays that *reframed* the disadvantaged construct by describing ways in which the various difficulties had an enriching, transformative or otherwise positive impact on applicants’ lives.

To address (RQ4) of this study, I developed a coding scheme for the “conformer” and “reframer” concepts. To code the applicants’ responses as “reframed,” I applied criteria drawn from CRT (Solórzano, 1998; Matsuda, 1993). If two of the following three criteria were present within applicants’ essays, their responses were coded as “reframer” essays:

- 1) Applicant described a critical perspective of macro or societal “contextual forces” impacting the applicant’s life, such as the role of race and racism in educational

experiences, alongside an ability to transcend and find meaning in those

“marginal experiences;”

Essay Example A:

My desire to become a physician was developed at a young age and has grown as I have matured. I have encountered challenges based on my socioeconomic status and ethnic background in pursuit of my goal. I have worked hard to achieve academic excellence while attending various Detroit Public Schools. Typically the quality of education of the Detroit Public School system is inferior to that of more affluent suburban communities. Despite this reality, I took advantage of opportunities presented to students, including joining the Future Doctors Club in high school. Beyond high school I sought out a secondary education and became the first in my family to graduate from college. This was an arduous task because I required financial support and this feat had not been accomplished by my parents or siblings. Despite their inexperience concerning college life, my family encouraged me throughout the process and when I graduated, they graduated also. Along the road to becoming a physician, I have also been faced with intimidations by individuals who did not believe that African American students possessed the ability to complete the studies necessary to become a doctor. These experiences, while unfortunate, have been excellent learning opportunities for me. This has made me more determined to do my best academically.

Essay Example B:

“You should consider a trade school, USC is too hard. That’s just the way things are.” – my high school counselor. This was the atmosphere at my high school. The school I attended had a student body that did not appreciate education. There was a large influx of gangs in this atmosphere. This resulted in a faculty that did not reach out to the students to try and teach them basic skills necessary for the pursuit of a higher education. Instead, the faculty mentioned trade schools. The ultimate result of this challenging situation was that I became self-sufficient in my pursuit of a higher education. At times this was a difficult task, as I had nobody to turn to and ask for help. My mother did not have the educational skills to provide me with assistance and I had a strained relationship with my father, as he suffers from post-traumatic stress-disorder (PTSD), due to his service in the Vietnam War. Having to pursue a higher education on my own proved to be successful, as I was one of only five students to attend a major university upon graduation. Though these challenges ultimately affected my performance at USC, I have always been able to push forward in my pursuit of a higher education, dealing with each challenge one at a time: "Things don't have to be the way they are."

- 2) Applicant described personal resilience and success despite struggle and /or how the applicant was motivated or strengthened by those challenges;

Essay Example A:

At the age of nine, my family and I moved to the United States. We arrived here with a few suitcases, some knowledge of the language, and the realization that our parents' education would be our only source of guidance through these trying times. Even at this age, I became aware of the importance of education and realized that no matter what hardships people face, with a solid education anything is possible. Yet, I had to work diligently to reach the same academic level that I had reached previously in the country from which I had arrived. But hardship leads to strength and with diligence and perseverance I moved to the top of my class. Furthermore, I suffered an injury to my knee in my second semester at Baylor that required surgery. I travelled every week, several times a week, from city to city attending physical therapy. Even though I worked diligently, no amount of studying could replace the missed lectures or the time taken out from studying due to all of the travelling. Although I worked extremely hard, some of my grades still suffered for about two semesters after this. Therefore, this was truly a hardship that I encountered during college. All of these disadvantages have made me a stronger person. Through these hardships I have gained even more determination to achieve my goals.

Essay Example B:

Coming from a family of low income and no education made getting through school more of a challenge for me than for children whose parents made a decent income and obtained an education. This however made me a stronger person because I had to work a lot harder to do well in school. This disadvantage actually gave me the advantage of being able to push myself to work harder because I had to learn everything on my own. Both of my parents were unable to help me with any school work because they did not understand English and because they were unable to get an education. Both of my parents come from a very low income family therefore had to work at age eight in order to survive. Their struggle however has helped me push myself to do well because their struggles are what have me in school today. Their dedication to make sure we went to school and succeed is what really pushes me to do better each time. A disadvantage is only a disadvantage if you let it be one.

- 3) Applicant challenged dominant paradigms related to minority students by describing the positive influence of culture, community, or family, as well as aspirations to “give back” to similarly disadvantaged communities.

Essay Example A:

To receive the best education possible, my younger sister and I endured 45-minute bus rides from our neighborhood to our suburban schools. Our parents, excellent teachers of perseverance, provided little assistance with our schoolwork; they had emigrated from Mexico with no knowledge of the English language and

an education equivalent to Junior High School standing. Thus my sister and I spent the afternoons helping one another out. Without the aid of home computers or encyclopedias, which my father could not afford on a gardener's salary, we managed to excel academically and enrolled as undergraduates at UC San Diego. The start of college coincided with my mother's unexpected fight with cancer. As my mother's companion, I learned to balance family obligations with school and work. My father, the only stable source of income, could not contribute to the college expenses of his two daughters. This led me to increase my work load to 30 hours a week during my senior year. After this demanding schedule while at UCSD, my college graduation was the first celebrated in my family, and a reward for the challenges encountered and overcome. I was now a new type of role model for the younger members of my family, proving that with will and dedication, our academic goals can be achieved.

Essay Example B:

My father has worked as a dishwasher, lettuce picker and in construction. My mother is a homemaker for six children. I grew up on the southside of Tucson where teenage pregnancy, gang violence and drug use are more common pursuits than attending college. Since my parents instilled in me the importance of education and the value of hard work, I am taking a different road and giving my best effort. By using mentors in high school wisely, a path to higher learning began to open; something unfamiliar to my parents, relatives and peers. In return for the help received, I gave back to the community as a tutor in two undergraduate programs: Academic Preparation for Excellence and Math Engineering and Science Achievement. As an older daughter, I am responsible for all family affairs in the absence of my mother. While a senior in college, an auto accident caused a spinal injury to my older brother. My mother was helping family in Mexico. The pressures of school, work and caring for my brother made this year a test of strength. Will power, tested by years of adversity, is what made me a college graduate. While I seek no special favor, I want the committee to know I understand the value of hard work and see myself as an asset, bringing life experiences worth sharing.

In contrast, essays that were coded as “conformer” essays were those that described the types of disadvantage applicants experienced, but did not *articulate* at least two of the above criteria, i.e.,: 1) a critical perspective of macro or societal “contextual forces” impacting the applicant’s life, alongside an ability to transcend and find meaning in those “marginal experiences;” 2) resilience and success despite struggles and /or how those struggles motivated or strengthened the applicant; and 3) a challenge to dominant deficit paradigms via a description of the positive influences of the applicant’s culture,

community, or family, as well as aspirations to “give back” to similarly disadvantaged communities.

In other words, I considered applicants “conformers” if the text they submitted did not in some way voice a departure from or subvert a deficit perspective. In the following examples, applicants did not effectively construct a narrative highlighting their own agency or empowerment, as did the “reframer” applicants:

Essay Example A:

I consider myself a disadvantaged applicant due to my childhood as a ward of the court. Because my parents were not fit to raise me, they have never had the capacity to provide me with financial support for my schooling. At this time I receive financial aid and student loans for the majority of my tuition and living costs for my family and I. The remaining 10% of my support comes from a few small grants that I was awarded for my biological laboratory work.

Essay Example B:

Based on the family income primarily. The income earned by both of my parents was not enough to help me or any of my siblings with the cost of a college education. Consequently the financial strain that was imposed was indeed a difficult barrier to get through. In addition, my parents never attended college, which made it difficult for them to provide help even if it were possible. Furthermore, while a teenager, my junior and senior years of high school were spent in alternative schools that maintained below adequate facilities as well as supplies.

Essay Example C:

Living in underserved communities has impacted my life to a great extent. Throughout my life, I have lived in low-income neighborhoods both in the US and overseas. My parents were unskilled workers who were paid below minimum wage due to the fact they had no formal training and spoke little English. With very limited financial resources, I was expected to contribute to the family income from a very early age and have been doing so ever since. Drug dealings and other crimes were part of the daily events I saw first-hand growing up. The death of my sister by a drive-by shooting is something that still burns my soul and reminds me of the hardships my family endured. The low quality public school system I attended did little to provide a safe place or a decent education. School was more like a prison as I was subjected to metal detectors and demeaning remarks from teachers who were not capable of dealing with a diverse student population. Coupled to all of this, I have spent some time living on the streets and in temporary shelters with my family, when we could not make ends meet. It was only recently that anyone in my family obtained health insurance or was able to seek medical attention when needed.

It can be argued that all AMCAS applicants are “reframers” by virtue of the personal agency driving their application to medical school and aspirations for a medical career. However, I have evaluated the way in which applicants chose to represent themselves within this high-stakes interface with U.S. medical schools. The “voice” within applicants’ submitted narratives is what is assessed in this study. I was particularly interested in how minority students chose to respond to an essay prompt that compels, even directs, them to represent themselves in a deficient light. How applicants navigated this interface was examined within this study.

According to the above criteria, I identified the *reframers* and *conformers* within the disadvantaged applicant group, and then used SPSS descriptive analyses to determine the proportion of *reframers* versus *conformers*. To learn if any distinct profiles existed for reframer and conformer applicants, I ran crosstab analyses in SPSS to test whether the various applicant characteristics considered in (RQ1a) and (RQ2a) were related to reframing or conforming. To answer whether being a “reframer” or “conformer” predicted admission, I ran a regression analysis akin to (RQ2c); admission (acceptance) was the dependent variable, and “conform” was the independent variable weighed in the last block.

Dependent Variable	Independent Variables		
Acceptance Indicator	<u>Block 1</u> Sex Race Variable Parent1 Education Status (highest degree held)	<u>Block 2</u> Applicant’s Highest Degree Held MCAT Score Cumulative Undergraduate Science GPA	<u>Block 3</u> Conform

V. Positionality and Limitations

Positionality

As a Chicana⁵ researcher examining a sample population that included minority applicants, I carefully considered my positionality. Milner (2007) suggests a positionality framework for education researchers investigating topics related to race or culture. In this section, I addressed my positionality using some of Milner's recommendations.

My racial and cultural roots are Mexican American. Through stories of racism and prejudice experienced by my grandparents and parents, at an early age I became cognizant of our marginalized status within the United States. Consequently, as a student and researcher my focus has long been on the experiences of people of color in this country. I am drawn to research with a social justice agenda that highlights the voices and unrecognized resources of racial minority groups. My epistemological stance is that multiple truths exist. I recognize that this orientation may influence the way I evaluate the experiences of racial minorities as well as the systems they live within. Because of this, I have tried to exercise caution when interpreting the experiences of racial minority research subjects. Though I consider myself an "insider" to some degree, I hold "outsider" status as well due to differences in social class and a variety of other social dimensions of difference. It was important to be mindful that individuals of color had various ways of identifying with their ethnic and racial backgrounds and some may not have identified at all.

Limitations

This study is limited by nature of its data. The data come from a pre-existing database created, cleaned, and coded by the AAMC. As I was not involved in the data gathering or cleaning process, this posed some challenges in terms of understanding how

⁵ The term "Chicana/o" refers respectively to women and men who are Mexican American. For many within this Latino subgroup, the term signifies self-determination, ethnic pride and political solidarity.

the AAMC arrived at certain data codes. In cases such as this, I was dependent upon the relationship that I had with staff members at the AAMC to glean a better understanding of the data. Also, because the data have been completely de-identified, there is no way to attach it to individuals or access the same population for follow-up information. One such limitation, was posed by the socioeconomic information available; because the data did not provide the applicants' household incomes, I used 2002-2008 U.S. Census and the Bureau of Labor Statistics' National Compensation Survey (NCS) data alongside their parents' occupation to determine estimated household income figures. Therefore, the quintiles used for the analyses are based on the 2002-2008 Census, which yielded only approximate income results. While the dataset provided occupation information for two parents, a substantial portion of applicants reported an occupation for only one parent as opposed to two parents; hence, I limited the analysis to only one parent's information.

Validity

As I am using pre-existing, de-identified data, there was no way to use member checks and verify with individual applicants that what they stated in their application essays was an accurate representation of how they conceived of "disadvantage." Also, beyond AAMC staff, it is unclear whether similar studies with the same or similar data could be reproduced. The AAMC provides only limited access to their database, so any researcher wishing to reproduce this study must form some kind of relationship with the AAMC and possibly invest financial resources to attain the data. In terms of generalizability, this study focuses on a very specific population of students during a specific place in time. It is arguable that any conclusions drawn regarding minority students in this study may not be generalizable to minority students of this racial

background within other areas of higher education. The final chapter of this project addresses further the problems inherent to research involving students and racial categorization, and also gives more in depth discussion to other study limitations.

VI. Chapter Summary

The existing research on diversity in medical schools fails to examine the point of entry to medical school. Among those points of entry is the application itself. Examining factors that influence admission to medical school is vital to developing initiatives that facilitate more diverse applicant pools and student bodies. Situating this study within the context of the U.S. medical school application also reveals findings and recommendations that may serve to build upon current holistic admissions initiatives as well as pre-med preparation and pipeline programs for minority students. Accordingly, this chapter described the procedures seeking to answer the four research questions guiding my study. The following chapter discusses the results of this study.

CHAPTER 4

RESULTS

This chapter presents findings from analyses of data in the study organized by research question. The first question examines the pool of applicants who were admitted to medical school between 2002-2008. I considered a variety of characteristics including academic, race/ethnicity, socioeconomic, gender, disadvantaged and underrepresented in medicine (URiM) status. The second question evaluates the extent to which applicants identified as disadvantaged, the academic and personal background characteristics of disadvantaged students, and the proportion of underrepresented in medicine (URiM) and non-URiM students within this sub-group of applicants. I also investigated whether being disadvantaged predicted admission to medical school. The third research question studies the short essays submitted by disadvantaged applicants. Similarly, the fourth research question focuses on comparison of applicant characteristics among “reframers” and “conformers.” I explored whether any relationships exist between status as “reframer” or “conformer” and the applicants’ academic and background characteristics. Finally, I investigated whether being a “reframer” or “conformer” relates to admission to medical school.

As an introduction and context for the findings, I first offer a descriptive overview of the 2002-2008 AMCAS applicants. This general snapshot provides information on academic and background characteristics including: race, ethnicity and nationality, gender, socioeconomic, URiM and disadvantaged status.

I. Who Applied to Medical School in 2002-2008?

Over the seven application cycles 265,176 students submitted AMCAS applications. Only 12.5% of the total applicant pool was classified as URiM⁶ by the AAMC. Similarly, a small percentage of all applicants (12.1%) identified as disadvantaged while the great majority (83.7%) did not. Applicants were almost equally split between females (49.5%) and males (50.5%). In terms of racial/ethnic background, substantial portions of the applicant pool were White/Non-Hispanic (64.6%) and Asian (21.2%), and the groups least represented were Hawaiian/Pacific Islander (0.42%), Cuban (0.59%), and Native American (1.1%). Table 1 provides information on the racial/ethnic groups in the sample, as well as gender data, URiM, and disadvantaged status. The most notable differences in the proportion of men and women who applied were among African Americans where more than two-thirds were female (67.8%) versus male (32.2%), as well as among URiM men (37.8%) and women (62.2%) and disadvantaged men (42.8%) and women (57.2%), where females were also more prevalent.

To assess socioeconomic background, the applicants' parental annual income and educational attainment were included in the analyses, and I used the variables PARENT_1_OCCUPATION_CD and PARENT_1_ED_LEVEL_CD. Since a substantial portion of applicants reported this background information for only one parent (coded PARENT_1 as above) as opposed to two parents, I limited the analysis to one parent. In lieu of data on applicants' household incomes, the previous chapter described how income quintiles were determined (see pg. 62). In omitting the second parents' occupation information provided by some applicants, I noted that, after running the

⁶ As described in previous chapters, URiM refers to "Blacks, Mexican Americans, Native Americans (that is, American Indians, Alaska Natives, and Native Hawaiians), and mainland Puerto Ricans."

descriptive analyses, there were no longer applicants in the bottom two income quintiles. While this may demonstrate the limitations of an income estimate as well as using information on only one parent, it is also in line with research indicating that medical school applicants typically come from households with incomes greater than what is average within the general population (Jolly, 2008). The income quintiles used in my analyses are ascending from first to fifth accordingly: bottom or first quintile \$0 - \$19,229; second \$19,230 - \$36,275; third \$36,276 - \$57,890; fourth \$57,891 - \$92,552; and the top or fifth \$92,553 or greater. As shown in Table 2, applicants were most likely to report a household income in the top quintile (78.5%) and were least apt to report a household income in the bottom or second quintiles (both at 0.0%). The racial/ethnic groups most likely to report a household with a top income quintile were Asian (81.0%) and Foreign (80.8%). Least likely to report a household income in the fifth quintile were Mexican Americans (60.1%).

As to parental educational attainment, Table 3 demonstrates that nearly three quarters of all applicants reported a Parent1 with a baccalaureate degree or higher (74.1%). The percentage with a Parent1 with a high school diploma or less was 25.9%. Applicants were least likely to report a Parent1 without a high school diploma (3.8%). The racial/ethnic groups most likely to report a Parent1 without a high school diploma were Mexican American (22.2%), Other Race (14.9%), and Unknown Race (14.4%). Native American (37.3%), Mexican American (34.6%), and African American (32.3%) applicants were most likely to report a Parent1 with a high school diploma. Foreign (37.6%), Puerto Rican (34.2%) and Hawaiian/Pacific Islander (33.7%) applicants were most likely to report a Parent1 with a college degree. The groups most likely to report a

Parent1 with a graduate or professional degree were Asian (48.7%), White (43.6%) and Foreign (40.6%).

As to the applicant pool's academic profile, science GPAs and cumulative GPAs as well as MCAT scores were considered. Total GPA and science GPA scores were based on a 4.0 scale. Total GPA scores were divided into ascending quintiles with the first or bottom quintile comprised of 0.00 – 3.20, second quintile 3.21 – 3.45, third quintile 3.46 – 3.63, fourth quintile 3.64 – 3.80, and top or fifth quintile 3.81 – 4.00. As Table 4a shows, the racial/ethnic groups most likely to report GPAs in the bottom quintile were African American (49.3%), Mexican American (38.5%), and Native American (37.8%). The racial/ethnic groups most likely to report top quintile Total GPAs were Foreign (26%), White (22%) and Asian (18.8%).

Science GPA was divided into ascending quintiles with the first or bottom quintile ranging from 0.00 – 3.02, second quintile at 3.03 – 3.33, third quintile of 3.34 – 3.56, fourth quintile at 3.57 – 3.79, and top or fifth quintile at 3.80 – 4.00. The racial/ethnic groups most likely to report bottom quintile science GPAs were African American (50.4%), Mexican American (39.2%), and Puerto Rican (36.6%). The racial/ethnic groups most likely to report top quintile science GPAs were Foreign (27.3%), White (21.3%) and Asian (18.6%).

At the time of this study, each sub-section of the MCAT was scored on a 0 – 15 point scale. Applicants' scores for the MCAT Basic Science, MCAT Physical Sciences and MCAT Verbal Reasoning portions of the standardized test were aggregated to create a range of scores from 0 to 45 points. The cumulative MCAT scores were divided into quintiles accordingly: first or bottom quintile 0 – 23, second quintile 24 – 27, third

quintile 28 – 29, fourth quintile 30 – 32, and top or fifth quintile 33 – 45. As in Table 5, the majority of applicants' MCAT scores were in the second quintile (24.9%). Applicants were least likely to have third quintile scores (15.6%). The racial/ethnic groups most likely to report bottom quintile total MCAT scores were Puerto Rican (68.3%), African American (65.0%), and Hispanic (45.3%). The racial/ethnic groups most likely to report top quintile MCAT scores were Asian (21.9%), Foreign (21.9%), and White, Non-Hispanic (18.1%). The most notable variation between the scores of female and male applicants was in the bottom quintile among Native Americans (48.7% female versus 29.9% male), Hispanics (52.8% female versus 37.2% male) and Other Race (51.7% female versus 34.4% male).

Findings from each research question are presented in the following subsections. Note that some of the key findings were highlighted with subheadings in bold typeface.

II. Key Findings

(RQ1): Who was accepted to medical school?

a. What are the academic and background characteristics related to admission?

Only 11.3% of all accepted students were URiMs. As illustrated by Table 6, slightly less than half (127,194 or 48%) of applicants were accepted to medical school between 2002 and 2008. Of those accepted students, more were male (51.2%) than female (48.8%). Men were also accepted at a slightly greater rate (48.6%) than women (47.3%). A small percentage of accepted applicants (11.3%) were classified as URiMs by the AAMC, and 43.5% of all URiM applicants were accepted compared to 48.6% of non-URiMs. Among the accepted URiMs, more were female (58.8%) than male (41.2%). However, male URiMs (47.4%) were accepted at a greater rate than URiM females

(41%). Among students who identified as disadvantaged, there were more female (55.9%) than male (44.1%) applicants.

Most accepted students were White, but applicants most likely to be accepted were Puerto Rican and those least likely were Hawaiian/Pacific Islander.

Disaggregating the accepted applicants by ethnic/racial background, most accepted students were White (67.8%) and Asian (21.2%). The ethnic/racial groups least represented among accepted students were Hawaiian/Pacific Islander (0.3%), Cuban (0.6%) and Native American (1%). Within each ethnic/racial group, the highest acceptance rates were among Puerto Rican (53.5%), Cuban (51.8%) and Unknown Race (51.7%). Applicants were less likely to be accepted if they identified as Hawaiian/Pacific Islander (34.1%), African American (41.4%) and Other Hispanic (42.6%).

Slightly more women than men applied to medical school, but men were slightly more likely to be accepted. In terms of gender, in nine out of the thirteen ethnic/racial groups examined, more women applied to medical school than men (see Table 1). However, in all but two of the thirteen sub-groups, men were more likely than women to be admitted. See Table 6. Among Whites and applicants of Unknown Race, women and men were equally as likely to be accepted. Of all male applicants, Puerto Ricans were most likely to be accepted (57.6%). Of all females, Unknown Race applicants were most likely to be accepted (51.7%). The greatest gender discrepancy occurred among African American applicants: while more than double the proportion of women (67.8%) applied than men (32.2%), men were more likely to be accepted than women (46.2% men versus 39.1% women).

Accepted students demonstrated elite or “high” SES indicators. As for socioeconomic background, the majority of accepted applicants reported a household income in the highest-grossing quintiles (80.6%); this was 2.1 percentage points greater than the percentage of applicants in the fifth quintile within the overall applicant pool. See Table 7. Among accepted applicants, the racial/ethnic groups most likely to report a household with a top quintile income were Asian (83.5%) and Foreign (83.1%). As in the larger applicant pool, Mexican Americans (61.3%) were least apt to report a household income in the fifth quintile. Also reflecting the larger applicant pool, accepted Cuban applicants presented the most notable gender difference where 11.1 percentage points separated males and females in the fifth quintile.

Regarding parents’ educational attainment, nearly eight in ten accepted applicants (79.1%) reported a Parent1 with a baccalaureate (30.2%) or post-baccalaureate degree (48.9%), as illustrated by Table 8. Only 2.7% of accepted applicants reported a parent with less than a high school diploma, and 18.3% reported a parent with a high school diploma. The racial/ethnic groups most likely to report a Parent1 with a graduate degree were Asian (56.5%), White, Non-Hispanic (48.8%) and Foreign (44.9%). The racial/ethnic groups most likely to report a Parent1 with less than a high school diploma were Mexican American (20.1%), Other Race (13.3%) and Unknown Race (11.5%). The greatest gender difference occurred among Hawaiians where males reported a Parent1 with a graduate degree at a 9.7 percentage point greater rate than women.

Accepted students demonstrated elite academic profiles. In terms of the academic profile of applicants, very few accepted applicants reported cumulative GPAs in the bottom quintile (7.8%). See Table 9a. More than half reported cumulative GPAs in

the fourth (25%) and top quintiles (31.6%). The racial/ethnic groups most likely to report top quintile cumulative GPAs were Foreign (45.2%), White (31.6%) and Asian (30.9%). The racial/ethnic groups most likely to report GPAs in the bottom quintile were African American (29.4%), Mexican American (21.0%) and Native American (19.8%). The most notable gender difference occurred among African Americans, where males reported a bottom quintile GPA at 7.2 percentage point greater rate than females. Similar to accepted applicants' cumulative GPA scores, only 7.4% reported Science GPAs in the bottom quintile and more than half reported scores in the top two quintiles (fourth 26.5%; fifth 30.7%). See Table 9b. The racial/ethnic groups most likely to report top quintile science GPAs were Foreign (46.4%), White (30.7%) and Asian (30.1%). The racial/ethnic groups most likely to report bottom quintile science GPAs were African American (30.5%), Puerto Rican (22.2%) and Mexican American (21.9%).

Accepted applicants were most likely to have MCAT scores in the fourth (28.3%) and fifth (29.1%) quintiles. See Table 10. They were least likely to have MCAT scores in the bottom quintile (6.0%). With regard to gender, a gap between the scores of males and females was most notable among Hawaiians where men were 16.8 percentage points more likely than Hawaiian women to have MCAT scores in the top quintile. The racial/ethnic groups most likely to have top quintile scores were Foreign (39.9%), Asian (37.7%) and White (29.6%). The racial/ethnic groups most likely to fall in the bottom quintile were Puerto Rican (53.4%), African American (34.3%) and Hispanic (24.5%).

(RQ2): Who identified as disadvantaged?

a. What are the characteristics of applicants who identified as disadvantaged?

Only 12.7% of all applicants were disadvantaged, and of those, 40% were URiMs, over half were women, and Mexican Americans were most likely to be

disadvantaged. Among the questions explored by this study is the extent to which medical school applicants identified as “disadvantaged.” As mentioned earlier in this chapter, of the total population of applicants in 2002-2008, the majority or 87.3% did *not* identify as disadvantaged. Only 12.7% (n=32,192) identified as disadvantaged. Of those students who declared disadvantage, only 38.1% were accepted to medical school (see Table 6). Of all accepted students, 10% or 12,278 out of 123,383 were disadvantaged. In terms of gender, more than half of disadvantaged applicants were female (57.2%) versus male (42.8%), as shown in Table 11. Among racial/ethnic groups, the greatest proportion of disadvantaged applicants were White (40.6%) followed by African American (29.1%), Asian (19.2%), and Hispanic (17.9%). The least represented racial/ethnic groups among disadvantaged applicants were Cuban (.9%), Hawaiian/Pacific Islander (1.1%) and Native American (2.9%). The ethnic/racial groups least likely to identify as disadvantaged were White (7.9%), Asian (11.4%), and Cuban (18.1%). Mexican American (44.5%), African American (42.9%) and Other Race (40.0%) were most likely to declare disadvantage. Within most racial/ethnic groups, female applicants were more likely to identify as disadvantaged, with the exception of one group: more African American males than females were disadvantaged (45% versus 41.8%). The greatest gender difference in disadvantage was among Native Americans where 7.6% more women reported disadvantage than men.

Most disadvantaged students reported a household income in the top quintile and a parent without a college degree. In terms of socioeconomic background, most disadvantaged students reported a household income in the fifth quintile (58.5%), as shown in Table 12, though in smaller proportion compared to the overall (78.5%) or

accepted (80.6%) applicant pools. Among disadvantaged applicants, the racial/ethnic groups most likely to report a household income in the top quintile were Foreign (70.1%) and Other Race (65.9%). The racial/ethnic groups least likely to report a household in the fifth income quintile were Unknown Race (31.8%) and Mexican American (41.3%). Regarding educational background, more than half (56%) of disadvantaged applicants reported a Parent1 without a college degree. See Table 13. Among disadvantaged students, the racial/ethnic groups most likely to report a Parent1 with a post-baccalaureate degree were Foreign (31.3%), White (20.3%) and African American (19.9%). The racial/ethnic groups most likely to report a Parent1 without a high school diploma were Mexican American (40.3%), Unknown Race (37.0%) and Other Race (29.1%).

Disadvantaged students were most likely to report bottom quintile GPA and MCAT scores. In relation to disadvantaged applicants' academic profile, the majority (59.3%) reported cumulative GPAs below the third quintile and were least represented in the top quintile (11.3%), as shown in Table 14a. Among disadvantaged applicants, the racial/ethnic groups most likely to have top quintile GPAs were Foreign (24.6%), White (15.0%) and Cuban (12.8%). The racial/ethnic groups most likely to have bottom quintile GPAs were African American (54.4%), Native American (51.0%) and Mexican American (47.8%). The science GPA scores of disadvantaged students were similar to their cumulative GPAs, as illustrated in Table 14b. The majority (58.9%) of disadvantaged applicants had GPAs below the third quintile, and they were least likely to have top quintile science GPAs (11.4%). Of the disadvantaged students, those most likely to have top quintile scores were Foreign (24.8%), White (14.5%) and Asian (13.4%).

Disadvantaged applicants most likely to possess bottom quintile science GPAs were African American (54.9%), Native American (48.7%) and Mexican American (47.8%).

As for disadvantaged applicants' MCAT scores, the great majority (72.6%) reported MCAT scores in the lowest two quintiles and were least likely to report top quintile scores (6.1%). See Table 15. Among the disadvantaged, the most likely to report top quintile scores were Asian (9.2%), Foreign (8.8%) and White (8.7%). The disadvantaged students most likely to report bottom quintile scores were Puerto Rican (73.1%), African American (70.5%) and Other Race (54.2%). The most notable gender difference was between Native Americans where women were 17.5 percentage points likelier than men to report bottom quintile MCAT scores.

b. How likely were URiMs to identify as disadvantaged and what are the characteristics of URiMs?

Less than half of disadvantaged applicants were URiMs. Over the 2002-2008 application cycles, the AAMC classified 33,104 applicants as URiM. Of those, less than half (43.5%) were accepted to medical school (See Table 6). Most URiMs were female (62.2%). In terms of URiM and disadvantaged status, less than half (40%) of URiMs identified as disadvantaged, and over half (60%) of all disadvantaged applicants were *not* URiMs. More disadvantaged women (43.9%) than men (34.7%) were URiMs.

As explained in Chapter 1, over the 2002-2008 AMCAS cycles, "URiMs" were classified by the AAMC as minorities underrepresented in medicine, to include Mexican Americans, mainland Puerto Ricans, African Americans, and American Indians. Yet, it is important to note that applicants who identified as one of these racial/ethnic subgroups did not always do so exclusively, as some students were from mixed race backgrounds. For example, it is possible that applicants who identified as Mexican American also

identified as Asian. This is why all racial/ethnic subgroups are represented in the breakdown of URiMs illustrated in Table 16.

As shown in Table 16, most URiMs in 2002-2008 were African American (67.8%), followed by Hispanic (28.7%), Mexican American (20.4%) and White (20.4%). The least represented racial/ethnic subgroups among URiMs were Cuban (0.6%), Hawaiian/Pacific Islander (1.1%), and Asian (2.8%). In terms of the ethnic/racial groups most likely to be classified as URiMs, 100% of Mexican American, Native American, and African American students were classified as URiMs. Hispanic (47.9%), Puerto Rican (44.2%), Unknown Race (36.2%), and Hawaiian/Pacific Islander (34.1%) applicants were also more likely to be classified as URiMs. Least likely were Asian (1.6%) and White (3.9%) applicants. Among the thirteen ethnic/racial groups considered in this study, in seven of the groups, females were more likely than males to be classified as URiMs.

Most URiMs reported top quintile household incomes and bottom quintile MCATs and GPAs. Regarding socioeconomic background, URiMs were most likely to report a household income in the top quintile (69.6%), though in smaller proportion than the overall (78.5%) or accepted (80.6%) applicant pools. See Table 17. Among URiMs, the racial/ethnic groups most likely to report a top quintile income were Cuban (79.4%) and Asian (74.6%). The racial/ethnic groups least apt to report a household income in the fifth quintile were Unknown Race (51.7%) and Mexican American (60.1%). As for parents' educational attainment, URiMs were most likely to report a Parent1 with a high school diploma (33.3%) and were least likely to report a Parent1 without a high school diploma (9.8%).

In relation to their academic profile, URiMs were most likely to report bottom quintile cumulative GPAs (45.4%), and least likely to report top quintile GPAs (8.3%). See Table 19a. Among URiMs the racial/ethnic groups most likely to report top quintile cumulative GPAs were White (13.3%), Native American (12.2%) and Hawaiian (11.4%). The racial/ethnic groups most likely to report bottom quintile scores were African American (49.3%), Other Hispanic (48.6%) and Other Race (46.6%). As was the case for their cumulative GPAs, URiMs were most likely to report bottom quintile science GPAs (46.3%) and were also least likely to report top quintile scores (8.1%). See Table 19b. Among URiMs, the racial/ethnic groups most likely to report top quintile science GPAs were White (12.4%), Native American (12.1%) and Hawaiian (11.2%). The racial/ethnic groups most likely to report bottom quintile science GPAs were African American (50.4%), Cuban (49.5%) and Other Hispanic (47.8%). The most notable gender gap was among Cubans where men were 10.2 percentage points likelier to report fourth quintile science GPAs.

As for the MCAT scores of URiMs, more than half (57.2%) reported bottom quintile scores and they were least likely to report top quintile MCAT scores (3.9%). See Table 20. Of the URiMs, the racial/ethnic groups most likely to report MCAT scores in the top quintile were Hawaiian (9.6%), White (9.3%) and Asian (8.8%). The racial/ethnic groups most likely to report MCAT scores in the bottom quintile were African American (65.0%), Other Race (56.0%) and Other Hispanic (53.3%). The greatest gender gap was among Asians where women were 25.2 percentage points likelier to report first quintile MCAT scores.

c. Did disadvantaged status predict admission to medical school?

To address this sub-question, a two-tailed bivariate Pearson correlation was computed in SPSS to determine the relationship between each of the predictor variables and acceptance to medical school. See Table 21. In particular, I was interested in investigating any relationship between admission and disadvantaged status. The results indicated statistically significant correlations among all predictors, except for the race variable. The following predictors had positive associations with the independent variable: MCAT ($r_s(260,033) = +.479, p < .001$); Science GPA ($r_s(253,592) = +.414, p < .001$); Parent1 Education ($r_s(.240,146) = +.129, p < .001$); and Sex ($r_s(265,174) = +.013, p < .001$). The results suggest that higher MCAT and GPA scores and parental educational attainment, as well as being a male applicant, were correlated with acceptance. Results indicated a statistically significant inverse relationship between acceptance to medical school and the following variables: the Disadvantaged status indicator ($r_s(254,284) = -.079, p < .001$); the URiM indicator ($r_s(265,175) = -.034, p < .001$); and the applicant Graduate Degree indicator ($r_s(254,317) = -.012, p < .001$). Thus, having URiM or disadvantaged status, or possessing a graduate degree, were correlated with not getting into medical school.

Being disadvantaged was a significant predictor of admission. In addition to running a correlation analysis, I also ran a binomial logistic regression analysis, as the outcome variable was admission or acceptance to medical school, a dichotomous variable (with the outcome “yes” or “no”). The predictor variables included disadvantaged status, as well as other variables known to influence admission. The variables were entered in a temporal sequence. In Block 1 (see Table 21), I entered variables related to students’ background including gender. To account for students’ race/ethnic background, I entered

both the URiM status variable (indicating Blacks, Mexican Americans, Native Americans [including American Indians, Alaska Natives, and Native Hawaiians], and mainland Puerto Ricans]) and the Asian variable, since it is not specifically accounted for in the URiM variable (White is the comparison group). I also entered into the equation the parents' educational attainment variable (AParentEd1), as a SES-indicator. As shown in Table 21, I found that all of the variables significantly predicted acceptance to medical school, as their p -values are less than .05 (all shown as .000, but are reported as $p < .001$). The sex (.04) and parent education (.31) variables had positive beta values. Thus, if an applicant identified as male, he was more likely to be accepted than a female applicant. Per the odds ratio, the odds of a male applicant being admitted are 1.04 greater than for a female applicant. Similarly, the higher the parent's educational attainment, the likelier the applicant was admitted. For each level of education attained by the parent, the odds of being accepted was multiplied by 1.37 for the applicant. The Asian and URiM variables had negative beta values, indicating a negative association between each of these predictor variables and the acceptance variable. In other words, the lower the value, the more likely accepted. So, if an applicant was not Asian, he or she was more likely to be admitted; the odds of being accepted were 96% lower for Asians than non-Asians. Similarly, if an applicant was not an URiM, he or she was more likely to be admitted; and, the odds of being accepted were 93% lower for URiMs than non-URiMs.

In Block 2, I added three academic metrics to the equation: the MCAT and Science GPA scores and the PU_Degree variable, which indicates whether applicants held a post-baccalaureate degree. I found that all of the variables significantly predicted acceptance to medical school, as in Block 1. See Table 21. Four variables had positive

associations with the acceptance variable: the URiM indicator (1.90), MCAT cumulative score (.253), the parental education indicator (.131), and the Science GPA (.020). It is notable that a suppressor effect was observed, as these variables demonstrated the same positive relationship with the dependent variable, but when I controlled for the effect of MCAT and GPA, there was a dramatic shift in the URiM beta, as shown in Table 21. The odds of URiMs being accepted increased dramatically. Per the odds ratio, the odds of an URiM being admitted are 6.70 times greater than for a non-URiM applicant. Also, the greater the MCAT and Science GPA scores, the more likely the applicant was accepted. For each point increase on the MCAT, the odds of being accepted to medical school were multiplied by 1.29. For each point increase in Science GPA, the odds of being accepted were multiplied by 1.02. Likewise, the more education that an applicant's parent attained, the likelier the applicant was admitted to medical school, and for each level of education attained by the parent, the odds of being accepted was multiplied by 1.14 for the applicant.

Conversely, DSex (-.401), DAsian (-.159), and PUDegree (-.639) had negative beta values. Accordingly, if you were a female (F=0) applicant in 2002-2008, you were more likely to be accepted than a male applicant, and per the odds ratio, the odds of being accepted were 67% lower for men than women. If you were not Asian (Y=1; N=0), you were more likely to be accepted, and the odds of acceptance were 85% lower for non-Asians than for Asians. If you did not have a graduate degree (PUDegree=0), you were more likely to be accepted than if you attained post-baccalaureate education (PUDegree=1); per the odds ratio, the odds of acceptance were 53% lower for graduate degree holders than applicants without a graduate degree.

Most positively associated with admission were the URiM and disadvantaged indicators as well as MCAT score. In the final Block 3, the disadvantaged indicator was added to the equation. Again, all variables significantly predicted admission to medical school, as in the previous Blocks. See Table 21. Five variables had positive beta values. The strongest positive association was between the acceptance variable and the URiM indicator (1.82), followed by the disadvantaged indicator (.307) and the MCAT cumulative score (.255). Accordingly, if an applicant was an URiM, he or she was more likely to be accepted than if he or she was a non-URiM; per the odds ratio, the odds of an URiM being admitted were 6.18 times greater than for a non-URiM. Likewise, applicants who identified as disadvantaged were more likely to be accepted than those who did not; the odds of a disadvantaged applicant being admitted were 1.36 times greater than for a non-disadvantaged student. As in Block 2, the greater the MCAT and Science GPA scores, the more likely was acceptance. For each point increase on the MCAT, the odds of being accepted to medical school were multiplied by 1.31. For each point increase in Science GPA, the odds of being accepted were multiplied by 1.02. Also as in Block 1 and 2, the more education that an applicant's parent attained, the likelier the applicant was admitted to medical school, and for each level of education attained by the parent, the odds of being accepted was multiplied by 1.17 for the applicant.

As to the variables in Block 3 with negative beta values, these were the same as Block 2: DSex (-.401), DAsian (-.172), and PUDegree (-.647), indicating a negative association between each of these predictor variables and the acceptance variable. If you were a female (F=0) applicant in 2002-2008, you were more likely to be accepted than a male applicant, and the odds of being accepted was 67% lower for men than women. If

you were not Asian ($Y=1; N=0$), you were more likely to be accepted, and the odds of acceptance were 84% lower for non-Asians than for Asians. If you did not have a graduate degree ($PUDegree=0$), you were more likely to be accepted than if you attained post-baccalaureate education ($PUDegree=1$); per the odds ratio, the odds of acceptance were 52% lower for graduate degree holders than applicants without a graduate degree.

(RQ3): How did applicants define disadvantage?

a. How did URiM applicants define disadvantage as compared to non-URiMs?

Race was among the least cited disadvantages and the top emergent themes were Financial, Education, and Overcome. As described in the previous chapter, a 2% proportional sample ($n=644$) was taken from the disadvantaged essays submitted over 2002-2008. The following essay themes were considered, according to the results of the pilot study: financial, education, community, immigration, home life, health, race, family support of education, give back, gender and overcome. Per review of the current sample essays, the following themes also emerged and were considered: first-generation college student, which emerged as a sub-theme of education; no medical insurance and medically-underserved, which emerged as sub-themes of health; single parent, which emerged as a sub-theme of home life, and language, which emerged as a sub-theme of immigration. In addition, I observed whether disadvantaged applicants “conformed” to a deficit paradigm or “reframed” the notion of disadvantaged through their responses. Not including “conform” and “reframe,” sixteen dimensions of disadvantage were considered. Figure 2 in the Appendix provides a description and brief examples of each of these dimensions.

Of the sixteen essay dimensions or themes, the most cited among disadvantaged applicants was financial. For instance, 529 or 82.1% of the essays indicated financial

disadvantage. See Table 22. The second and third most prevalent themes were education (427 or 66.3%) and overcome (41.0%). The least prevalent themes were give back (53 or 8.2%), gender (31 or 4.8%) and no medical insurance (29 or 4.5%).

Race was mentioned almost 20 times more among URiMs than by non-URiMs. In terms of how URiMs and non-URiMs responded to the disadvantaged essay prompt, each group reported financial and education disadvantages as the most prevalent themes. See Table 22. Like the overall sample, the least prevalent themes among URiMs were gender (23 or 8.4%), give back (21 or 7.7%) and no medical insurance (14 or 5.1%). Among non-URiMs, the least prevalent themes were race (18 or 4.9%), no medical insurance (15 or 4.0%), and gender (8 or 2.2%). Notably, race was mentioned in only 4.9% of non-URiM essays compared to 66 or 24.2% of URiM essays, which is a 19.3 percentage point difference. Similarly, non-URiMs described disadvantage in terms of home life in 122 or 32.9% of their essays, while URiMs reported home life in 139 or 50.9% of their essays – an 18 percentage point difference. Another gap, though only by 11.3 percentage points, was in the way applicants reported language, where this dimension of disadvantage was present among 25 or 9.2% of URiM essays compared to 76 or 20.5% of non-URiM essays.

(RQ4): In their essay responses, what proportion of applicants “reframed” the disadvantaged construct, and what proportion “conformed”?

a. How do “reframers” define disadvantage? How do “conformers” define disadvantage?

More than half of the sample “conformed.” As described in Chapter 3, applicants were coded as conformers if they submitted (a) essays that *conformed* to the construct of disadvantage by enumerating deficiencies and challenges in the applicants’ lives; and applicants were coded as reframers if they submitted (b) essays that *reframed*

the disadvantaged construct by describing ways in which the various difficulties had an enriching, transformative or otherwise positive impact on applicants' lives. In coding for these distinctions, it is notable that, while the great majority of applicants' essays fit neatly within either the "conformer" or "reframer" categories, there were some essays in which this binary distinction was not so clear. Such essays seemed to exhibit both conformer and reframer qualities. For instance, I encountered essays in which the majority of the text was a decidedly "conformer" description, but the applicant made concluding remarks that fit the "reframer" coding scheme. However, since these more ambiguous instances did not predominate the analysis, I chose to abide by the original conformer versus reframer binary coding scheme (I will address this topic further in the study limitations section of Chapter 5).

Hence, I found that more applicants conformed to (363 or 56.4%) than reframed (281 or 43.6%) the disadvantaged construct in their essays. Typically, both conformers and reframers demonstrated disadvantage through a range of dimensions. In other words, in a single disadvantaged essay, three to five dimensions of disadvantage were typically discussed. Among conformers – applicants whose essays did not highlight personal empowerment and did not in some way subvert a deficit perspective – the most prevalent dimensions of disadvantage discussed were financial (300 or 82.6%), education (220 or 60.6%) and health (143 or 39.4%). See Table 23. The least prevalent themes discussed (including overarching and sub-themes) by conformers were family support of educational aspirations and race (both at 35 or 9.6%), no medical insurance (15 or 4.1%) and gender (13 or 3.6%). The following selected examples demonstrate how applicants touched upon multiple dimensions of disadvantage. Each of the three most prevalent

dimensions of disadvantage among conformers (financial, education, and health)

emerged from these excerpts, and I have included notes showing how I interpreted these discussions:

Prevalent Conformer Themes Example (A):

Living in underserved communities has impacted my life to a great extent. Throughout my life, I have lived in low-income neighborhoods both in the US and overseas. My parents were unskilled workers who were paid below minimum wage due to the fact they had no formal training and spoke little English. With very limited financial resources, I was expected to contribute to the family income from a very early age and have been doing so ever since. Drug dealings and other crimes were part of the daily events I saw first-hand growing up. The death of my sister by a drive-by shooting is something that still burns my soul and reminds me of the hardships my family endured. The low quality public school system I attended did little to provide a safe place or a decent education. School was more like a prison as I was subjected to metal detectors and demeaning remarks from teachers who were not capable of dealing with a diverse student population. Coupled to all of this, I have spent some time living on the streets and in temporary shelters with my family, when we could not make ends meet. It was only recently that anyone in my family obtained health insurance or was able to seek medical attention when needed.

Interpretation: The applicant described financial disadvantage in terms of living in a low-income neighborhood, parents paid below minimum wage, and working to help contribute to the family income. As to educational disadvantage, the applicant noted that his or her parents did not have formal education; thus, he or she was a first-generation college student. The applicant also described low-quality, punitive secondary schools with racist treatment from teachers. Regarding health disadvantages, the applicant stated that no one in his or her family had access to medical care nor insurance.

Prevalent Conformer Themes Example (B):

I came to the U.S as a refugee. My father although holding a Master's degree from the U.S could not get a full time job due to his limited English. I, therefore, grew up financially disadvantaged and have been working since the age of 14. I grew up in a poor and at times a dangerous neighborhood in that I have woken up to sounds of gunshots and lived across from later convicted drug dealers. I was educationally disadvantaged because I attended schools with some of the lowest test score statistics in the state. Special Advanced placement courses were scarce and the student dropout rate was high. Although healthcare was available, I was underserved medically, because healthcare was not offered on demand. Majority of my family's medical needs were taken to emergency rooms and free clinics due to easier access. Usually means of getting to doctors' offices and translation services were not available.

Interpretation: In describing financial disadvantage, the applicant conveyed that his or her parent was unable to obtain full-time work due to limited English, growing up in a poor neighborhood and working at a young age to contribute to the family's income. In terms of educational disadvantage, the applicant said that he or she attended low-

performing schools with high drop-out rates and no college preparation. Regarding health disadvantages, the applicant described very limited access to medical care and no access to culturally competent care.

Prevalent Conformer Themes Example (C):

Superior has less than 1000 people and our main industry, a lumber mill, closed down several years ago leaving many unemployed. These workers eventually left town, deserting their homes and dropping the population dramatically. For those who stayed, like my family, life has been a struggle. My father's business barely keeps afloat. My mother has taught school 29 years, and for the last 9 she has not received a raise, even though the cost of health insurance and the cost of living continues to climb. Our school keeps using old books and old equipment, only purchasing new items when grant money is found for that purpose. During my schooling, the music and art programs were cut in half, the home economics department was eliminated, and the English department was cut back. Our hospital and rest home are the only medical facilities in our county and struggle to keep open. All serious medical emergencies must commute by car 60 miles to Missoula, as do all maternity and baby deliveries. The only other choice is to have the expense of an emergency Life-Flight or ambulance ride.

Interpretation: As to financial disadvantage, the applicant described the effects of a depressed local economy upon his or her family's income. Similarly, he or she noted educational disadvantage that stemmed from schools with very limited, sub-par resources. Regarding health disadvantages, the applicant described living in a medically underserved community.

Prevalent Conformer Themes Example (D):

My family immigrated to the US in 1986, and we had no extended family or friends in the US that could provide any kind of assistance to us. My parents, two older sisters and I came with enough money to pay for our first month's rent. None of us spoke English, and my older parents (who are currently 74 and 60 years old) did not have the skills or education that could place them in a decently paying job. Everyone started working in fast food restaurants, and once I turned 15 and a half, the legal working age in California, I started working in order to help out with expenses. Growing up, most of my clothes came from thrift shops. I did not have the option of visiting the colleges that I had applied to because the cost of the college applications were all I could afford. The day I moved to Stanford was the first time I had stepped foot on the Stanford campus. Once I entered college, I had to work and take loans in order to completely support myself. My weekends and evenings were spent working. Expensive textbooks each quarter quickly became a financial burden, so many times I had to borrow textbooks from the library and friends. There were quarters that I could not afford health insurance coverage. Being able to afford a very much needed computer was out of the question.

Interpretation: The financial disadvantages described included monetary hardship related to immigration, working at a young age to supplement his or her family's low-income, and paying for college on his or her own. The educational disadvantages noted by the applicant included being a first-generation college student, having to work through college and being unable to afford academic tools such as textbooks and a computer. The health disadvantage described was not having health insurance.

Prevalent Conformer Themes Example (E):

I was diagnosed with malignant melanoma shortly before my eighteenth birthday. I went back to school later in life, but I was married and had to support my family while going to school. Some semesters I could not afford to pay tuition or buy books so I did not attend during that time. These things have contributed to the extra time it has taken me to earn my degree and the gaps in my academic record.

Interpretation: The financial disadvantage noted by the applicant was having a limited income. The educational disadvantage described was directly related, as he or she was sometimes unable to afford tuition or textbooks, which led to gaps in his or her academic record. In terms of a health disadvantage, the applicant noted that he or she had been diagnosed with cancer.

Prevalent Conformer Themes Example (F):

I was born in a rural town of a communist country. My father was discriminated against in Vietnam due to his political affiliation before 1975. This created much hardship for the family. My family and I escaped Vietnam in a small boat with thirty-three other people in 1988. During the journey, we ran into a storm, were harassed by pirates, and were lost at sea for five days. Fortunately, the Thailand officials rescued and transferred us to various refugee camps after almost four weeks wandering at sea. I encountered many difficulties soon after I arrived in Dallas on April 6, 1990. I was very sick from the change in the weather and chicken pox. I had to go through the discomfort of the illness without any medication since my parents did not have any money or health insurance. During the first three months, my parents and I were living on an allowance budget. We were given \$60 for each week. Without any college degrees, skills, or knowledge of English, my parents were forced to work long hours at minimal wages. The government helped our family by placing me on a lunch reduction program at school. At school I was being ridiculed for not understanding English or the American culture. I was also far behind from my classmates in all subjects because I was not able to understand the teacher.

Interpretation: The applicant described financial disadvantages related to growing up in a hostile political environment and immigration. Likewise, the educational disadvantages described were related to immigration and language barriers, as well as having parents with low educational attainment. The health disadvantages described included personal illness and disease, and lacking access to care or insurance.

As described in Chapter 3, reframers were coded as such due to the voice of empowerment conveyed in their essays. Also, if two of the following CRT-based criteria were met, applicants were considered reframers: 1) applicant described a critical perspective of macro or societal “contextual forces” impacting the applicant’s life, alongside an ability to transcend and find meaning in those “marginal experiences;” 2)

applicant described personal resilience and success despite struggle and /or how the applicant was motivated or strengthened by those challenges; and 3) applicant challenged dominant paradigms related to minority students by describing the positive influence of culture, community, or family, as well as aspirations to “give back” to similarly disadvantaged communities.

Within reframers’ essays, the least discussed dimensions of disadvantage were medically underserved (35 or 12.5%), gender (18 or 6.4%) and no medical insurance (14 or 5.0%). The most prevalent themes were overcome (264 or 94.0%), financial (229 or 81.5%) and education (207 or 73.7%). See Table 23. In the selected examples, reframers voiced each of these three dimensions of disadvantage within their lived experiences:

Prevalent Reframer Themes Example (A):

When my father left, my childhood changed dramatically. I remembered moving every year or two. It would not have bothered me much except that each time I finally learned the idiosyncrasies of each school, it was already time to say goodbye. The rent was always cheaper in the next city . . . or the next. In retrospect, moving frequently has been a positive experience for me, for it exposed me to a host of different social and ethnic groups. Most importantly, it has made me learn how to adapt quickly to new and changing environments. My father and mother have since reconciled. In my father's absence, it has made me more responsible and aware of where I came from. Despite being categorized as “disadvantaged,” I have managed to be the first in my family to go to and graduate from college. I hope to continue my education and use that knowledge to give back to the community that has made me who I am.

Interpretation: The applicant “reframed” the disadvantages discussed by highlighting the advantages that stemmed from frequent moves, including interaction with a diversity of people and the ability to adapt to changing environments. Similarly, he or she said that having an absentee parent made him or her become more responsible. The applicant noted that he or she plans to apply these experiences toward serving the community. The “overcome” theme also emerged in the applicant’s discussion of being the first in her or his family to attain a college degree, and being a first-generation college student is also a reference to educational disadvantage, along with disrupted schooling from frequent moves. Financial disadvantage was coded due to the references the applicant made to his or her single-parent household and struggle to attain affordable housing.

Prevalent Reframer Themes Example (B):

I was raised in one of the poorest communities in Boston, Massachusetts. Routinely, I witnessed and experienced poverty, violence, crime, poor education and lack of adequate

health care. Surviving life in this tough American inner city was daunting, yet I managed to remain focused on my goals; most important of which was to enter medical school and become a community physician. Education in Roxbury and its neighboring boroughs was wholly inadequate. Low achievement expectations and insufficient Boston Public School resources (including limited, outdated textbooks and little library access) were balanced by high drop-out rates, teen pregnancy, and rampant drug and alcohol abuse. For those who managed to graduate from high school, lack of support (family or community) and inadequate funding, combined with the phobia of massive accrued debt unfortunately restricted many students from Boston's inner city schools from even applying to college. Despite developing and growing up in this challenging microenvironment, I felt determined to do something positive and productive with my life. I remain committed to community outreach and social improvement, and ultimately to help develop infrastructures which address some of the dire and deleterious circumstances in poorer communities.

Interpretation: The applicant "reframed" his or her discussion of disadvantage by highlighting how he or she "overcame" a violent, impoverished community. He or she touched on educational disadvantage via a description of inadequate schooling. The applicant described these experiences as motivating factors to achieve academic and personal success and ultimately give back to similarly disadvantaged communities. The dimension of financial disadvantage permeated the applicant's discussion of growing up in the inner city.

Prevalent Reframer Themes Example (C):

I consider myself disadvantaged because I moved to the United States at age eight speaking only Spanish, and for the first eighteen (18) years of my life my family of seven lived at or below poverty level. I attended schools in the small farming community of Santa Paula, California. My parents, who had no education beyond elementary school in Mexico, did not have the English skills or the knowledge to guide me in my studies. I had to rely solely on myself and my books to do well in school. Due to economics and my family's place in society--Mexican farm workers--I did not have the social opportunities available to me that would help me find my way, such as Boy Scouts, 4-H Club and Little League. I have worked hard to overcome the disadvantages I experienced economically, socially and educationally. To become a physician will be a great accomplishment and it will allow me to be a role model to my daughter and others like myself. Furthermore, as a physician I will be able to help more people in general. I will provide quality service and health care to all patients. I will become a strong advocate for all those in need of healthcare. I will also spend time mentoring other students interested in the field of medicine.

Interpretation: In this essay, the applicant clearly states that he or she "worked hard to overcome the disadvantages [I] experienced economically, socially and educationally." The financial disadvantage described was an impoverished household in which the parents were immigrant farmworkers. The educational disadvantages described were being a first-generation college student and lacking access to enriching extracurricular activities. The applicant described how these disadvantages inspired a commitment to medically underserved communities.

Prevalent Reframer Themes Example (D): Those who persevere, prevail. These words I truly believe and this belief has gotten me beyond many obstacles in my life. Hailing from a small town in the Deep South, I have experienced the effects of limited educational, financial and health care resources. Although I have overcome many challenges in my academic career, I can claim no easy victory. My success thus far has been the result of great financial sacrifice by my family and myself. As one of three college students my parents had to support, I wanted nothing more after high school than to become self-sufficient. Over the next four years I worked several jobs and also spent hours commuting to school. During my senior year I reached my maximum while working three part-time jobs and carrying twenty-one credit hours. Although my grades suffered during my years of work, I must admit I learned some valuable lessons. I developed organization, money management and time management skills: qualities I will need not only in medical school, but also as a health care professional.

Interpretation: The “overcome” theme emerged in the applicant’s discussion of perseverance and personal achievement despite challenges of a low-income community and household. This touched upon financial disadvantage, along with the applicant’s description of working several jobs to independently finance her or his college education. The applicant touched upon educational disadvantage by noting that her or his grades suffered due to long hours at work. The applicant “reframed” his or her discussion by highlighting how she or he developed valuable skills and qualities through adversity.

Prevalent Reframer Themes Example (E): Though my mother had a good job and did a good job of providing for my brother and I, she was rarely at home. She worked consistently. For that reason, I was pushed to be the head of the house when my mother was not present. My parents divorced when I was three; and my father had been uninvolved from the time I turned seven. Prior to high school, we lived in a mid-sized home in the inner city of Atlanta. Atlanta is a large city; but it is medically underserved. Growing up, I went to a high school where as many as 50% of the students had children; and there were constant brawls between rival housing projects. I do not believe that these circumstances compromised my education. Though at times it was stressful, it made me a stronger person and only increased my desire to be successful so that I could return and give something back to the community. As I moved ahead in high school, times improved. My mother received a job promotion and was more readily available at home. I had a wonderful time growing up. Though at times we had difficult situations, I do not regret my childhood. I believe that all my experiences influenced me in a positive manner and added to my character as an adult.

Interpretation: The applicant described financial disadvantages related to a single-parent household and life in an inner city. The educational disadvantages referenced were those related to attending school where teenage pregnancy and violence were prevalent. In “reframing” this discussion, the applicant cited those challenges as positive, motivating factors that bolstered his or her character and desire to succeed and give back to her or his community.

Prevalent Reframer Themes Example (F):

Growing up on a small-scale dairy farm as the oldest of six children means that money has never been in abundance for my family. Throughout my lifetime, my family has lived

on an extremely low income, but still managed to make ends meet. As a result, my parents were unable to contribute anything to assist with my education. While my background has helped to make me into who I am, it has also meant that I have had to overcome significant barriers to make my college education possible. As a first-generation college student, I am also extremely excited to have the opportunity to set an example for my younger siblings. It is such an amazing thing that I have had assistance from the federal government and via academic scholarships that have helped enable me to attend a university. I have supplemented this funding with my own earnings from various jobs and internship experiences. I believe that I have a great deal to share with others, and am very excited to start a whole new chapter in my family's history!

Interpretation: The applicant discussed financial disadvantages related to growing up in a large, low-income household in which the parents were unable to make monetary contributions to her or his education. The applicant funded her or his education through financial aid and working. Being a first-generation college student represented the educational disadvantage experienced. The “overcome” theme emerged in the applicant’s statement that she or he has “overcome significant barriers” to succeed academically. The applicant also “reframed” her or his description of disadvantages by expressing her or his intention to set an example for younger siblings.

Through this qualitative analysis of essays, I did not find any marked contrasts in the way conformers and reframers discussed the different dimensions of disadvantage. Each group discussed these themes in similar ways. As aforementioned, the great departure between the two groups was in the presence or absence of an overarching sense of resilience or empowerment through overcoming obstacles. A descriptive analysis revealed some differences when comparing the frequency by which the varied dimensions of disadvantage emerged in the essays of conformers and reframers. For example, while education was one of the top emergent themes among both conformers and reframers, 73.7% of conformers discussed this dimension versus 60.6% of reframers – a 13.1 percentage point gap. Similar gaps emerged where reframers (40.6%) were more apt to cite community as a disadvantage than were conformers (30.3%), and being a first-generation college student was more frequently discussed by reframers (23.1%) than by conformers (12.9%). See Table 23.

- b. Are there distinct profiles for "reframer" versus "conformer" applicants? If so, what are the academic and background characteristics related to "conforming" or "reframing"?*

Conformers and reframers were characteristically similar, and no distinct profiles emerged. Among the characteristics considered in the profiles of reframers and conformers was race/ethnicity. Table 24 illustrates how applicants “conformed” versus “reframed” among the distinct race/ethnicity groups. The most notable gap between conformers and reframers was within the composition of the Native American, Puerto Rican and Hawaiian/Pacific Islanders groups: 73.9% of Native Americans conformed versus 26.1% who reframed, a 47.8 percentage point difference; 70% of Puerto Ricans conformed versus 40% who reframed; and 33.3% of Hawaiian/Pacific Islanders conformed versus 66.7% who reframed. So, Native Americans and Puerto Ricans were most likely to “conform.” Hawaiian/Pacific Islanders were most likely to “reframe,” followed by Unknown Race applicants (36.8% of Unknown Race students conformed versus 63.2% who reframed, a 26.4 percentage point difference).

In addition to race/ethnicity, I also compared the SES-indicators for conformers and reframers. As in the total applicant pool, the largest concentration of all applicants in this sample was within the fifth or highest household income quintile (63.3%). Conformers were slightly more likely than reframers to report a household income in the top two quintiles, per Table 25. The most pronounced difference between conformers and reframers was in the third quintile, where reframers were 5 percentage points more likely than conformers to report a household income in this range.

In terms of how conformers and reframers reported the educational attainment of their parents, both groups were most likely to report a parent with a high school diploma

(39.5%), as was the case for the total disadvantaged applicant pool (See Tables 13 and 26). Among the reframer sub-sample, applicants were least likely to report a parent with a graduate degree (15.2%). Among conformers, applicants were least likely to report a parent without a high school diploma (16.0%) – though, reframers were 4.6 times more likely to report this than conformers, which represented the biggest difference in the way these groups reported parental educational attainment.

Another area examined in the profiles of conformers and reframers was their academic performance per cumulative and science GPAs and MCAT scores. As shown in Tables 27a, 27b and Table 28, the academic profiles of these groups were quite similar. The cumulative GPAs of both reframers and conformers were predominately in the first and second quintiles, as was the case for the total disadvantaged applicant population (See Tables 14a and 27a). Regarding their science GPAs, conformers and reframers were most concentrated in the first quintile (37.8%). The most pronounced gap in how conformers and reframers reported their science score was in the third quintile, in which conformers were 3 percentage points less likely to report a score in this range. See Table 27b. Regarding their MCAT performance, the scores of both groups were concentrated in the bottom (47.6%) and second quintiles (26.5%). See Table 28. Notably, conformers (9.2%) were slightly more likely than reframers (6.8%) to report fifth quintile scores.

c. Does any relationship exist between admission and reframing or conforming?

Slightly more conformers than reframers were admitted. Descriptive analysis revealed that of the 232 applicants in the sample who were offered admission, 139 or 59.9% were conformers, while 93 or 40.1% of the accepted were reframers. Therefore, more admitted applicants were conformers than they were reframers. Of the 363

applicants who were conformers, 139 or 38.3% were admitted to medical school. Of the 281 reframer applicants, 93 or 33.1% were admitted. Thus, conformers were 5.2 percentage points more likely to be admitted than reframers.

Neither conforming nor reframing was correlated with admission. In addition to the descriptive analyses of this “disadvantaged” sub-sample, a two-tailed bivariate Pearson correlation was computed in SPSS to determine the relationship between each of the predictor variables in this sample of disadvantaged students and acceptance to medical school. In particular, I was interested in investigating any relationship between admission and either conforming or reframing. Neither the conformer nor the reframer variable had a statistically significant correlation with acceptance. Rather, the MCAT ($r_s(635) = +.536, p < .001$) and Science GPA ($r_s(641) = +.393, p < .001$) variables had statistically significant positive correlations with the independent variable. Results indicated a statistically significant inverse relationship between the URiM indicator variable ($r_s(642) = -.081, p = .040$) and acceptance. No other predictors demonstrated statistically significant correlations with the independent variable. The results suggest that higher MCAT and GPA scores were correlated with acceptance, and that having URiM status was correlated with not getting into medical school. The latter contradicts the findings of the logistic regression described below, which indicated that being a URiM made admission to medical school more likely.

As aforementioned, I ran a hierarchical block-entry logistic regression in SPSS with acceptance to medical school as the dependent variable. See Table 29. The intent of this analysis was to test whether conforming or reframing had any relationship to acceptance to medical school. The student background and academic variables utilized in

research question 2c were also entered into this equation, though used mainly as controls, as I have already established and discussed the role that each of these predictors play. As in research question 2c, the predictor variables were entered in a temporal sequence: first, I entered student background characteristics; second, I entered academic metrics; and third, I entered the “conform” variable. In Block 1, none of the four student background variables were significant. In Block 2, three of the seven variables significantly predicted admission: the URiM indicator ($p < .001$), cumulative MCAT ($p < .001$) and Science GPA scores ($p < .001$). Likewise, these three predictors had positive betas. This meant that URiMs were more likely accepted than non-URiMs, and that high MCAT and GPA scores were more likely to yield admission. The odds of an URiM being admitted were 9.07 times greater than a non-URiM applicant. The odds of being accepted to medical school were higher when the MCAT score increased by 1.41 times. For each point increase in an applicant’s Science GPA, the odds of being accepted to med school were multiplied by 1.02.

Neither conforming nor reframing predicted admission. In Block 3, the “conform” indicator was entered in the equation, along with the other seven predictors. I found that there was no statistically significant relationship between admission and being either a conformer or reframer. As in the previous block, the variables that significantly predicted admission were the URiM indicator and the MCAT and GPA scores. These three predictors, as well as the “conform” indicator, were positively associated with acceptance. The strongest positive association was between the URiM indicator (2.20) and the acceptance variable, followed by the MCAT cumulative score indicator (.34) and the “conform” indicator (.15) (though the “conform” variable was not statistically

significant). This meant that if an applicant was classified as an URiM by the AAMC, they were more likely to be accepted than if they were a non-URiM; the greater the MCAT or Science GPA (.021) scores, the more likely the applicant was accepted. For each point increase on the MCAT, the odds of being accepted to medical school are multiplied by 1.41. In terms of science GPA, for each point increase, the odds of being accepted to medical school are multiplied by 1.02.

III. Chapter Summary

The intent of this chapter was to present the findings of this project, which studied the U.S. medical school application – the gateway for future physicians – over the 2002-2008 application and admission cycles. The first set of findings addressed research question 1 (RQ1), provided context for the study, and elucidated the characteristics of the 2002-2008 applicant pool as well as the elite class of students offered admission. In sum, these findings highlighted the persistent shortage of URiMs who applied and were admitted to medical school, relative to White students. Via descriptive analyses, I examined a variety of student characteristics, including the racial/ethnic make-up of the total applicant and accepted pools. The results indicated that relatively few applicants were URiMs (12.5%) or disadvantaged (12.1%). White students (64.6%) comprised the majority of the total applicant pool, and Asians (21.2%) were second most represented. In terms of socioeconomic indicators, the majority (78.5%) of applicants reported a household income in the top quintile (\$92,553+), and most applicants (74.1%) had at least one college-educated parent. Yet, notably, the applicants most likely to report a high school diploma as their parents' highest level of educational attainment were URiMs: Native American (37.3%), Mexican American (34.6%) and African American (32.3%).

Likewise, these URiM applicant groups were among those most likely to report bottom quintile cumulative GPA and MCAT scores.

As shown in this chapter, over 2002-2008, 127,194 applicants (48%) were accepted to medical school, and of those, only 11.3% were URiMs. In terms of absolute values, the greatest numbers of accepted applicants were White (67.8%) and Asian (21.2%), while those with the highest acceptance rates were Puerto Rican (53.5%), Cuban (51.8%) and Unknown Race (51.7%). The lowest acceptance rates were among Hawaiian/Pacific Islanders (34.1%), African Americans (41.4%) and Other Hispanics (42.6%). Notably, one of the greatest gender gaps found in this project's descriptive analyses was among African American applicants: though more than double the proportion of women (67.8%) applied than men (32.2%), men were more likely than women to be accepted (46.2% versus 39.1%).

As to SES-indicators of accepted applicants, 80.6% reported a top quintile household income, 80% had college graduate parents and almost half had parents with a graduate degree. Only 2.7% had a parent without a high school diploma and the most likely to report this were Mexican American (20%) applicants. Along with African Americans (29.4%) and Native Americans (19.8%), Mexican Americans (21.0%) were also the most likely to report bottom quintile cumulative GPAs. Top quintile MCAT scores were more likely to be reported by Foreign (46.4%), Asian (37.7%) and White (29.6%) students, while bottom quintile MCAT scores were more likely reported by Puerto Rican (53.4%), African American (34.3%), and Hispanic (25.5%) students. Thus, the emergent trend within the accepted applicant pool was that URiMs were likelier than

non-URiMs to report bottom quintile GPA and MCAT scores, and also demonstrate lower SES indicators.

After providing a broad context for the study via RQ1, I focused on the interface of racial/ethnic minority applicants and the medical school application. In particular, in RQ2 I was interested in investigating the “disadvantaged status” essay prompt. In Chapter 1, I discussed how this essay prompt was inserted into the AMCAS as a possible proxy for overtly soliciting applicants’ race/ethnicity. Thus, part of the aim of RQ2 was to discern whether the disadvantaged prompt can help identify applicants of color. While less than half (40%) of all URiMs identified as disadvantaged, my findings indicate that the disadvantaged prompt may have some utility. Though the greatest number of disadvantaged applicants were White (40.6%), the most likely to declare disadvantage were URiMs: Mexican Americans (44.5%) and African American (42.9%). The least likely to identify as disadvantaged were Whites (7.9%) and Asians (11.4%).

In RQ2, I also wanted to learn about the characteristics of disadvantaged students and URiMs. Most disadvantaged (58.5%) and URiM (69.6%) applicants reported a household income in the top quintile, though in smaller proportion than the total population (78.5%) or the accepted applicant pool (80.6%). More than half of disadvantaged applicants (56%) reported a parent without a college degree, and URiMs (33.3%) were most likely to report high school as their parents’ highest level of education; this is notable as 79.1% of the total applicant pool reported a parent with at least a baccalaureate degree. As in the total applicant and accepted pools, disadvantaged URiMs represented those most likely to report bottom quintile GPA and MCAT scores. Regarding gender, more than half of disadvantaged (57.2%) students and URiMs (62.2%)

were women. This is interesting, as the proportion of male and female applicants are relatively equal among the total and accepted applicant pools.

In addition to descriptive analyses of the URiM and disadvantaged pools, RQ2 tested whether being disadvantaged predicted admission. As per a logistic regression analysis, being “disadvantaged” is one among a variety of applicant characteristics that significantly predicted admission to medical school. See Table 21. In Block 3, the strongest positive associations were between the URiM indicator (1.821) and the acceptance variable, followed by the Disadvantaged applicant indicator (.307). Thus, if applicants were either an URiM or disadvantaged, they were more likely to be accepted than if they were a non-URiM or did not identify as disadvantaged.

To address RQ3, qualitative analyses were applied to a sample of disadvantaged essays to learn how applicants defined “disadvantage.” The top emergent themes were Financial (82.1%), Education (66.3%) and Overcome (41.0%). The least cited themes were Give Back (8.2%), Gender (4.8%) and No Medical Insurance (4.5%). The second set of findings for RQ3 compared the essay responses of URiMs versus non-URiMs. It is notable that URiMs were 19.3 percentage points likelier than non-URiMs to cite race as a disadvantage.

For the project’s final research question, RQ4, I compared “conformers” and “reframers” and found that there were more conformers (56.4%) than reframers (43.6%). Native Americans and Puerto Ricans were most likely to “conform,” while Hawaiian/Pacific Islanders were most likely to “reframe,” followed by Unknown Race applicants. Otherwise, the analyses of the student background and academic

characteristics of conformers and reframers showed these groups to be quite similar. Thus, no notably distinct profile emerged for either group.

As to their essays, conformers and reframers both cited financial and education as their top dimensions of disadvantage. Though, 73.7% of conformers cited an educational disadvantage versus 60.6% of reframers. Reframers were more apt to cite community as a disadvantage than were conformers, and being a first-generation college student was more frequently discussed by reframers than by conformers. As to whether conforming or reframing made any difference for getting into medical school, conformers were 5.2% likelier than reframers to be admitted, per a descriptive analysis. However, a logistic regression analysis demonstrated that there was no statistically significant relationship between admission and being either a conformer or reframer. In Block 3, the variables that significantly predicted acceptance to medical school were the URiM indicator ($p < .001$), cumulative MCAT ($p < .001$) and Science GPA scores ($p < .001$). If an applicant was classified as an URiM by the AAMC, they were more likely to be accepted than if they were a non-URiM; the greater the MCAT or Science GPA scores, the more likely the applicant was accepted.

The findings presented in this chapter give insights to the U.S. medical school applicant pool and begin to tell the story of minority applicants' experiences with the gateway to medical school. In the next chapter, these findings are discussed and implications for both practice and future research are presented in the hope of increasing the proportion of underrepresented minority students admitted to U.S. medical schools, building a substantial body of physicians of color, whom will ultimately reflect and help serve this nation's diverse populace.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This paper began with Dr. Martin Luther King Jr.'s remarks on the health disparities suffered disproportionately by the poor and racial minorities of this country. Fifty years later, Dr. King's words remain shamefully relevant in a nation of plenty where medical care is dispensed and withheld as a scarce good rather than regarded as a human right. In this study of the U.S. medical school admissions application, I have drawn a parallel between health care and higher education by investigating an intersection of these two vital, societal resources. Like access to health care, within this country there rages a debate over access to higher education. A branch of this debate involves the extent to which affirmative action can or should ameliorate a legacy of unequal access and racial segregation. As a potential, race-neutral safeguard against recurrent legal challenges to affirmative action in college admissions, the disadvantaged status question was inserted into the AMCAS, prompting applicants:

“Do you wish to be considered a disadvantaged applicant by any of your designated medical schools that may consider such factors (social, economic or educational)?” and if so, “Explain why you should be considered a disadvantaged applicant by your designated medical schools.”

As explained in previous chapters, this represents a potential loophole where applicants can reveal and discuss their racial/ethnic backgrounds, should direct solicitation of applicants' race/ethnicity become unlawful in the admissions process. This dissertation is a mixed-method investigation of this race-blind disadvantaged prompt, the interface of applicants with this portion of the AMCAS, and whether such a race-neutral mechanism can indeed help cull a diverse group of future physicians. In this chapter, I reiterate and

discuss the study's findings, conclusions, limitations and implications for future research in higher education and policy.

I. Review of Research Questions, Findings and Discussion

Utilizing Critical Race Theory (CRT) to frame my investigation, I addressed four research questions. The first question asked about the academic and personal background characteristics of accepted medical school applicants. The remaining questions examined closely the AMCAS disadvantaged prompt. I examined the racial/ethnic composition of the disadvantaged applicant pool, and then explored the ways in which the term “disadvantage” was defined by students and applied to their lived experiences. I compared the essays of disadvantaged URiMs and non-URiMs for the different dimensions of disadvantage they discussed. In examining the content of these essays, I also considered whether students “conformed” to or “reframed” the concept of “disadvantage” – a term that is a potential racial microaggression (see Chapter 2), as it holds historic connotations of academic underperformance or other deficiencies in minority students. Alongside their essays, I compared the academic and personal background characteristics of conformers and reframers, and investigated whether conforming or reframing predicted admission to medical school. Within the following sections, I present a synopsis of the research questions’ findings and validate the discussion with “voices” of the applicants’ via excerpts from their disadvantaged essays. I also provide recommendations for future research directions.

(RQ1) Key Findings and Discussion

Prior to addressing RQ1, I provided historical context for the study through a discussion of the roots of U.S. medical education amid a legacy of racism and

segregation. Per Matsuda (1993, p. 6), “CRT insists on a contextual/historical analysis... a stance that presumes that racism has contributed to all contemporary manifestations of group advantage and disadvantage.” In RQ1, I investigated the characteristics of 2002-2008 accepted students, revealing clear contemporary advantages for some groups and distinct disadvantages for others. Nearly 70% of the 2002-2008 admitted medical students were White, and only 11.3% were URiMs. The findings also demonstrated the academically elite class of students selected for medical admissions. For example, the majority reported MCAT and cumulative GPA scores in the top two quintiles. However, a small portion of accepted applicants reported bottom quintile MCAT and GPA scores, and those most likely to do so were African American, Puerto Rican, Mexican American, and Hispanic. This concentration of URiMs within the bottom quintiles of these academic indicators is an arguable extension of the relatively substandard schooling (Trent, Owens-Nicholson, Eatman, Burke, Daugherty, & Norman, 2003) and limited access to standardized test preparation attained by minorities (Wightman, 2003). It is also reflective of the educational disadvantages conveyed in the essays submitted by these students:

I attended middle school and high school in the Tombstone Unified School district in Arizona. While the district strived to give its students a well-rounded education, its lack of funds drastically hindered this mission. The Tombstone Unified School District is a rural district and is tremendously underfunded. This under funding drastically limits the curriculum of the science department. Before entering college, I had very little exposure to laboratory work. I have had to work extremely hard to reach the academic level of my collegiate peers. –Black applicant, 2004

I consider myself a disadvantaged applicant because I am from a minority group underrepresented in medicine and because I am not economically privileged. As an African American woman, I have seen first-hand what struggle and sacrifice is... I consider myself educationally disadvantaged during my years in middle and high school. I went to Rubidoux High School in Riverside, CA. Aside from safety

issues in the surrounding community; my school had few resources to prepare me for college. There were few Advanced Placement and Honors classes available. However, I took advantage of the classes that were offered to better prepare myself for college-level course-work. –Black applicant, 2003

At eight years of age I began working as a fruit picker in the rural, agricultural area in which I was raised. My income, along with those of my siblings, was used to help support my parents' family. I worked before and after school and on weekends. If a relative was ill, I took their place in the fields and did not attend my classes. The schools I attended lacked many of the amenities found in more affluent locales. They lacked libraries, class supplies, and qualified and experienced teachers. Most teachers taught on a temporary basis, repaying the governmental authorities with their time in exchange for the funding they received for their educations. – Other Hispanic applicant, 2002

It is these kinds of disadvantages that may have contributed to the finding that URiM groups such as African Americans and Other Hispanics were among the least likely to gain admission. The lowest acceptance rates were among Hawaiian/Pacific Islanders, which points to the need for further study of the specific challenges facing this population of potential medical school students.

I became aware of racial differences when I entered elementary school. Other children would call my sister and myself names, such as “Nigger,” “Sambo,” “Kinky hair,” and “dumb” or “stupid Hawaiian.” I hated catching the school bus because kids often refused to let us sit with them... I attended public schools in the Waiakea area, on the Big Island of Hawaii. The public school system was often non-conducive to learning. Teachers were not able to accommodate each student's needs adequately, due to the large classroom. – Hawaiian/Pacific Islander applicant, 2002

As to the SES-profile of accepted students, most reported top quintile household incomes and parents with at least a baccalaureate degree. These findings are consistent with research indicating that medical school students disproportionately report household incomes greater than those of the general U.S. population (Jolly, 2008), though White students typically report higher incomes than URiMs as well as higher parental educational attainment (Davis et al., 2013). Foremost among the accepted students who

reported third quintile household incomes (\$36,276-\$57,890), as well as parents whose educational attainment did not exceed high school, were Mexican Americans. This finding reflects the extant literature indicating low educational attainment levels of Mexican Americans relative to other racial/ethnic groups (Ryan & Bauman, 2016; Gonzalez-Barrera & Lopez, 2013). The challenges of a low-income household and being a first-generation college student were also described by disadvantaged Mexican American applicants:

Being a female born to a traditional Mexican family, I was expected to stay at home and quit school after high school. Going away to college was very difficult emotionally due to lack of support from my family. Unfortunately this reflected in my academic performance during my undergraduate career. My parents are both agricultural labor workers. My family's income is approximately \$19,800 a year, an income that is definitely not enough for a family of six. Both of my parents went to school only up to the second grade, due to lack of financial resources (in Mexico). Being uneducated and unaware of what it takes to obtain a higher education, the words SAT, MCAT and even Biology (my major) are completely foreign to them. Being through college without the support and knowledge that educated parents can offer to their children makes me different from the majority. I had nobody in my family to advise me about college, I learned the hard way, by trial and error. — Mexican American applicant, 2004

As a first generation college student I was fortunate to have an encouraging family who was extremely supportive of my educational goals. Although my family was oblivious about the college and professional school processes, they learned the importance of obtaining a higher education and supported my endeavors. Since both of my parents did not attend college it was something that I had to explore in high school. Even though my parents did not receive a college education they still pushed me to achieve academically in high school. With that persistent guidance and constant motivation I soon was involved in many activities and I was able to meet many supportive friends and faculty. When I received my acceptance letter from the University of Arizona my parents were incredibly happy and it was a dream come true for my family and I; however, they were worried that they would not be able to support me financially. With their continual support and motivation throughout high school I was successful and was awarded a tuition waiver. It not only boosted my confidence to pursue my career goals, but it indicated to my family that pursuing a higher education was not merely something for the upper class. —Mexican American applicant, 2006

As evidenced by my findings on the socioeconomic profiles of accepted students of color, it is important to note that even within this elite group of students, “high-achieving” minorities may experience some of the myriad challenges faced by “at-risk” students of color, resulting in higher rates of withdrawal, dismissal from medical school, or lower pass rates on the U.S. medical licensing exam (Andriole & Jeffe, 2010). This has implications for institutional programming designed to support the persistence and success of minority medical students. Of value for such support programming would be research focused upon the disadvantaged status essays of minority applicants who did *not* gain admission to medical school. Their essays delineate a host of challenges experienced on their premedical pathways. An in-depth qualitative analysis that also includes interviews with recent medical school applicants could make impactful contributions to student support programs for aspiring medical students of color.

While some predictable results were yielded by these descriptive analyses of the 2002-2008 accepted applicants, unexpected findings also surfaced with implications for future research in the areas of race and medical school applicants. For instance, while White and Asian students comprised the majority of the accepted applicant pool, these were not the racial/ethnic groups most likely to gain admission. Rather, Puerto Ricans, Cubans, and Unknown Race applicants had the highest rates of acceptance. This points to the need for more research on these specific groups of applicants and what can be learned from their relatively high rates of success. In particular, it is interesting that Puerto Ricans, a group originally deemed by the AAMC as “underrepresented in medicine,” would have the highest acceptance rate (53.5%). Also of interest for future research is the group of applicants who identified as Unknown Race and their high rate of admission.

Research has found that “unknown” students are often White students reluctant to identify as non-minority or are actually multiracial students who use the term “unknown” as a default identifier (Smith et al., 2005). What is also interesting is that students who identified as Other Race did not gain admission at the same rate as Unknown Race students. This suggests that these groups are dissimilarly comprised. An in-depth comparison of these two groups of medical applicants would yield interesting results for future research.

Finally, the descriptive analyses findings from RQ1 indicate that there were no gender discrepancies present among applicants to medical school nor within the accepted applicant pool, as men and women applied and gained admission in almost equal proportions. It is notable that slightly more women applied, but men were slightly more likely to be accepted. Moreover, this particular gender gap was greatly exaggerated among African American applicants: while more than double the number of women applied to medical school, men were seven percentage points likelier to gain admission.

(RQ2) Key Findings and Discussion

To address RQ2, I first discerned the characteristics of disadvantaged applicants. Only 12.7% of the total 2002-2008 applicant pool identified as disadvantaged. Of those disadvantaged students, 38.1% were accepted to medical school, a rate 10% lower than the total applicant population. As to the composition of the disadvantaged population, more women (57.2%) identified as disadvantage than men (42.8%). White students (40.6%) made up the largest proportion of disadvantaged applicants, in terms of race/ethnicity, and 60% of all disadvantaged students were *not* URiMs. However, Mexican Americans (44.5%), African Americans (42.9%) and Other Race students

(40.0%) were most likely to identify as disadvantaged. Least likely to declare disadvantage were White (7.9%), Asian (11.4%) and Cuban (18.1%) students. Regarding the disadvantaged population's SES indicators, most disadvantaged students reported a household income in the top quintile (58.5%), though at a lesser rate than the overall (78.5%) and accepted (80.6%) applicant pools. More than half of disadvantaged students (56%) reported a parent without a college degree.

Many students grow up with the knowledge that they are assured a college education. However, coming from my socio-economic background a higher education was not a given. Although throughout my schooling I showed potential academically, I did not comprehend that I deserved a chance to continue even if I was poor. Neither of my parents could provide guidance with this issue because neither of them attended college. It wasn't until much later that I became aware of the resources available to underprivileged students. Financial worries such as this are definitely a disadvantage in such a competitive atmosphere. – Puerto Rican applicant, 2002

As a first generation college student, a mixture of emotions have accompanied my college career. While I am proud and honored to be the first of my family to attend and graduate from college, a large amount of responsibility has been placed on my shoulders. I have funded the majority of my tuition and all of my living expenses for the past four years. I have always had more than one job, and have worked approximately thirty hours a week, while still maintaining leadership positions in honor societies and a spot on the Dean's List. I realize that the road for my colleagues, who did not have to juggle an academic schedule and employment, may have been a bit smoother. However, I feel that I have gained a great deal from my high school and college employment experiences. I not only have an academic record that reflects my dedication, but am proficient at managing a demanding schedule. Due to these factors, I feel that I should be considered both academically and economically disadvantaged. – White applicant, 2003

In comparison, the vast majority (74.1%) of the overall applicant pool reported a parent with a college degree, and almost half (48.9%) of the accepted student population reported a parent with a graduate degree. Among the disadvantaged sample, the racial/ethnic groups most likely to report a parent without a high school diploma were Mexican American (40.3%), Unknown Race (37.0%) and Other Race (29.1%). Another

notable area of departure from the overall applicant pool and accepted pool was in the disadvantaged population's GPA and MCAT scores, as disadvantaged applicants were most likely to report scores in the bottom quintiles.

After elucidating a general profile of disadvantaged students, the second part of this research question addressed the composition of the URiM student population. As with the descriptive analyses of disadvantaged applicants, I examined the background and academic characteristics of URiMs. Of the total 2002-2008 applicant pool, 12.5% were URiMs, and of those, 43.5% were admitted to medical school – 4.5 percentage points less than the total population's acceptance rate. In terms of a student profile, most URiMs were female (62.2%), less than half were disadvantaged (40%), most were African American (67.8%), most reported a top quintile household income (69.6%), and were most likely to report parental educational attainment as a high school diploma (33.3%). As to their academic profile, URiMs were most likely to report bottom quintile cumulative and Science GPAs as well as MCAT scores.

In answering RQ2, I discovered interesting similarities and differences between the pools of students identified by the AAMC's URiM classification and those culled by the disadvantaged prompt. The aim of each mechanism is to help flag minority applicants for medical schools interested in enhancing diversity. The URiM classification is race-conscious, while the disadvantaged prompt is race-neutral. This begs the question, which mechanism offers the most utility to medical schools for identifying racially diverse students? Are these mechanisms more effective when used in conjunction? Future research could pursue this question. While each group comprised 12% of the total 2002-2008 applicant pool, the groups of students that these mechanisms identified are not

necessarily the same. For example, 60% of disadvantaged students were *not* URiMs. White students made up the largest proportion of the disadvantaged pool (40%) but only 20.4% of URiMs. URiMs (43.5%) also gained admission at a greater rate than disadvantaged students (38.1%).

With general profiles of both disadvantaged and URiMs determined, the final portion of this research question investigated the relationship between disadvantage and admission to medical school. A Pearson's Correlation indicated an inverse relationship between admission and disadvantaged status as well as with URiM status; thus, being either a disadvantaged student or URiM was correlated with not getting into medical school. However, the results of a block-entry logistic regression indicated that being disadvantaged was a significant predictor of admission, among other academic and personal characteristics known in the literature to be associated with acceptance to medical school. Notably, the variables most positively associated with admission were being an URiM (1.82), followed by identifying as disadvantaged (.31) and MCAT score (.26). The odds of an URiM being accepted increased dramatically after controlling for MCAT and GPA scores. This was because there is a negative relationship between URiM status and scores – higher MCAT and GPA scores are correlated with acceptance, while having URiM status was correlated with not getting into medical school. The variables most negatively associated with admission were the graduate degree indicator, followed by the race variable and the gender variable. Thus, if an applicant did not have a graduate degree, he or she would be more likely to be admitted; if an applicant was not Asian, he or she was more likely accepted; and female applicants were more likely to get into medical school.

The findings from RQ2 speak to one of this study's primary aims; that is, to test whether the race-neutral disadvantage prompt can help identify and recruit more racially/ethnically diverse applicants. The descriptive analyses show that the greatest proportion of students who self-identified as disadvantaged were not racial minorities, but White (40.6%). See Table 11. Yet, the students most likely to declare disadvantage were indeed racial minorities, and, moreover were among the student groups the AAMC have identified as URiMs (Mexican American 44.5%; African American 29.1%). The logistic regression analysis demonstrated strong positive associations between admission and both disadvantaged and URiM status. Thus, these findings suggest the disadvantaged prompt may have utility for identifying and recruiting more minority applicants without overtly soliciting their racial/ethnic backgrounds. Yet, whether these minority applicants specifically cite race in their essays, and therefore identify themselves as students of color, are discussed in the following section.

(RQ3) Key Findings and Discussion

To address RQ3, I investigated how applicants navigated the disadvantaged status question. I looked closely at how the term “disadvantage” was defined and discussed within a selected proportional sample of applicant essays. As explained in Chapter 2, coding categories were based on a pilot study, and were refined and applied alongside additional themes that emerged via the frequency by which they arose as well as their congruence with a CRT framework. Multiple dimensions of disadvantage emerged from the analysis, with financial and educational disadvantage being the most prevalent themes discussed by applicants in the sample. The third most emergent theme was the discussion of overcoming disadvantages. Thus, race was not typically cited as a disadvantage by this

sample of applicants, indicating that if no other area of the AMCAS provided students' racial/ethnic background to medical admissions officers, the disadvantaged status prompt would offer very limited utility as a proxy. Applicants were also least likely to discuss the themes of giving back, gender, or having no medical insurance.

To fully address RQ3, I also compared the essay responses of URiM versus non-URiM students and some notable differences arose. For instance, URiMs discussed race as a disadvantage almost 20% more frequently than non-URiMs. Examples of these discussions are below:

While growing up in Brevard County I experienced racism daily. Not only because of the color of my skin but because of my parents interracial marriage. I attended a predominately white high school that consisted of a large violent and racist white supremacy gang called the skinheads. They constantly attacked minority students at school and in the community. These race wars went on weekly as I struggled to get an education and stay out of harm's way. My educational environment was neither peaceful nor safe. I was placed at risk each day entering and leaving school... For these reasons alone I should be considered a disadvantaged but determined applicant. –URiM applicant, 2006

As a Black female born in Texas, I grew up socially disadvantaged. Attending school in primarily Caucasian institutions exposed me to years of racism and undue prejudice. Being of both Black and Hispanic heritages as well as being a woman, have made me a triple minority and thus have subjected me to social disadvantages on a plethora of levels. I chose to attend Howard University to ensure that the discrimination that I experienced growing up would not follow me to college. While the four years of my undergraduate education were an oasis, upon graduation and entrance in to graduate school and the work force, I was again subjected to the discrimination that I was trying to escape. –URiM applicant, 2005

As an underrepresented minority, I feel strongly about my need to voice the hardships of racial profiling and economic disadvantage. As a low-income student the dichotomy between student and worker was one that I had to face every day of my college career. Being a worker and a student is extremely challenging when pursuing a science major at Oberlin College... I do feel I met the challenge of balancing work and school very well, however, by being extremely dedicated in my classes as well as in extracurricular activities. In addition, I truly believe that I started Oberlin as a science major with three strikes against me. I was not taught in a just way by most of my science professors. I have been ignored inside and

outside of the classroom. I endured the prejudicial attitudes of many of my science professors, was made to doubt my intelligence, and was led to believe I could not attain a scientific career. I became psychologically affected by these assaults and believe that this hardship more often than not affected my academic performance in the sciences. Not gaining the respect I deserved was detrimental. – URiM applicant, 2002

This finding seems somewhat predictable, as one would expect that students of color – in particular, members of minority groups “underrepresented in medicine” – would indeed be more inclined to experience and discuss racially-related disadvantages than students not classified as URiMs. URiMs were also 18% more likely than non-URiMs to report something in their home life as a disadvantage, an interesting finding that could point to an area of future research. Also, non-URiMs were 11% more likely than URiMs to report language as a disadvantage. This finding seems counterintuitive, as one may expect that students of color, potentially with immigrant parents, would express language-related disadvantages more often than non-URiMs.

(RQ4) Results and Discussion

As described in Chapter 2, this study provided an opportunity to examine the “voices” conveyed by medical school applicants; that is, what sort of strategies or “*mascaras*”⁷ did students put forth in this high-stakes interface at the gateway of medical school admissions? I found a distinct dichotomy of “conformer” and “reframer” *mascaras*. As described in previous chapters, this terminology relates to the manner in which students approached the disadvantaged prompt and framed their responses. I coded essays as “conformers” if students merely enumerated challenges or obstacles

⁷ See Chapter 2 for an explanation of *mascaras*/masks, as adapted by Rodriguez (2006) from Anzaldúa (1990). Rodriguez says that people of color are compelled to wear *mascaras* as a survival tactic and defense “against racist educational institutions in which we try to maneuver” (Rodriguez, 2006, p. 1069-1070), but though they offer protection, they are also marginalizing because they “conceal part of our identities,” engendering internalized oppression.

experienced, while “reframer” essays were coded as such if applicants demonstrated “the ability to undo or break through” a “disadvantaged” mask (Rodriguez, 2006) via discussion of resilience, empowerment or a critical perspective on the disadvantages overcome. RQ4 examined this distinction among applicants in the sample, and I found that more than half (56.4%) of the students were conformers. The dimensions of disadvantage conveyed most often by conformers were financial (82.6%), educational (60.6%), and health (39.4%). The least discussed were family support of educational aspirations (9.6%), race (9.6%), no medical insurance (4.1%) and gender (3.6%). Similarly, the least cited dimensions of disadvantage among reframers were being medically underserved (12.5%), gender (6.4%) and no medical insurance (5.0%). The most prevalent themes cited by reframers were overcome (94.0%), financial (81.5%) and education (73.7%).

The frequency with which the various disadvantaged dimensions were discussed represented the greatest differences between conformers versus reframers. For instance, reframers cited educational disadvantage 13% more than conformers, and discussed community-related disadvantages as well as being a first-generation college student 10% more than conformers. Otherwise, the groups discussed the themes in similar manners, with the exception of reframers “reframing” their presentation of disadvantages. Future research could provide a more in-depth examination, looking for any relationships between the various dimensions as well as if any relationship exists between admission and the various themes.

The final research question further addressed the conformer versus reframer phenomena by looking for any distinctive characteristics within each group. Yet, no

distinct profiles surfaced. Rather, when student SES and academic indicators were compared, the groups were quite similar. Though, as discussed in the previous chapter, conformers were slightly more likely than reframers to report a higher household income and top quintile MCAT scores; reframers were slightly more likely than conformers to report a parent with a high school diploma as the highest level of educational attainment. In comparing these groups, the most interesting data came from descriptive analyses of their race/ethnicity profiles. Within some of the race/ethnic subgroups, some notable findings were that Native Americans (73.9%) and Puerto Ricans (70%) were overwhelmingly conformers. Conversely, more than half of Hawaiian/Pacific Islanders (66.7%) and Unknown Race (63.2%) applicants were reframers.

The final portion of this project investigated whether any relationship existed between admission to medical school and either conforming or reframing. Via descriptive analyses, I found that conformers in the sample were 5.2% more likely to be admitted than reframers. I also ran a Pearson's correlation and found that neither being a conformer nor a reframer was correlated with admission. As per a logistic regression analysis, I found no statistically significant relationship between admission and conforming or reframing. Rather, as in the logistic regression addressing RQ2c, the predictors that exhibited statistically significant relationships with admission were the URiM indicator, MCAT and Science GPA scores.

These results suggest that the content of the disadvantaged essays did not matter to medical admissions committees. As mentioned in previous chapters, there is currently no research or other evidence to indicate that medical schools are weighing applicants' responses to the disadvantaged status question in their admissions decisions. It is possible

that medical school admissions committees are gleaning this type of applicant information from the students' personal statements, and that the disadvantaged status prompt is redundant and does not offer any new information beyond the content of applicants' personal statements. Yet, it is possible that the disadvantaged essay represents a place in the AMCAS where students are uniquely describing an ability to overcome obstacles, demonstrate resilience, determination to give back, or a critical consciousness about the stratified nature of our society. If so, it would not make sense to disregard this part of the application. These are the sorts of critical pieces of information that matter in holistic review, and such experiences and qualities represent a desirable background for an empathetic, resourceful and culturally competent physician. Future research could compare the students' qualitative responses within these different parts of the AMCAS application. Via a qualitative study to include interviews with recent medical school applicants of color, future research could also delve more fully into the conformer versus reframer phenomena and investigate the applicants' points of view and strategies for navigating this part of the AMCAS. The excerpt below hints at the process behind interpreting "disadvantage":

Because I was initially concerned with the negative connotation sometimes associated with the phrase "disadvantaged person," I elected not to be considered a disadvantaged applicant. But after careful consideration of the advice from an admissions advisor in Seattle, I decided to write this essay. In the truest context of my status growing up-I was disadvantaged. I attended primarily rural public schools in Mississippi that did not always have adequate resources. Many times, the textbooks were worn and had pages that were completely ripped out. Furthermore, we had no enrichment programs or honors courses. It was not until our school was thrust into boycotts that I was able to take honors and advanced placement courses. Because of my parents' commitment to my education, they sacrificed and negotiated ways for me to make the 50 miles one-way commute to a different school. During my high school years, I had to adjust not only to a new environment, which was academically and economically foreign to my previous lifestyle, but also to simultaneously working to help support my family

financially. At one point I worked two part-time jobs while maintaining my full-time course load. Despite the past unfavorable circumstances, resilience continues to motivate me to become the doctor I aspire to be.”— African American applicant, 2002

II. Study limitations

There are, of course, a number of limitations to my study. I have touched on a couple of these in Chapter 2. First, the generalizeability of my findings is limited by my data set and sample. This is because access to such data is not readily available without a legal agreement with the AAMC. Also, because the data were de-identified to protect the privacy of individual applicants, there is no way to conduct future research that connects specific students to the data used in the project. For example, it would be impossible to conduct a qualitative study that seeks to follow-up with particular AMCAS applicants to expound upon what was written in their disadvantaged essays. Another limitation is changes to the AMCAS application and it being somewhat different than the format used in the 2002-2008 cycles. Also, the data examined for this study are at least eight years old. Yet, the 2015 statistics released by the AAMC on their admitted students remains consistent with the trends that emerged from this study.

As mentioned in the previous chapter, among this project’s limitations is the choice that the researcher made to create a distinct, binary scheme for coding “conformers” and “reframers.” I have discussed how there were some essays that did not fit neatly within the conformer and reframer categories, but despite this, I chose to abide by a conformer versus reframer dichotomy. Doing so enabled me to utilize these variables for regression analyses. Yet, it did not allow for full exploration of the nuances within these essays. For example, among reframers, I observed the potential for subcategories: a) reframers who discussed ways in which they had overcome a variety of

disadvantages; and b) reframers who described their resilience, but also demonstrated a critical consciousness of the societal forces influencing their lives and pre-medical pathways. To create a deeper understanding of the experiences of “disadvantaged” medical school applicants, future research could explore such nuances within the reframer and conformer essays.

Another limitation regards the monoracially-framed approach toward this data and method. In performing my analysis, I found that a substantial number of applicants identified with more than one racial/ethnic category. Yet, though this project utilized a CRT framework with intentions to challenge dominant racist paradigms, I focused on maintaining distinct monoracial categories in my analysis. Certainly this was conceptually useful and facilitated the comparative aspects of my study, likely yielding insights that would have been otherwise obscured had I delved into the multiracial identities of each applicant. But, there are important drawbacks and marginalizing consequences to a monoracial approach, because it disregards the multiracial identities and experiences of a significant number of students. Future research should focus on the multiracial subgroup of applicants within this 2002-2008 student population, to learn how prevalent is multiraciality among pre-medical students and the implications for building a physician workforce that reflects an increasingly diverse patient populace. In the same vein, future research should explore intersectionality and how gender, class and other dimensions of difference influence students’ premedical pathways as well as the medical school experiences of students of color.

Finally, another limitation to note is that this project was exploratory in nature. The mixed methods employed were exploratory, providing a broad overview of the 2002-

2008 AMCAS applicants – who got into medical school and who did not, who responded to the disadvantaged status prompt and how, and what was the general content of the disadvantaged essays. Nevertheless, the topics surfaced provide a vital springboard for more in-depth quantitative and qualitative investigation.

III. Theoretical Framework and Policy Implications

A CRT lens highlights the importance of this exploratory study, which yielded a general overview of the topics, but through empirical evidence, illuminated racial bias and white supremacy embedded within the U.S. medical institution. To address how CRT helps to inform some of my key findings, in this section I refer (in italics) to the framework's terminology and central tenets outlined by Matsuda et al. (1993) discussed in Chapter 2 as well as to Rodriguez's (2006) description of racial microaggressions and Bell's (1980) concept of interest convergence. I also discuss how CRT can fall short in producing effective activist scholarship in this area.

My findings demonstrated that aspiring physicians of color remain on the margins, a prime example of *contemporary manifestations of group advantage and disadvantage*. That this nation's premedical pathways and medical school admissions processes remain racially stratified, *privileging whites over minorities* is undeniable, when confronted with the disproportionate numbers of white versus minority medical school applicants, matriculants, and practicing physicians. Indeed, I found that the majority of the U.S. medical student body is comprised of academically and economically elite, mostly white students. Both URiM and disadvantaged applicants demonstrated lower SES and academic profiles as well as lower acceptance rates than the overall applicant pool. CRT attributes this in large part to historic racial privilege, but

also calls into question the *claims of neutrality, objectivity, colorblindness and meritocracy* within the current admissions process. The implications for policy are that the *dominant, default* formula of metrics, with the MCAT at its center, must be disrupted in favor of more inclusive ways to evaluate medical school candidates that also focus on the lived experiences of aspiring doctors, such as holistic review.

While the consequences of a racially stratified physician workforce – underserved communities of color and poorer patient outcomes due to race-discordant patient-physician relationships and a lack of culturally competent care – are suffered disproportionately by minorities, the resulting economic strain poses deleterious effects for all of society. Likewise, the multitude of benefits yielded by racial diversity in medical schools and the medical profession would be widely shared. Hence, per a CRT lens, *interest convergence* has come into play, and diversity initiatives among U.S. medical schools, such as holistic review, have gained traction. As to policy implications, a CRT framework would posit that, for such diversity initiatives to succeed, the benefits to the white majority must be continually emphasized and empirically supported. Per Jackson, (2011), for racial progress to be gained, it is necessary to demonstrate how “the ultimate costs of racism are more fiscally unproductive than the individual and collective wealth of whites” (p. 442). Yet, what are the costs (to communities of color) associated with the adoption of race-neutral alternatives to affirmative action? If CRT’s ultimate aim is to help dissolve racial oppression, how can that be realized with race-neutral strategies that hinge upon interest convergence? If CRT scholars support race-neutral initiatives, how does that help bring race and racism to the forefront? Conversely, if CRT scholarship remains true to the tenet of illuminating racial inequities, and utilizes key

terminology such as “white supremacy” and “endemic racism,” how can we attract and galvanize the necessary white allies for interest convergence?

Per a CRT lens, this project centered on the disadvantaged and URiM applicants, *shifting the focus* from the dominant group of medical students to the experiences of minority applicants. Via the disadvantaged status prompt, I studied the *voices* or *mascaras* constructed and conveyed in their essays and found a dichotomy of “conformers” and “reframers.” I considered the disadvantaged prompt a potential *racial microaggression* that compelled applicants of color to convey an (conformer) essay in line with the *colonizers’ definition of us [minorities]*. Essays that “reframed” the concept of disadvantage in effect subverted the colonizers’ definition by constructing a *counterstory* of empowerment and resilience, indicating an understanding of how social structures work to dominate one’s life. According to CRT scholarship, the ability to form a critical consciousness about racial stratification and mitigate *racial microaggressions* and other forms of racism, is key to achieving *self-actualization* and *resistance*. Yet, while some applicants successfully disrupted racial stereotypes, this was not necessarily associated with successful application to medical school. Though I found no significant nor correlational relationships between admission and either conforming or reframing, my descriptive analyses showed that there were more conformer (56.4%) than reframer applicants and that conformers were slightly more likely to get into medical school (5.2% advantage). So, if the disadvantaged status prompt becomes an important and mandatory piece of the admissions evaluation, how should admissions advisors (like the one mentioned in the essay excerpt on pg. 114) or other student support personnel advise premedical students of color? Should students be encouraged to adopt a conformer

strategy or self-stereotyping *mascara* because this could slightly boost the likelihood of acceptance? Can *counter narratives* make any difference in terms of advancement up the social hierarchy?

Relatedly, critics of CRT posit that the framework makes the problematic assumption that sharing “the subjective experiences of racism will automatically lead to some sort of psychological conversion in which... [we] will know how to ‘do the right thing’” (Litowitz, 1997). Beyond raising consciousness about the pervasiveness of racism, how can CRT produce activist research that more clearly identifies “the right thing”? In her piece on interest convergence, Jackson (2011) addresses this critique and conundrum: “opportunities abound for discovering the salience of race and the seduction of colorblindness. Whites need only to understand that it is ultimately in their best material, emotional, psychological, and moral interests to act on behalf of racial progress than to thwart it or to deny its necessity” (p. 454). While this project’s aim was to bring to light the “salience of racism” in the U.S. medical institution as well as the seductiveness of colorblindness in alternatives to race-conscious admissions practices, I also attempted to identify “the right thing” to do in demonstrating how a more racially equitable student body can effectively address the nation’s physician shortage and gross health disparities.

IV. Closing Remarks

In Chapter 1, I referenced Betancourt et al.’s (2003) three-tiered framework for helping to achieve cultural competence in the U.S. healthcare delivery system. Most relevant to this project is *organizational cultural competence*, which involves increasing the numbers of racial minorities in U.S. medical schools, ultimately yielding improved patient outcomes and access for medically underserved minority communities. For

medical school admissions committees, this is a lofty goal, made ever more difficult by legal challenges to affirmative action in postsecondary admissions. The disadvantaged status prompt was created as a potential strategy toward meeting this goal. Yet, as previously mentioned, it is a race-neutral strategy, and such strategies utilized within higher education have proved ineffective at creating the kind of transformational change needed to ameliorate gaping, enduring racial disparities. Nor do race-blind policies challenge the way merit is currently defined and weighed in higher education admissions.

While the quantitative analyses of this mixed methods study showed that being “disadvantaged” or an URiM was somewhat favorable for applicants, this finding is inconsequential compared to the consistently paltry numbers of minority medical students within the U.S. medical student body. The qualitative analyses of this project demonstrated that most disadvantaged students of color are not identifying themselves as racially disadvantaged, as the creators of the “disadvantaged status prompt” hoped or anticipated. Moreover, there is currently no other research on this portion of the AMCAS, and it is unknown how or to what extent the prompt is being utilized by medical school admissions committees.

Thus, the disadvantaged status prompt represents another problematic example of diversity policy that sidesteps race. In this historic moment, Whites are glaringly overrepresented among medical students, and yet ironically, notions of “reverse discrimination” and calls for objective meritocracy pose serious “disadvantages” to policy efforts that might otherwise be effective at shoring racial diversity, if they were blatantly race-conscious. The disadvantaged status prompt, along with a revised URiM definition that no longer delineates racial minorities, are cautious, diluted responses

within a politically volatile environment. The U.S. medical profession and healthcare delivery system remain stratified by race. A ban on affirmative action in medical school admissions, on top of a historically racist and segregated landscape, will sustain insurmountable obstacles to medical school for the vast majority of aspiring physicians of color, and hence, conditions of substandard care for people of color.

APPENDIX A: DATA TABLES

Table 1
Total AMCAS Applicant Pool 2002-2008 by Racial/Ethnic Background and Gender

	Percentage by Gender		Percentage of Total Applicant Pool
	M	W	
African American (n=22,436)	32.2	67.8	8.5
Asian (n=56,130)	49.5	50.5	21.2
Cuban (n=1565)	52.1	47.9	.59
Foreign (n=9,258)	48.9	51.1	3.5
Hawaiian/Pacific Islander (n=1110)	46.2	53.8	.42
Hispanic (n=19,374)	48.1	53.8	7.3
Mexican American (n=6742)	48.8	51.2	2.5
Native American (n=2940)	49.2	50.8	1.1
Other Hispanic (n=7,333)	47.9	52.1	2.8
Other Race (n=5316)	51.4	48.6	2.0
Puerto Rican (n=4470)	44.3	55.7	1.7
Unknown Race (n=5909)	52.1	47.9	2.2
White, Non-Hispanic (n=171,430)	53.1	46.9	64.6
URiM (n=33104)	37.8	62.2	12.5
Disadvantaged (n=32191)	42.8	57.2	12.1
All Applicants	50.5 (n=133917)	49.5 (n=131259)	100.0 (n=265,176)

Table 2

Total AMCAS Pool 2002-2008: Household Income Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile \$0-\$19,229		2 nd Quintile \$19,230-\$36,275		3 rd Quintile \$36,276-\$57,890		4 th Quintile \$57,891-\$92,552		5 th Quintile \$92,553+	
	M	W	M	W	M	W	M	W	M	W
African American	0	0	0	0	8.0	7.0	18.9	20.9	73.1	72.2
	0 (n=0)	0	0 (n=0)	0	7.3 (n=731)		20.2 (n=2027)		72.5 (n=7265)	
Asian	0	0	0	0	5.5	5.7	13.5	13.4	81.1	80.9
	0 (n=0)	0	0 (n=0)	0	5.6 (n=2106)		13.4 (n=5047)		81.0 (n=30457)	
Cuban	0	0	0	0	7.4	3.6	17.7	14.9	74.9	81.4
	0 (n=0)	0	0 (n=0)	0	5.6 (n=57)		16.4 (n=166)		77.9 (n=788)	
Foreign	0	0	0	0	3.8	3.2	32.1	35.1	80.9	80.7
	0 (n=0)	0	0 (n=0)	0	3.5 (n=188)		33.6 (n=2431)		80.8 (n=4342)	
Hawaiian/P.Island.	0	0	0	0	9.2	14.3	18.0	14.6	72.8	71.0
	0 (n=0)	0	0 (n=0)	0	11.7 (n=78)		16.4 (n=109)		71.9 (n=479)	
Hispanic	0	0	0	0	12.1	11.2	18.0	18.5	69.8	70.4
	0 (n=0)	0	0 (n=0)	0	11.6 (n=1229)		18.3 (n=1927)		70.1 (n=7396)	
Mexican American	0	0	0	0	19.2	19.1	20.4	21.1	60.4	59.9
	0 (n=0)	0	0 (n=0)	0	19.1 (n=666)		20.7 (n=721)		60.1 (n=2093)	
Native American	0	0	0	0	10.5	9.0	20.8	21.4	68.7	69.5
	0 (n=0)	0	0 (n=0)	0	9.7 (n=158)		21.1 (n=343)		69.1 (n=1121)	
Other Hispanic	0	0	0	0	10.4	9.7	17.1	17.2	72.5	73.0
	0 (n=0)	0	0 (n=0)	0	10.1 (n=427)		17.2 (n=729)		72.8 (n=3087)	
Other Race	0	0	0	0	9.0	8.9	15.0	15.4	76.0	75.7
	0 (n=0)	0	0 (n=0)	0	8.9 (n=288)		15.2 (n=490)		75.9 (n=2447)	
Puerto Rican	0	0	0	0	5.0	6.4	16.1	18.0	78.9	75.6
	0 (n=0)	0	0 (n=0)	0	5.8 (n=127)		17.2 (n=377)		77.1 (n=1693)	
Unknown Race	0	0	0	0	14.3	15.4	18.2	16.5	67.4	68.1
	0 (n=0)	0	0 (n=0)	0	14.8 (n=388)		17.5 (n=458)		67.7 (n=1776)	
White, Non-Hisp.	0	0	0	0	4.3	4.1	17.5	16.8	78.0	79.1
	0 (n=0)	0	0 (n=10)	0	4.2 (n=5015)		17.2 (n=20509)		78.6 (n=93556)	
All Applicants	0	0	0	0	5.0	4.9	16.8	16.4	78.2	78.7
	(n=0)	(n=0)	(n=4)	(n=6)	(n=4466)	(n=4168)	(n=15014)	(n=13791)	(n=70143)	(n=66507)
	0 (n=0)		0 (n=10)		5.0 (n=8634)		16.6 (n=28805)		78.5 (n=136650)	

Table 3
Total AMCAS Pool 2002-2008: Parent1 Educational Attainment by Racial/Ethnic Background and Gender

	No High School Diploma		High School Diploma		College Degree		Graduate Degree	
	M	W	M	W	M	W	M	W
African American	10.4	6.2	28.3	34.2	27.7	29.1	33.6	30.5
	7.5 (n=1550)		32.3 (n=6643)		28.7 (n=5892)		31.5 (n=6467)	
Asian	5.9	6.3	14.7	16.3	29.1	30.1	50.3	47.2
	6.1 (n=3083)		15.6 (n=7856)		29.6 (n=14955)		48.7 (n=24623)	
Cuban	6.1	6.6	27.1	26.9	27.1	29.8	39.7	36.8
	6.3 (n=93)		27.0 (n=396)		28.4 (n=416)		38.3 (n=562)	
Foreign	6.7	5.0	15.6	16.3	37.0	38.1	40.7	40.5
	5.8 (n=474)		16.0 (n=1298)		37.6 (n=3047)		40.6 (n=3291)	
Hawaiian/Pacific Islander	5.5	6.6	27.4	27.2	31.4	35.6	35.7	30.7
	6.1 (n=62)		27.3 (n=278)		33.7 (n=343)		33.0 (n=336)	
Hispanic	12.5	11.9	27.9	30.9	25.8	28.1	33.8	29.1
	12.2 (n=2030)		29.5 (n=4925)		27.0 (n=4510)		31.4 (n=5237)	
Mexican American	21.6	22.9	33.6	35.7	20.7	19.9	24.1	21.5
	22.2 (n=11158)		34.6 (n=1805)		20.3 (n=1059)		22.8 (n=1188)	
Native American	5.7	5.6	37.9	36.9	27.8	28.0	28.6	29.6
	5.6 (n=146)		37.3 (n=967)		27.9 (n=723)		29.1 (n=755)	
Other Hispanic	10.8	10.1	26.7	30.9	25.6	27.8	36.9	31.2
	10.4 (n=679)		28.9 (n=1885)		26.8 (n=1744)		33.9 (n=2210)	
Other Race	14.4	15.4	26.3	30.7	24.3	26.0	35.0	27.9
	14.9 (n=702)		28.5 (n=1345)		25.1 (n=1187)		31.6 (n=1491)	
Puerto Rican	4.7	4.0	24.2	28.0	31.7	36.1	39.4	31.8
	4.3 (n=180)		26.4 (n=1099)		34.2 (n=1424)		35.1 (n=1465)	
Unknown Race	14.2	14.6	24.4	28.8	23.9	24.3	37.5	32.3
	14.4 (n=607)		26.5 (n=1114)		24.1 (n=1013)		35.0 (n=1473)	
White, Non-Hispanic	1.7	1.7	21.9	23.7	31.3	32.7	45.1	41.9
	1.7 (n=2708)		22.8 (n=35746)		31.9 (n=50171)		43.6 (n=68488)	
All Applicants	3.7	3.8	20.8	23.4	30.6	31.7	44.9	41.1
	(n=4463)	(n=4546)	(n=25041)	(n=27968)	(n=36921)	(n=37866)	(n=54232)	(n=49110)
	3.8 (n=9009)		22.1 (n=53009)		31.1 (n=74787)		43.0 (n=103342)	

Table 4a
Total AMCAS Pool 2002-2008: Cumulative GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.20		2 nd Quintile 3.21-3.45		3 rd Quintile 3.46-3.63		4 th Quintile 3.64-3.80		5 th Quintile 3.81-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	51.7 49.3 (n=10866)	48.1	19.8 21.2 (n=4667)	21.8	12.9 13.2 (n=2919)	13.4	9.2 9.4 (n=2069)	9.5	6.5 6.9 (n=1529)	7.2
Asian	21.0 19.2 (n=10525)	17.5	21.3 21.6 (n=11809)	21.8	20.6 21.0 (n=11487)	21.4	18.8 19.5 (n=10656)	20.1	18.3 18.8 (n=10281)	19.2
Cuban	28.7 25.5 (n=396)	22.1	24.3 23.8 (n=369)	23.2	17.0 18.0 (n=279)	19.0	15.0 17.3 (n=269)	19.8	15.0 15.4 (n=239)	15.8
Foreign	17.9 18.0 (n=1601)	18.2	18.1 17.7 (n=1570)	17.3	17.8 17.7 (n=1570)	17.5	19.6 20.6 (n=1825)	21.5	26.6 26.0 (n=2312)	25.6
Hawaiian/P.Island.	34.3 32.6 (n=356)	31.1	23.2 23.4 (n=256)	23.6	17.1 17.0 (n=186)	17.0	13.1 15.0 (n=164)	16.7	12.3 11.9 (n=130)	11.6
Hispanic	36.4 34.2 (n=6268)	32.2	23.1 23.3 (n=4264)	23.4	16.0 16.9 (n=3105)	17.8	12.9 13.6 (n=2488)	14.1	11.6 12.1 (n=2212)	12.5
Mexican American	41.2 38.5 (n=2319)	35.9	22.4 23.3 (n=1403)	24.1	15.0 16.2 (n=976)	17.4	11.5 11.5 (n=694)	11.6	10.0 10.5 (n=632)	11.0
Native American	39.5 37.8 (n=1058)	36.2	22.3 20.6 (n=577)	19.1	14.3 16.3 (n=456)	18.2	11.2 13.0 (n=363)	14.7	12.7 12.2 (n=342)	11.8
Other Hispanic	36.0 34.1 (n=2392)	32.4	24.1 24.1 (n=1689)	24.1	15.7 17.2 (n=1205)	18.5	13.1 13.6 (n=956)	14.1	11.1 11.0 (n=773)	10.9
Other Race	34.0 33.9 (n=1683)	33.8	24.3 23.8 (n=1182)	23.2	16.6 16.6 (n=827)	16.7	13.3 14.1 (n=702)	15.0	11.8 11.6 (n=575)	11.3
Puerto Rican	36.3 34.0 (n=1504)	32.2	21.6 21.2 (n=937)	20.9	16.8 17.0 (n=752)	17.1	12.8 13.9 (n=616)	14.8	12.5 13.8 (n=612)	14.9
Unknown Race	28.5 27.7 (n=1421)	26.8	20.3 20.9 (n=1071)	21.5	18.4 18.5 (n=952)	18.7	16.2 16.4 (n=843)	16.7	16.6 16.5 (n=847)	16.4
White, Non-Hisp.	18.8 16.4 (n=27474)	13.7	20.8 20.3 (n=33945)	19.7	19.9 20.7 (n=34619)	21.6	19.6 20.6 (n=34391)	21.7	20.8 22.0 (n=36824)	23.4
All Applicants	21.5 (n=28025)	19.3 (n=24573)	20.8 (n=27086)	20.4 (n=25959)	19.5 (n=25395)	20.3 (n=25837)	18.7 (n=24352)	19.7 (n=25133)	19.5 (n=25407)	20.4 (n=26044)
	20.4 (n=52598)		20.6 (n=53045)		19.9 (n=51232)		19.2 (n=49485)		20.0 (n=51451)	

Table 4b

Total AMCAS Pool 2002-2008: Science GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.02		2 nd Quintile 3.03-3.33		3 rd Quintile 3.34-3.56		4 th Quintile 3.57-3.70		5 th Quintile 3.80-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	48.6 50.4 (n=10968)	51.2	20.6 20.8 (n=4525)	20.9	13.1 12.4 (n=2691)	12.0	10.0 9.6 (n=2081)	9.3	7.6 6.9 (n=1509)	6.6
Asian	18.7 19.1 (n=10306)	19.5	20.6 21.2 (n=114610)	21.9	20.4 20.5 (n=11040)	20.5	21.2 20.6 (n=11139)	20.0	19.1 18.6 (n=10027)	18.0
Cuban	28.0 27.4 (n=425)	26.8	21.6 21.8 (n=338)	22.0	18.6 18.4 (n=285)	18.1	16.6 17.7 (n=275)	18.9	15.2 14.6 (n=227)	14.1
Foreign	15.6 17.0 (n=1492)	18.3	15.4 16.0 (n=1407)	16.6	19.0 18.3 (n=1614)	17.7	21.2 21.5 (n=1889)	21.7	28.8 27.3 (n=2398)	25.7
Hawaiian/P.Island.	34.2 33.9 (n=368)	33.7	19.2 22.0 (n=238)	24.3	19.6 18.3 (n=198)	17.1	13.6 13.9 (n=151)	14.2	13.4 11.9 (n=129)	10.6
Hispanic	34.4 35.6 (n=6233)	36.7	22.6 22.5 (n=3948)	22.5	16.7 16.5 (n=2892)	16.3	14.4 13.9 (n=2440)	13.5	11.9 11.4 (n=1995)	11.0
Mexican American	38.4 39.2 (n=2117)	40.0	23.2 23.3 (n=1256)	23.4	14.8 15.2 (n=818)	15.5	13.9 12.6 (n=679)	11.3	9.7 9.7 (n=525)	9.7
Native American	35.7 36.3 (n=999)	36.9	21.8 21.6 (n=595)	21.4	14.2 15.3 (n=420)	16.3	15.2 14.7 (n=405)	14.3	13.1 12.1 (n=332)	11.1
Other Hispanic	33.9 35.6 (n=2438)	37.2	22.8 22.7 (n=1557)	22.6	17.4 17.1 (n=1172)	16.9	14.3 13.9 (n=952)	13.5	11.6 10.6 (n=728)	9.8
Other Race	32.9 35.2 (n=1678)	37.7	23.5 22.3 (n=1064)	21.0	16.4 17.0 (n=810)	17.6	15.2 14.4 (n=688)	13.6	12.1 11.1 (n=529)	10.1
Puerto Rican	35.6 36.6 (n=1609)	37.3	21.3 21.2 (n=933)	21.1	16.7 16.4 (n=720)	16.1	13.7 13.4 (n=588)	13.1	12.7 12.5 (n=552)	12.4
Unknown Race	25.8 28.0 (n=1339)	30.4	20.0 20.5 (n=983)	21.1	18.7 18.0 (n=861)	17.2	18.3 17.6 (n=845)	16.9	17.2 15.9 (n=760)	14.4
White, Non-Hisp.	16.5 16.3 (n=26774)	15.9	20.1 20.2 (n=33324)	20.3	20.5 20.6 (n=33979)	20.8	21.6 21.6 (n=35611)	21.7	21.3 21.3 (n=35062)	21.3
All Applicants	19.2 (n=24546)	21.5 (n=26980)	20.1 (n=25750)	20.6 (n=25843)	19.9 (n=25474)	19.5 (n=24426)	20.7 (n=26473)	19.7 (n=24681)	20.2 (n=25845)	18.8 (n=23576)
	20.3 (n=51526)		20.3 (n=51593)		19.7 (n=49900)		20.2 (n=51154)		19.5 (n=49421)	

Table 5
Total AMCAS Pool 2002-2008: MCAT Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-23		2 nd Quintile 24-27		3 rd Quintile 28-29		4 th Quintile 30-32		5 th Quintile 33-45	
	M	W	M	W	M	W	M	W	M	W
African American	56.6 65.0 (n=14409)	69.0	23.6 21.6 (n=4789)	20.6	7.9 6.1 (n=1352)	5.2	7.4 4.9 (n=1080)	3.7	4.6 2.5 (n=545)	1.5
Asian	13.0 17.3 (n=9437)	21.5	20.0 22.6 (n=12332)	25.1	15.1 15.6 (n=8516)	16.0	24.4 22.7 (n=12411)	21.0	27.5 21.9 (n=11969)	16.3
Cuban	25.0 30.9 (n=479)	37.3	24.0 26.6 (n=413)	29.5	16.2 15.3 (n=238)	14.4	21.0 16.8 (n=260)	12.1	13.8 10.4 (n=162)	6.7
Foreign	16.4 21.7 (n=1972)	26.7	18.8 21.7 (n=1978)	24.6	14.1 14.2 (n=1296)	14.4	22.0 20.4 (n=1858)	18.9	28.7 21.9 (n=1995)	15.4
Hawaiian/P.Island.	26.8 36.5 (n=402)	44.8	25.6 27.4 (n=302)	28.9	18.2 14.9 (n=164)	12.0	16.0 13.1 (n=144)	10.5	13.3 8.2 (n=90)	3.7
Hispanic	37.2 45.3 (n=8688)	52.8	26.2 25.7 (n=4929)	25.2	13.0 11.1 (n=2133)	9.4	14.1 11.1 (n=2122)	8.3	9.5 6.8 (n=1306)	4.3
Mexican American	36.3 43.6 (n=2920)	50.7	28.9 28.6 (n=1916)	28.4	12.9 11.0 (n=737)	9.3	13.3 10.5 (n=702)	7.8	8.6 6.2 (n=416)	3.9
Native American	29.9 39.4 (n=1139)	48.7	29.3 28.2 (n=815)	27.1	13.8 11.9 (n=344)	10.1	16.9 13.1 (n=379)	9.4	10.1 7.4 (n=214)	4.7
Other Hispanic	28.6 36.8 (n=2661)	44.4	27.9 27.8 (n=2010)	27.7	15.0 13.3 (n=964)	11.8	16.6 13.5 (n=978)	10.7	11.8 8.5 (n=616)	5.5
Other Race	34.4 42.8 (n=2256)	51.7	27.9 26.6 (n=1404)	25.3	13.0 11.9 (n=627)	10.7	15.4 12.0 (n=633)	8.4	9.4 6.7 (n=356)	4.0
Puerto Rican	60.8 68.3 (n=3031)	74.3	19.5 17.2 (n=761)	15.3	8.4 6.0 (n=265)	4.1	6.5 5.1 (n=228)	4.1	4.8 3.4 (n=151)	2.3
Unknown Race	27.7 35.2 (n=1814)	43.7	23.6 23.7 (n=1224)	23.9	13.1 12.2 (n=628)	11.2	17.6 14.7 (n=758)	11.5	18.1 14.2 (n=730)	9.8
White, Non-Hisp.	13.0 17.2 (n=29078)	22.0	23.8 26.3 (n=44370)	29.1	17.5 17.1 (n=28897)	16.7	23.3 21.3 (n=36063)	19.1	22.5 18.1 (n=30506)	13.1
All Applicants	16.3 (n=21420)	28.6 (n=36762)	22.9 (n=30187)	27.0 (n=34650)	16.2 (n=21345)	14.9 (n=19119)	22.3 (n=29371)	17.3 (n=22229)	22.3 (n=29338)	12.2 (n=15613)
	22.4 (n=58182)		24.9 (n=64837)		15.6 (n=40464)		19.8 (n=51600)		17.3 (n=44951)	

Table 6
Accepted AMCAS Applicants 2002-2008 by Racial/Ethnic Background and Gender

	Number/Percentage by Gender		Subgroup Acceptance Rate		Proportion Accepted Within Overall Accepted Population	
	M	W	M	W	M	W
African American	36.0 (n=3339)	64.0 (n=5945)	46.2	39.1	5.1	9.6
		(n=9284)	41.4		7.3	
Asian	49.4 (n=13306)	50.6 (n=13607)	47.9	48.0	20.4	21.9
		(n=26913)	47.9		21.2	
Cuban	53.4 (n=433)	46.6 (n=378)	53.1	50.5	0.7	0.6
		(n=811)	51.8		0.6	
Foreign	49.3 (n=1165)	50.7 (n=1135)	25.1	24.6	1.7	1.9
		(n=2300)	24.8		1.8	
Hawaiian/P. Island	50.7 (n=192)	49.3 (n=187)	37.4	31.3	0.3	0.3
		(n=379)	34.1		0.3	
Hispanic	50.2 (n=4597)	49.8 (n=4565)	49.4	45.4	7.3	7.6
		(n=9162)	47.3		7.4	
Mexican American	50.8 (n=1628)	49.2 (n=1577)	49.5	45.7	2.5	2.5
		(n=3205)	47.5		2.5	
Native American	49.6 (n=658)	50.4 (n=669)	45.5	44.8	1.0	1.1
		(n=1327)	45.1		1.0	
Other Hispanic	49.8 (n=1555)	50.2 (n=1570)	44.2	41.1	2.4	2.5
		(n=3125)	42.6		2.5	
Other Race	53.0 (n=1211)	47.0 (n=1075)	44.4	41.6	1.9	1.7
		(n=2286)	43.0		1.8	
Puerto Rican	47.7 (n=1141)	52.3 (n=1249)	57.6	50.2	1.8	2.0
		(n=2390)	53.5		1.9	
Unknown Race	52.1 (n=1591)	47.9 (n=1463)	51.7	51.7	2.4	2.4
		(n=3054)	51.7		2.4	
White, Non-Hispanic	53.0 (n=45723)	47.0 (n=40473)	50.3	50.3	70.3	65.1
		(n=86196)	50.3		67.8	
URiM	41.2 (n=5933)	58.8 (n=8451)	47.4	41.0	9.1	13.6
		(n=14384)	43.5		11.3	
Disadvantaged	44.1 (n=5412)	55.9 (n=6866)	39.3	37.3	8.6	11.4
		(n=12,278)	38.1		10.0	
All Accepted Applicants	51.2 (n=65067)	48.8 (n=62127)	48.6 (n=65067)	47.3 (n=62127)	51.2 (n=65067)	48.8 (n=62127)
	100.0 (n=127194)		48.0 (n=127194)		48.0 (n=127194)	

Table 7
 Accepted AMCAS Applicants 2002-2008: Household Income Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile \$0-\$19,229		2 nd Quintile \$19,230-\$36,275		3 rd Quintile \$36,276-\$57,890		4 th Quintile \$57,891-\$92,552		5 th Quintile \$92,553+	
	M	W	M	W	M	W	M	W	M	W
African American	0	0	0	0	6.7	5.5	17.9	19.8	75.3	74.7
	0 (n=0)		0 (n=0)		5.9 (n=281)		19.1 (n=906)		74.9 (n=3551)	
Asian	0	0	0	0	4.1	4.3	12.5	12.1	83.4	83.6
	0 (n=0)		0 (n=0)		4.2 (n=814)		12.3 (n=2388)		83.5 (n=16214)	
Cuban	0	0	0	0	6.7	2.0	18.2	11.7	75.1	86.2
	0 (n=0)		0 (n=0)		4.6 (n=25)		15.3 (n=83)		80.1 (n=436)	
Foreign	0	0	0	0	2.6	2.9	13.5	15.0	83.9	82.2
	0 (n=0)		0 (n=0)		2.7 (n=41)		14.2 (n=212)		83.1 (n=1240)	
Hawaiian/P.Island.	0	0	0	0	5.3	8.9	18.3	14.3	76.3	76.8
	0 (n=0)		0 (n=0)		7.0 (n=17)		16.5 (n=40)		76.5 (n=186)	
Hispanic	0	0	0	0	10.9	9.5	17.2	18.3	71.9	72.1
	0 (n=0)		0 (n=0)		10.2 (n=559)		17.8 (n=973)		72.0 (n=3942)	
Mexican American	0	0	0	0	18.2	16.4	21.5	21.0	60.2	62.5
	0 (n=0)		0 (n=0)		17.4 (n=329)		21.3 (n=403)		61.3 (n=1160)	
Native American	0	0	0	0	10.5	7.4	20.1	21.3	69.4	71.3
	0 (n=0)		0 (n=0)		8.9 (n=72)		20.7 (n=167)		70.4 (n=568)	
Other Hispanic	0	0	0	0	8.8	9.2	14.9	18.0	76.3	72.9
	0 (n=0)		0 (n=0)		9.0 (n=177)		16.4 (n=323)		74.6 (n=1470)	
Other Race	0	0	0	0	8.0	9.4	13.5	15.7	78.4	74.9
	0 (n=0)		0 (n=0)		8.6 (n=129)		14.5 (n=217)		76.8 (n=1146)	
Puerto Rican	0	0	0	0	3.9	4.9	14.0	17.2	82.1	77.8
	0 (n=0)		0 (n=0)		4.5 (n=58)		15.7 (n=204)		79.8 (n=1036)	
Unknown Race	0	0	0	0	13.0	10.9	17.6	14.1	69.3	74.9
	0 (n=0)		0 (n=0)		12.1 (n=178)		16.1 (n=237)		71.7 (n=1054)	
White, Non-Hisp.	0	0	1.0	3.0	3.6	3.2	16.6	15.4	79.8	81.4
	0 (n=10)		0.0 (n=4)		3.4 (n=2171)		16.0 (n=10191)		80.6 (n=51243)	
All Accepted Applicants	0	0	0	0	4.1	3.8	15.8	15.0	80.1	81.2
	(n=0)	(n=0)	(n=1)	(n=3)	(n=1908)	(n=1653)	(n=7352)	(n=6526)	(n=37364)	(n=35282)
	0 (n=0)		0 (n=4)		4.0 (n=3561)		15.4 (n=13871)		80.6 (n=72646)	

Table 8
Accepted AMCAS Applicants 2002-2008: Parent1 Educational Attainment by Racial/Ethnic Background and Gender

	No High School Diploma		High School Diploma		College Degree		Graduate Degree	
	M	W	M	W	M	W	M	W
African American	7.3	4.8	26.4	30.3	28.6	28.9	37.7	36.0
	5.7 (n=492)		28.9 (n=2511)		28.8 (n=2499)		36.6 (n=3176)	
Asian	4.1	4.6	11.8	12.1	26.7	27.6	57.3	55.6
	4.4 (n=1072)		12.0 (n=2929)		27.2 (n=6655)		56.5 (n=13828)	
Cuban	6.1	4.8	24.3	21.4	28.2	31.3	41.4	42.5
	5.5 (n=42)		22.9 (n=175)		29.6 (n=226)		41.9 (n=320)	
Foreign	5.7	4.9	14.5	14.5	35.4	35.2	44.4	45.4
	5.3 (n=110)		14.5 (n=300)		35.3 (n=730)		44.9 (n=929)	
Hawaiian/Pacific Islander	3.9	2.9	28.3	30.8	28.3	36.6	39.4	29.7
	3.4 (n=12)		29.5 (n=104)		32.4 (n=114)		34.7 (n=122)	
Hispanic	11.2	9.6	25.4	28.4	26.5	28.0	36.9	34.0
	10.4 (n=858)		26.9 (n=2214)		27.2 (n=2244)		35.4 (n=2919)	
Mexican American	21.2	19.0	32.2	33.9	20.5	21.9	26.0	25.3
	20.1 (n=541)		33.0 (n=888)		21.2 (n=570)		25.7 (n=690)	
Native American	5.9	3.7	35.2	35.2	29.6	29.7	29.3	31.3
	4.8 (n=59)		35.2 (n=432)		29.7 (n=364)		30.3 (n=372)	
Other Hispanic	8.9	7.9	24.0	28.0	25.9	26.1	41.2	38.0
	8.4 (n=242)		26.0 (n=747)		26.0 (n=746)		39.6 (n=1136)	
Other Race	13.2	13.4	24.1	27.9	23.7	26.3	39.0	32.4
	13.3 (n=281)		25.9 (n=547)		24.9 (n=526)		35.9 (n=757)	
Puerto Rican	3.5	3.0	20.2	25.4	32.3	35.2	44.0	36.4
	3.2 (n=72)		22.9 (n=516)		33.9 (n=763)		40.0 (n=902)	
Unknown Race	12.1	10.8	22.3	25.3	23.8	24.8	41.7	39.1
	11.5 (n=256)		23.7 (n=527)		24.3 (n=539)		40.5 (n=899)	
White, Non-Hispanic	1.3	1.2	18.6	18.8	30.5	32.3	49.7	47.8
	1.2 (n=992)		18.7 (n=15046)		31.3 (n=25230)		48.8 (n=39296)	
All Accepted Applicants	2.7	2.7	17.8	18.8	29.5	30.8	50.0	47.7
	(n=1615)	(n=1535)	(n=10638)	(n=10802)	(n=17619)	(n=17674)	(n=29831)	(n=27338)
	2.7 (n=3151)		18.3 (n=21468)		30.2 (n=35397)		48.9 (n=57373)	

Table 9a

Accepted AMCAS Applicants 2002-2008: Cumulative GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.20		2 nd Quintile 3.21-3.45		3 rd Quintile 3.46-3.63		4 th Quintile 3.64-3.80		5 th Quintile 3.81-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	34.0 29.4 (n=2697)	26.8	23.4 24.3 (n=2231)	24.8	17.5 18.2 (n=1668)	18.6	13.9 15.2 (n=1396)	15.9	11.1 13.0 (n=1189)	14.0
Asian	6.3 5.4 (n=1437)	4.6	14.7 14.5 (n=3824)	14.3	22.1 22.5 (n=5939)	22.8	26.1 26.7 (n=7050)	27.2	30.8 30.9 (n=8175)	31.0
Cuban	15.8 12.6 (n=102)	9.0	20.0 21.4 (n=173)	23.1	21.1 19.6 (n=158)	17.8	19.7 21.4 (n=173)	23.3	23.4 25.0 (n=202)	26.8
Foreign	3.6 3.4 (n=76)	3.2	10.4 10.2 (n=227)	9.9	16.1 15.9 (n=355)	15.7	24.5 25.3 (n=565)	26.2	45.4 45.2 (n=1007)	44.9
Hawaiian/P.Island.	11.5 11.4 (n=43)	11.4	22.4 20.5 (n=77)	18.5	20.8 19.9 (n=75)	19.0	20.3 23.1 (n=87)	26.1	25.0 25.0 (n=94)	25.0
Hispanic	20.2 17.7 (n=1560)	15.0	22.4 22.3 (n=1968)	22.2	19.8 20.5 (n=1815)	21.3	18.6 19.4 (n=1711)	20.1	19.0 20.2 (n=1784)	21.4
Mexican American	23.6 21.0 (n=624)	18.2	22.5 22.8 (n=679)	23.1	19.2 21.1 (n=627)	23.0	17.1 16.9 (n=504)	16.8	17.6 18.2 (n=542)	18.8
Native American	20.8 19.8 (n=255)	18.9	23.4 21.1 (n=271)	18.9	20.5 21.6 (n=277)	22.6	14.7 17.2 (n=221)	19.6	20.5 20.3 (n=261)	20.1
Other Hispanic	17.3 15.3 (n=465)	13.3	22.5 22.7 (n=689)	22.9	20.8 21.4 (n=650)	22.0	20.2 20.9 (n=634)	21.6	19.2 19.7 (n=597)	20.1
Other Race	18.4 17.4 (n=379)	16.2	21.9 22.3 (n=487)	22.8	20.6 20.4 (n=445)	20.2	18.8 19.7 (n=430)	20.3	20.3 20.1 (n=439)	20.0
Puerto Rican	23.1 19.5 (n=463)	16.2	23.6 21.7 (n=515)	19.9	18.7 19.1 (n=455)	19.5	17.3 19.0 (n=452)	20.6	17.3 20.7 (n=493)	23.9
Unknown Race	13.0 12.3 (n=321)	11.5	17.7 17.3 (n=464)	17.9	21.7 20.8 (n=542)	19.7	22.2 23.3 (n=608)	24.6	25.4 25.8 (n=672)	26.2
White, Non-Hisp.	7.4 5.9 (n=4983)	4.2	15.0 14.0 (n=18570)	12.8	20.3 20.7 (n=25716)	20.9	24.8 25.0 (n=31153)	26.8	32.5 31.6 (n=39319)	35.3
All Applicants	8.8 (n=5584)	6.7 (n=4095)	15.4 (n=9827)	14.4 (n=8743)	20.5 (n=13053)	20.9 (n=12663)	24.4 (n=15553)	25.7 (n=15600)	31.0 (n=19734)	32.3 (n=19585)
	7.8 (n=9679)		14.9 (n=18570)		20.7 (n=25716)		25.0 (n=31153)		31.6 (n=39319)	

Table 9b

Accepted AMCAS Applicants 2002-2008: Science GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.02		2 nd Quintile 3.03-3.33		3 rd Quintile 3.34-3.56		4 th Quintile 3.57-3.79		5 th Quintile 3.80-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	30.4 30.5 (n=2784)	30.7	24.6 24.3 (n=2212)	24.1	17.3 17.2 (n=1572)	17.2	15.3 15.5 (n=1410)	15.5	12.3 12.5 (n=1136)	12.5
Asian	5.1 5.2 (n=1363)	5.3	13.5 14.6 (n=3831)	15.7	21.2 21.9 (n=5736)	22.5	28.9 28.2 (n=7410)	27.6	31.4 30.1 (n=7901)	28.8
Cuban	42.7 13.4 (n=108)	43.3	24.3 19.6 (n=158)	25.7	16.7 19.9 (n=161)	17.1	11.6 23.4 (n=189)	8.6	4.7 23.8 (n=192)	5.3
Foreign	2.9 3.1 (n=69)	3.3	9.0 8.8 (n=195)	8.6	15.8 16.5 (n=366)	17.1	25.0 25.2 (n=558)	25.4	47.3 46.4 (n=1030)	45.6
Hawaiian/P.Island.	13.5 13.6 (n=51)	13.7	14.1 16.8 (n=63)	19.7	24.5 22.1 (n=83)	19.7	21.9 22.9 (n=86)	24.0	26.0 24.5 (n=92)	23.0
Hispanic	19.0 18.9 (n=1623)	18.8	21.4 22.1 (n=1894)	22.7	19.8 20.0 (n=1718)	20.2	21.1 20.2 (n=1736)	19.3	18.7 18.8 (n=1616)	18.9
Mexican American	21.8 21.9 (n=609)	22.1	22.9 23.5 (n=654)	24.2	18.1 19.4 (n=540)	20.8	21.3 19.0 (n=527)	16.6	16.0 16.2 (n=449)	16.4
Native American	18.4 19.2 (n=245)	20.0	20.5 21.5 (n=274)	22.5	18.3 18.9 (n=241)	19.5	21.3 20.0 (n=255)	18.7	21.6 20.5 (n=261)	19.3
Other Hispanic	15.5 16.2 (n=483)	16.8	20.3 21.9 (n=654)	23.4	21.8 20.9 (n=624)	20.0	22.8 21.9 (n=654)	21.0	19.7 19.2 (n=575)	18.8
Other Race	17.7 18.2 (n=387)	18.7	20.7 21.0 (n=448)	21.4	20.3 21.3 (n=454)	22.5	21.2 20.8 (n=443)	20.4	20.2 18.7 (n=398)	17.0
Puerto Rican	23.5 22.2 (n=526)	21.0	21.5 21.1 (n=500)	20.7	19.6 19.7 (n=467)	19.8	17.8 18.2 (n=431)	18.6	17.5 18.8 (n=445)	19.9
Unknown Race	11.3 12.4 (n=308)	13.7	17.1 18.3 (n=455)	19.7	20.8 20.1 (n=501)	19.4	25.3 24.6 (n=613)	23.9	25.6 24.6 (n=611)	23.4
White, Non-Hisp.	5.6 5.3 (n=4441)	5.0	13.6 14.0 (n=11721)	14.4	20.5 20.6 (n=17270)	20.7	27.3 26.5 (n=32674)	27.6	33.0 30.7 (n=37794)	32.3
	7.0 (n=4426)	7.8 (n=4698)	14.3 (n=8999)	15.6 (n=9393)	20.3 (n=12836)	20.7 (n=12416)	26.8 (n=16929)	26.2 (n=15745)	31.6 (n=19954)	29.7 (n=17840)
All Applicants	7.4 (n=9124)		14.9 (n=18392)		20.5 (n=25252)		26.5 (n=32674)		30.7 (n=37794)	

Table 10
 Accepted AMCAS Pool 2002-2008: MCAT Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-23		2 nd Quintile 24-27		3 rd Quintile 28-29		4 th Quintile 30-32		5 th Quintile 33-45	
	M	W	M	W	M	W	M	W	M	W
African American	29.9	36.7	34.8	39.4	13.0	11.6	13.6	8.7	8.7	3.5
	34.3 (n=3137)		37.8 (n=3456)		12.1 (n=1110)		10.5 (n=959)		5.4 (n=491)	
Asian	1.5	2.7	9.9	15.4	13.7	18.7	30.2	32.4	44.7	30.8
	2.1 (n=535)		12.7 (n=3243)		16.2 (n=4155)		31.3 (n=8017)		37.7 (n=9649)	
Cuban	9.3	12.5	19.1	31.6	18.9	21.3	30.5	22.1	22.1	12.5
	10.8 (n=87)		25.0 (n=201)		20.0 (n=161)		26.6 (n=214)		17.6 (n=142)	
Foreign	5.7	6.5	12.4	18.0	11.5	14.6	24.8	26.5	45.6	34.4
	6.1 (n=137)		15.3 (n=344)		13.1 (n=295)		25.7 (n=579)		39.9 (n=900)	
Hawaiian/P.Island.	8.9	14.1	18.2	27.2	20.3	22.8	26.6	26.6	26.0	9.2
	11.4 (n=43)		22.6 (n=85)		21.5 (n=81)		26.6 (n=100)		17.8 (n=67)	
Hispanic	20.5	28.6	26.5	31.8	16.2	15.2	20.9	15.6	15.9	8.8
	24.5 (n=2219)		29.2 (n=2638)		15.7 (n=1419)		18.3 (n=1652)		12.4 (n=1118)	
Mexican American	15.0	22.4	32.3	39.6	17.6	15.6	20.6	14.7	14.5	7.6
	18.7 (n=592)		35.8 (n=1135)		16.6 (n=527)		17.7 (n=560)		11.1 (n=353)	
Native American	10.7	21.9	28.8	34.3	18.4	15.6	24.8	19.0	17.3	9.1
	16.3 (n=211)		31.6 (n=408)		17.0 (n=220)		21.9 (n=283)		13.2 (n=171)	
Other Hispanic	8.4	14.7	25.0	31.5	18.2	19.2	26.0	22.1	22.4	12.5
	11.5 (n=353)		28.3 (n=866)		18.7 (n=573)		24.1 (n=737)		17.4 (n=534)	
Other Race	15.4	24.8	27.0	31.7	15.9	18.8	24.4	16.3	17.3	8.5
	19.8 (n=448)		29.2 (n=661)		17.2 (n=390)		20.6 (n=466)		13.2 (n=298)	
Puerto Rican	48.9	57.6	24.2	23.3	10.2	7.6	9.6	7.2	7.1	4.3
	53.4 (n=1271)		23.7 (n=564)		8.9 (n=211)		8.3 (n=198)		5.6 (n=134)	
Unknown Race	11.6	19.4	23.4	27.8	14.6	15.8	23.4	18.5	27.1	18.6
	15.1 (n=373)		25.4 (n=627)		15.1 (n=374)		21.2 (n=523)		23.3 (n=575)	
White, Non-Hisp.	2.6	4.4	14.6	21.8	17.7	20.9	30.1	29.7	35.1	23.3
	3.4 (n=2873)		17.9 (n=15075)		19.2 (n=16149)		29.9 (n=25154)		29.6 (n=24873)	
	4.2	7.9	15.2	22.4	16.5	19.3	28.9	27.7	35.2	22.7
All Applicants	(n=2688)	(n=4700)	(n=9592)	(n=13377)	(n=10468)	(n=11528)	(n=18287)	(n=16583)	(n=22260)	(n=13577)
	6.0 (n=7388)		18.7 (n=22969)		17.9 (n=21996)		28.3 (n=34870)		29.1 (n=35837)	

Table 11
Disadvantaged AMCAS Applicants 2002-2008 by Racial/Ethnic Background and Gender

	Number/Percentage by Gender		Subgroup Disadvantaged Rate		Proportion Disadvantaged Within Total Disadvantaged Population	
	M	W	M	W	M	W
African American	33.8 (n=3167)	66.2 (n=6198)	45	41.8	23.0	33.7
	(n=9365)			42.9		29.1
Asian	46.1 (n=2847)	53.9 (n=3331)	10.6	12.2	20.7	18.1
	(n=6178)			11.4		19.2
Cuban	50.5 (n=142)	49.5 (n=139)	17.6	18.6	1.0	0.8
	(n=281)			18.1		0.9
Foreign	48.2 (n=509)	51.8 (n=547)	11.5	11.8	3.7	3.0
	(n=1056)			11.7		3.3
Hawaiian/P. Island	42.6 (n=155)	57.4 (n=209)	31	35.7	1.1	1.1
	(n=364)			33.5		1.1
Hispanic	45.4 (n=2601)	54.6 (n=3133)	30.8	34.3	18.9	17.0
	(n=5734)			32.6		17.9
Mexican American	46.7 (n=1122)	53.5 (n=1281)	42.2	46.6	8.1	7.0
	(n=2403)			44.5		7.5
Native American	43.0 (n=397)	57.0 (n=527)	29.7	37.3	2.9	2.9
	(n=924)			33.6		2.9
Other Hispanic	44.4 (n=986)	55.6 (n=1237)	30	34.5	7.2	6.7
	(n=2223)			32.4		6.9
Other Race	47.8 (n=917)	52.2 (n=1002)	37.1	43.2	6.7	5.4
	(n=1919)			40.0		6.0
Puerto Rican	41.0 (n=459)	(n=661)	23.5	26.8	3.3	3.6
	(n=1120)			25.3		3.5
Unknown Race	52.1 (n=597)	47.9 (n=685)	23.6	30.3	4.3	3.7
	(n=1282)			26.7		4.0
White, Non-Hispanic	46.1 (n=6023)	53.9 (n=7036)	6.9	9.1	43.7	38.2
	(n=13059)			7.9		40.6
URiM	37.2 (n=4786)	62.8 (n=8078)	41.4	41.6	34.7	43.9
	(n=12864)			41.5		40.0
All Disadvantaged Applicants	42.8 (n=13783)	57.2 (n=18408)	10.7	14.6	42.8	57.2
	100.0 (n=32191)		12.7 (n=32191)		12.7 (n=32191)	

Table 12
Disadvantaged AMCAS Applicants 2002-2008: Household Income Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile \$0-\$19,229		2 nd Quintile \$19,230-\$36,275		3 rd Quintile \$36,276-\$57,890		4 th Quintile \$57,891-\$92,552		5 th Quintile \$92,553+	
	M	W	M	W	M	W	M	W	M	W
African American	0	0	0	0	14.9	12.8	23.3	24.1	61.8	63.1
	0 (n=0)		0 (n=0)		13.5 (n=464)		23.8 (n=817)		62.7 (n=2150)	
Asian	0	0	0	0	26.8	25.1	20.3	19.9	52.9	55.0
	0 (n=0)		0 (n=0)		25.9 (n=908)		20.1 (n=704)		54.0 (n=1893)	
Cuban	0	0	0	0	19.7	15.8	30.3	24.6	50.0	59.6
	0 (n=0)		0 (n=0)		18.0 (n=24)		27.8 (n=37)		54.1 (n=72)	
Foreign	0	0	0	0	8.3	9.4	23.0	19.1	68.7	71.5
	0 (n=0)		0 (n=0)		8.8 (n=4.7)		21.1 (n=112)		70.1 (n=373)	
Hawaiian/P.Island.	0	0	0	0	19.8	28.7	28.7	17.8	51.5	53.5
	0 (n=0)		0 (n=0)		24.3 (n=49)		23.3 (n=47)		52.5 (n=106)	
Hispanic	0	0	0	0	30.0	25.9	22.9	23.1	47.2	51.0
	0 (n=0)		0 (n=0)		27.8 (n=832)		23.0 (n=687)		49.2 (n=1471)	
Mexican American	0	0	0	0	37.2	34.4	21.4	24.4	41.4	41.2
	0 (n=0)		0 (n=0)		35.7 (n=496)		23.0 (n=319)		41.3 (n=573)	
Native American	0	0	0	0	29.6	15.9	25.8	24.8	44.6	59.3
	0 (n=0)		0 (n=0)		21.5 (n=98)		25.2 (n=115)		53.3 (n=243)	
Other Hispanic	0	0	0	0	26.3	22.9	21.9	20.8	51.8	56.3
	0 (n=0)		0 (n=0)		24.5 (n=276)		21.3 (n=240)		54.2 (n=611)	
Other Race	0	0	0	0	20.2	17.9	14.8	15.4	65.0	66.7
	0 (n=0)		0 (n=0)		19.1 (n=220)		15.1 (n=174)		65.9 (n=760)	
Puerto Rican	0	0	0	0	15.4	15.2	27.4	23.8	57.1	61.0
	0 (n=0)		0 (n=0)		15.3 (n=70)		25.2 (n=115)		59.5 (n=272)	
Unknown Race	0	0	0	0	41.7	42.3	25.2	27.2	33.0	30.5
	0 (n=0)		0 (n=0)		42.0 (n=255)		26.2 (n=159)		31.8 (n=193)	
White, Non-Hisp.	0	0	0	1	15.4	15.0	25.6	24.5	59.9	60.5
	0 (n=0)		0 (n=1)		15.2 (n=1150)		24.6 (n=1858)		60.2 (n=4554)	
All Disadvantaged Applicants	0	0	0	0	19.5	17.8	22.9	23.0	57.6	59.1
	(n=0)	(n=0)	(n=0)	(n=1)	(n=1447)	(n=1605)	(n=1701)	(n=2069)	(n=4280)	(n=5321)
	0 (n=0)		0 (n=1)		18.6 (n=3052)		23.0 (n=3770)		58.5 (n=9601)	

Table 13
Disadvantaged AMCAS Applicants 2002-2008: Parent1 Educational Attainment by Racial/Ethnic Background and Gender

	No High School Diploma		High School Diploma		College Degree		Graduate Degree	
	M	W	M	W	M	W	M	W
African American	18.2	11.1	37.8	43.5	24.5	25.3	19.5	20.1
	13.5 (n=1189)		41.6 (n=3671)		25.0 (n=2209)		19.9 (n=1759)	
Asian	24.1	23.8	31.7	36.0	25.6	23.8	18.7	16.4
	24.0 (n=1435)		34.0 (n=2037)		24.6 (n=1475)		17.4 (n=1044)	
Cuban	18.2	16.3	38.7	51.1	22.6	20.0	20.4	12.6
	17.3 (n=47)		44.9 (n=122)		21.3 (n=58)		16.5 (n=45)	
Foreign	18.8	11.5	24.1	23.9	29.3	30.1	27.8	34.6
	15.0 (n=149)		24.0 (n=238)		29.7 (n=295)		31.3 (n=311)	
Hawaiian/Pacific Islander	13.4	13.0	43.6	40.1	25.5	29.7	17.4	17.2
	13.2 (n=45)		41.6 (n=142)		27.9 (n=95)		17.3 (n=59)	
Hispanic	28.8	25.9	38.2	41.2	18.6	20.0	14.4	12.9
	27.2 (n=1506)		39.8 (n=2205)		19.4 (n=1072)		13.6 (n=751)	
Mexican American	40.7	39.9	35.8	38.9	14.8	12.4	8.7	8.9
	40.3 (n=942)		37.5 (n=876)		13.5 (n=315)		8.8 (n=206)	
Native American	14.4	12.6	53.4	47.3	17.7	22.6	14.4	17.6
	13.4 (n=116)		49.9 (n=433)		20.5 (n=178)		16.2 (n=141)	
Other Hispanic	23.9	20.5	39.8	42.0	19.6	22.5	16.6	15.0
	22.0 (n=470)		41.0 (n=876)		21.2 (n=453)		15.7 (n=336)	
Other Race	29.8	28.5	34.6	36.7	19.4	20.5	16.2	14.3
	29.1 (n=552)		35.7 (n=677)		20.0 (n=379)		15.2 (n=289)	
Puerto Rican	12.3	10.0	42.1	43.2	25.1	29.8	20.5	17.0
	10.9 (n=117)		42.8 (n=457)		27.9 (n=298)		18.4 (n=197)	
Unknown Race	39.3	35.0	35.6	43.5	15.4	13.4	9.8	8.1
	37.0 (n=453)		39.8 (n=487)		14.3 (n=175)		8.9 (n=109)	
White, Non-Hispanic	9.4	8.2	43.8	44.5	26.2	27.3	20.6	20.0
	8.8 (n=1100)		44.2 (n=5546)		26.8 (n=3369)		20.3 (n=2546)	
All Applicants	17.6	14.3	38.5	41.7	24.6	25.1	19.3	18.9
	(n=2311)	(n=2526)	(n=5061)	(n=7348)	(n=3233)	(n=4425)	(n=2529)	(n=3332)
	15.7 (n=4839)		40.3 (n=12431)		24.9 (n=7680)		19.1 (n=5876)	

Table 14a

Disadvantaged AMCAS Applicants 2002-2008: Cumulative GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.20		2 nd Quintile 3.21-3.45		3 rd Quintile 3.46-3.63		4 th Quintile 3.64-3.80		5 th Quintile 3.81-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	56.2 54.4 (n=5079)	53.5	19.2 20.8 (n=1941)	21.6	11.0 11.8 (n=1099)	12.2	8.7 7.9 (n=737)	7.5	4.9 5.1 (n=477)	5.2
Asian	29.2 27.5 (n=1694)	26.1	24.4 24.5 (n=1512)	24.7	19.1 19.6 (n=1205)	20.0	15.4 15.7 (n=965)	15.9	12.0 12.7 (n=784)	13.3
Cuban	41.5 39.9 (n=112)	38.1	28.2 25.3 (n=71)	22.3	11.3 12.8 (n=36)	14.4	8.5 9.3 (n=26)	10.1	10.6 12.8 (n=36)	15.1
Foreign	23.6 21.5 (n=223)	19.6	19.4 18.4 (n=190)	17.4	15.2 16.0 (n=166)	16.9	17.2 19.4 (n=201)	21.5	24.6 24.6 (n=255)	24.6
Hawaiian/P.Island.	40.0 40.4 (n=147)	40.7	20.6 24.5 (n=89)	27.3	19.4 16.2 (n=59)	13.9	13.5 12.1 (n=44)	11.0	6.5 6.9 (n=25)	7.2
Hispanic	47.5 44.8 (n=2561)	42.6	22.7 24.0 (n=1372)	25.1	13.5 14.0 (n=802)	14.4	9.4 9.7 (n=556)	10.0	6.9 7.4 (n=423)	7.8
Mexican American	50.7 47.8 (n=1147)	45.2	22.5 24.8 (n=596)	26.9	13.6 13.5 (n=325)	13.4	7.2 7.6 (n=183)	8.0	6.0 6.3 (n=151)	6.6
Native American	53.4 51.0 (n=471)	49.1	19.6 18.4 (n=170)	17.5	11.1 13.1 (n=121)	14.6	8.1 10.3 (n=95)	12.0	7.8 7.3 (n=67)	6.8
Other Hispanic	46.1 44.2 (n=978)	42.7	24.0 24.4 (n=541)	24.8	14.2 15.0 (n=331)	15.6	9.9 10.1 (n=224)	10.3	5.8 6.3 (n=139)	6.6
Other Race	46.4 44.1 (n=842)	41.9	23.7 25.1 (n=479)	26.4	13.1 14.1 (n=270)	15.0	9.4 9.5 (n=182)	9.6	7.3 7.2 (n=137)	7.0
Puerto Rican	47.5 43.9 (n=488)	41.4	19.5 20.8 (n=231)	21.7	12.5 13.8 (n=153)	14.7	11.4 11.7 (n=130)	11.9	9.2 9.8 (n=109)	10.2
Unknown Race	45.0 41.8 (n=535)	39.0	20.6 23.2 (n=297)	25.4	16.8 17.3 (n=221)	17.7	10.4 10.3 (n=132)	10.2	7.2 7.5 (n=96)	7.7
White, Non-Hisp.	30.6 27.8 (n=3626)	25.4	22.7 22.7 (n=2955)	22.7	17.5 18.5 (n=2412)	19.3	15.1 16.0 (n=2082)	16.7	14.4 15.0 (n=1962)	15.8
All Applicants	37.7 (n=5171)	36.2 (n=6658)	22.1 (n=3027)	22.7 (n=4177)	15.9 (n=2177)	16.5 (n=3039)	13.1 (n=1801)	13.1 (n=2401)	11.3 (n=1545)	11.4 (n=2095)
	36.9 (n=11829)		22.4 (n=7204)		16.3 (n=5216)		13.1 (n=4202)		11.3 (n=3640)	

Table 14b
Disadvantaged AMCAS Applicants 2002-2008: Science GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.02		2 nd Quintile 3.03-3.33		3 rd Quintile 3.34-3.56		4 th Quintile 3.57-3.79		5 th Quintile 3.80-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	52.7	56.0	19.6	20.3	11.6	11.0	9.6	7.6	6.5	5.2
	54.9 (n=5115)		20.0 (n=1868)		11.2 (n=1045)		8.2 (n=768)		5.7 (n=529)	
Asian	26.4	27.8	22.6	24.2	20.5	18.6	17.3	15.9	13.3	13.4
	27.1 (n=1671)		23.5 (n=1445)		19.5 (n=1198)		16.6 (n=1019)		13.4 (n=822)	
Cuban	40.1	38.8	24.6	22.3	16.2	12.9	9.2	12.9	9.9	12.9
	39.5 (n=111)		23.5 (n=66)		14.6 (n=41)		11.0 (n=31)		11.4 (n=32)	
Foreign	20.8	19.4	18.1	18.3	17.7	16.9	18.1	20.9	25.3	24.4
	20.1 (n=207)		18.2 (n=188)		17.3 (n=178)		19.6 (n=202)		24.8 (n=256)	
Hawaiian/P.Island.	43.2	44.5	17.4	26.8	18.1	12.9	11.6	9.1	9.7	6.7
	44.0 (n=160)		22.8 (n=83)		15.1 (n=55)		10.2 (n=37)		8.0 (n=29)	
Hispanic	44.6	46.2	23.0	22.9	14.4	13.8	10.5	9.9	7.5	7.3
	45.4 (n=2595)		22.9 (n=1310)		14.1 (n=803)		10.2 (n=580)		7.4 (n=423)	
Mexican American	46.8	48.6	23.6	23.0	13.7	13.9	9.6	8.5	6.2	6.0
	47.8 (n=1147)		23.3 (n=559)		13.8 (n=332)		9.0 (n=217)		6.1 (n=147)	
Native American	48.6	48.8	19.9	21.1	12.8	13.1	10.3	9.9	8.3	7.2
	48.7 (n=450)		20.6 (n=190)		13.0 (n=120)		10.1 (n=93)		7.7 (n=71)	
Other Hispanic	44.1	46.0	23.0	22.9	15.8	14.4	9.7	10.5	7.4	6.2
	45.1 (n=998)		22.9 (n=507)		15.1 (n=333)		10.1 (n=224)		6.7 (n=149)	
Other Race	43.7	45.2	22.8	22.7	14.3	15.7	12.0	9.5	7.1	6.8
	44.5 (n=850)		22.7 (n=434)		15.1 (n=288)		10.7 (n=205)		7.0 (n=133)	
Puerto Rican	45.5	46.1	20.1	22.2	13.3	12.7	11.8	8.9	9.2	10.1
	45.9 (n=509)		21.4 (n=237)		13.0 (n=144)		10.1 (n=112)		9.7 (n=108)	
Unknown Race	40.4	42.0	22.8	24.5	17.6	15.6	10.9	10.2	8.2	7.6
	41.3 (n=529)		23.7 (n=304)		16.5 (n=212)		10.5 (n=135)		7.9 (n=101)	
White, Non-Hisp.	28.2	28.2	22.4	22.6	18.0	18.4	17.0	16.3	14.4	14.5
	28.2 (n=3678)		22.5 (n=2931)		18.2 (n=2369)		16.6 (n=2165)		14.5 (n=1886)	
All Applicants	34.8	38.6	21.7	22.0	16.7	15.5	14.7	12.9	12.1	10.9
	(n=4775) (n=7090)		(n=2973) (n=4036)		(n=2292) (n=2850)		(n=2014) (n=2377)		(n=1653) (n=2006)	
	37.0 (n=11866)		21.9 (n=7009)		16.0 (n=5142)		13.7 (n=4391)		11.4 (n=3659)	

Table 15
Disadvantaged AMCAS Pool 2002-2008: MCAT Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-23		2 nd Quintile 24-27		3 rd Quintile 28-29		4 th Quintile 30-32		5 th Quintile 33-45	
	M	W	M	W	M	W	M	W	M	W
African American	64.4	73.6	21.3	19.3	7.0	4.0	4.8	2.5	2.4	0.6
	70.5 (n=6537)		20.0 (n=1855)		5.0 (n=468)		3.3 (n=302)		1.2 (n=114)	
Asian	29.5	39.2	26.7	28.5	14.8	13.2	17.6	11.8	11.4	7.3
	34.7 (n=2124)		27.7 (n=1694)		13.9 (n=854)		14.5 (n=886)		9.2 (n=564)	
Cuban	36.4	48.6	20.7	23.2	14.3	13.8	20.7	11.6	7.9	2.9
	42.4 (n=118)		21.9 (n=61)		14.0 (n=39)		16.2 (n=45)		5.4 (n=15)	
Foreign	37.6	41.4	26.2	28.4	11.1	9.8	15.7	12.2	9.3	8.3
	39.6 (n=414)		27.3 (n=286)		10.4 (n=109)		13.9 (n=145)		8.8 (n=92)	
Hawaiian/P.Island.	47.1	60.6	23.9	22.1	14.2	10.6	11.0	5.8	3.9	1.0
	54.8 (n=199)		22.9 (n=83)		12.1 (n=44)		8.0 (n=29)		2.2 (n=8)	
Hispanic	44.7	60.1	28.4	24.4	11.4	7.2	10.4	6.3	5.2	1.9
	53.1 (n=3019)		26.2 (n=1490)		9.1 (n=516)		8.2 (n=466)		3.4 (n=194)	
Mexican American	41.2	56.9	31.7	27.6	11.3	7.8	9.9	6.0	5.9	1.5
	49.6 (n=1186)		29.5 (n=707)		9.4 (n=225)		7.9 (n=188)		3.6 (n=87)	
Native American	42.7	60.2	28.3	23.6	10.1	6.8	11.6	5.8	7.3	3.7
	52.6 (n=480)		25.6 (n=234)		8.2 (n=75)		8.3 (n=76)		5.3 (n=48)	
Other Hispanic	40.6	56.6	29.0	25.4	13.2	8.2	11.5	7.1	5.7	2.6
	49.5 (n=1087)		27.0 (n=593)		10.4 (n=229)		9.1 (n=199)		4.0 (n=88)	
Other Race	46.3	61.4	28.3	24.9	9.3	7.3	10.9	4.7	5.2	1.6
	54.2 (n=1034)		26.5 (n=506)		8.3 (n=158)		7.7 (n=146)		3.3 (n=63)	
Puerto Rican	67.9	76.7	18.4	14.8	6.9	3.0	4.4	4.4	2.4	1.1
	73.1 (n=810)		16.2 (n=180)		4.6 (n=51)		4.4 (n=49)		1.6 (n=18)	
Unknown Race	40.7	57.0	33.1	26.2	11.1	7.4	8.8	6.1	6.2	3.3
	49.4 (n=624)		29.4 (n=372)		9.2 (n=116)		7.4 (n=93)		4.7 (n=59)	
White, Non-Hisp.	25.6	36.6	29.9	32.5	16.2	12.6	16.4	12.5	12.0	5.9
	31.5 (n=4074)		31.3 (n=4047)		14.3 (n=1848)		14.3 (n=1851)		8.7 (n=1126)	
All Applicants	37.8	51.9	27.0	26.4	13.0	9.3	13.3	8.3	8.8	4.1
	(n=5171)	(n=9459)	(n=3698)	(n=4818)	(n=1778)	(n=1691)	(n=1825)	(n=1517)	(n=1206)	(n=740)
	45.9 (n=14630)		26.7 (n=8516)		10.9 (n=3469)		10.5 (n=3342)		6.1 (n=1946)	

Table 16
URiM AMCAS Applicants 2002-2008 by Racial/Ethnic Background and Gender

	Number/Percentage by Gender		Subgroup URiM Rate		Proportion URiM Within Total URiM Population	
	M	W	M	W	M	W
African American	32.2 (n=7230)	67.8 (n=15206)	100.0	100.0	57.8	73.8
Asian	41.6 (n=384)	58.4 (n=538)	1.4	1.9	3.1	2.6
Cuban	43.5 (n=81)	56.5 (n=105)	9.9	14.0	0.6	0.5
Foreign	(n=0)	(n=0)	0	0	0	0
Hawaiian/P. Island	45.8 (n=173)	54.2 (n=205)	33.7	34.3	1.4	1.0
Hispanic	47.9 (n=4452)	52.1 (n=4836)	47.8	48.1	36.4	24.0
Mexican American	48.8 (n=3290)	51.2 (n=3452)	100.0	100.0	26.3	16.8
Native American	49.2 (n=1446)	50.8 (n=1494)	100.0	100.0	11.6	7.3
Other Hispanic	43.2 (n=535)	56.8 (n=702)	15.2	18.4	4.3	3.4
Other Race	47.7 (n=770)	52.3 (n=843)	28.2	32.6	6.2	4.1
Puerto Rican	46.5 (n=918)	53.5 (n=1056)	46.3	42.4	7.3	5.1
Unknown Race	52.2 (n=1114)	47.8 (n=1022)	36.2	36.1	8.9	5.0
White, Non-Hisp.	47.5 (n=3204)	52.5 (n=3548)	3.5	4.4	25.6	17.2
Disadvantaged	37.2 (n=4786)	62.8 (n=8078)	41.4	41.6	34.7	43.9
All URiM Applicants	37.8 (n=12506)	62.2 (n=20598)	10.7	14.6	42.8	57.2
	100.0 (n=33104)		12.7 (n=33104)		12.7 (n=33104)	

Table 17
URiM AMCAS Applicants 2002-2008: Household Income Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile \$0-\$19,229		2 nd Quintile \$19,230-\$36,275		3 rd Quintile \$36,276-\$57,890		4 th Quintile \$57,891-\$92,552		5 th Quintile \$92,553+	
	M	W	M	W	M	W	M	W	M	W
African American	0	0	0	0	8.0	7.0	18.9	20.9	73.1	72.2
	0 (n=0)		0 (n=0)		7.3 (n=731)		20.2 (n=2027)		72.5 (n=7265)	
Asian	0	0	0	0	8.8	10.9	12.4	17.5	78.8	71.5
	0 (n=0)		0 (n=0)		10.0 (n=53)		15.3 (n=81)		74.6 (n=394)	
Cuban	0	0	0	0	4.7	3.4	20.9	13.6	74.4	83.1
	0 (n=0)		0 (n=0)		3.9 (n=4)		16.7 (n=17)		79.4 (n=81)	
Foreign	0	0	0	0	0	0	0	0	0	0
	0 (n=0)		0 (n=0)		0 (n=0)		0 (n=0)		0 (n=0)	
Hawaiian/P.Island.	0	0	0	0	6.9	13.4	20.6	18.8	72.5	67.9
	0 (n=0)		0 (n=0)		10.3 (n=22)		19.6 (n=42)		70.1 (n=150)	
Hispanic	0	0	0	0	16.6	16.0	20.5	20.7	62.9	63.3
	0 (n=0)		0 (n=0)		16.3 (n=785)		20.6 (n=993)		63.1 (n=3039)	
Mexican American	0	0	0	0	19.2	19.1	20.4	21.1	60.4	59.9
	0 (n=0)		0 (n=0)		19.1 (n=666)		20.7 (n=721)		60.1 (n=2093)	
Native American	0	0	0	0	10.5	9.0	20.4	21.1	68.7	69.5
	0 (n=0)		0 (n=0)		9.7 (n=158)		20.7 (n=721)		69.1 (n=1121)	
Other Hispanic	0	0	0	0	14.0	14.5	18.5	20.5	67.5	65.0
	0 (n=0)		0 (n=0)		14.3 (n=88)		19.6 (n=121)		66.1 (n=408)	
Other Race	0	0	0	0	18.7	15.5	14.5	19.1	66.8	65.3
	0 (n=0)		0 (n=0)		17.1 (n=159)		16.9 (n=157)		66.1 (n=615)	
Puerto Rican	0	0	0	0	7.4	9.1	20.5	18.9	72.1	72.0
	0 (n=0)		0 (n=0)		8.3 (n=89)		19.6 (n=209)		72.1 (n=769)	
Unknown Race	0	0	0	0	21.2	22.2	21.2	22.2	55.0	47.8
	0 (n=0)		0 (n=0)		21.6 (n=204)		21.6 (n=204)		51.7 (n=488)	
White, Non-Hisp.	0	0	0	0	10.7	10.4	20.9	20.4	68.4	69.2
	0 (n=0)		0 (n=0)		10.5 (n=403)		20.7 (n=793)		68.8 (n=2640)	
All URiM Applicants	0	0	0	0	11.1	9.5	19.4	20.9	69.5	69.6
	(n=0)	(n=0)	(n=0)	(n=0)	(n=696)	(n=902)	(n=1217)	(n=1982)	(n=4354)	(n=6611)
	0 (n=0)		0 (n=0)		10.1 (n=1598)		20.3 (n=3199)		69.6 (n=10965)	

Table 18
URiM AMCAS Applicants 2002-2008: Parent1 Educational Attainment by Racial/Ethnic Background and Gender

	No High School Diploma		High School Diploma		College Degree		Graduate Degree	
	M	W	M	W	M	W	M	W
African American	10.4	6.2	28.3	34.2	27.7	29.1	33.6	30.5
	7.5 (n=1550)		32.3 (n=6643)		28.7 (n=5892)		31.5 (n=6467)	
Asian	8.4	7.1	31.8	35.3	28.3	27.6	31.5	30.0
	7.6 (n=64)		33.8 (n=285)		27.9 (n=235)		30.6 (n=258)	
Cuban	6.6	4.0	27.6	24.8	31.6	28.7	34.2	42.6
	5.1 (n=9)		26.0 (n=46)		29.9 (n=53)		39.0 (n=69)	
Foreign	0	0	0	0	0	0	0	0
	0		0		0		0	
Hawaiian/P.Island.	3.2	3.6	42.7	38.7	25.5	33.0	28.7	24.7
	3.4 (n=12)		40.5 (n=142)		29.6 (n=104)		26.5 (n=93)	
Hispanic	18.0	17.9	33.0	35.6	22.1	22.6	27.0	23.9
	17.9 (n=1356)		34.4 (n=2598)		22.4 (n=1691)		25.4 (n=1918)	
Mexican American	21.6	22.9	33.6	35.7	20.7	19.9	24.1	21.5
	22.2 (n=1158)		34.6 (n=1805)		20.3 (n=1059)		22.8 (n=1188)	
Native American	5.7	5.6	37.9	36.8	27.8	28.0	28.6	29.6
	5.6 (n=146)		37.3 (n=967)		27.9 (n=723)		29.1 (n=755)	
Other Hispanic	16.5	14.9	33.5	35.0	21.6	26.2	28.4	23.8
	15.5 (n=169)		34.4 (n=374)		24.3 (n=264)		25.8 (n=280)	
Other Race	26.8	26.9	36.1	37.5	17.0	19.2	20.1	16.4
	26.9 (n=370)		36.9 (n=508)		18.1 (n=250)		18.1 (n=250)	
Puerto Rican	6.5	5.9	31.9	36.5	25.5	27.4	36.1	30.1
	6.2 (n=113)		34.4 (n=627)		26.5 (n=484)		32.9 (n=599)	
Unknown Race	25.8	27.4	35.4	38.1	18.0	17.5	20.9	17.0
	26.6 (n=411)		36.6 (n=567)		17.8 (n=275)		19.1 (n=295)	
White/Non-Hisp	7.9	9.3	32.1	33.4	26.7	26.4	33.2	31.0
	8.6 (n=499)		32.8 (n=1893)		26.5 (n=1530)		32.0 (n=1849)	
All URiM Applicants	12.1	8.5	30.9	34.7	25.9	27.7	31.2	29.1
	(n=1306)	(n=1563)	(n=3338)	(n=6415)	(n=2800)	(n=5121)	(n=3372)	(n=5383)
	9.8 (n=2869)		33.3 (n=9753)		27.0 (n=7921)		29.9 (n=8755)	

Table 19a
URiM AMCAS Applicants 2002-2008: Cumulative GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.20		2 nd Quintile 3.21-3.45		3 rd Quintile 3.46-3.63		4 th Quintile 3.64-3.80		5 th Quintile 3.81-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	51.7 49.3 (n=10866)	48.1	19.8 21.2 (n=4667)	21.8	12.9 13.2 (n=2919)	13.4	9.2 9.4 (n=2069)	9.5	6.5 6.9 (n=1529)	7.2
Asian	37.6 37.9 (n=341)	38.1	21.8 23.2 (n=209)	24.2	18.3 17.4 (n=157)	16.9	10.5 10.9 (n=98)	11.2	11.8 10.6 (n=95)	9.7
Cuban	48.1 45.6 (n=83)	43.8	13.0 18.7 (n=34)	22.9	18.2 17.6 (n=32)	17.1	10.4 7.1 (n=13)	4.8	10.4 11.0 (n=20)	11.4
Foreign	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0
Hawaiian/P.Island.	35.1 35.4 (n=131)	35.6	18.5 21.1 (n=78)	23.3	20.2 18.9 (n=70)	17.3	12.5 13.2 (n=49)	13.9	13.7 11.4 (n=42)	9.4
Hispanic	41.3 38.9 (n=3322)	36.7	22.2 23.2 (n=1983)	24.2	15.3 16.1 (n=1377)	16.9	11.3 11.7 (n=10000)	12.1	9.8 10.0 (n=855)	10.2
Mexican American	41.2 38.5 (n=2319)	35.9	22.4 23.3 (n=1403)	24.1	15.0 16.2 (n=976)	17.4	11.5 11.5 (n=694)	11.6	10.0 10.5 (n=632)	11.0
Native American	39.5 37.8 (n=1058)	36.2	22.3 20.6 (n=577)	19.1	14.3 16.3 (n=456)	18.2	11.2 13.0 (n=363)	14.7	12.7 12.2 (n=342)	11.8
Other Hispanic	52.5 48.6 (n=558)	45.8	19.7 20.5 (n=235)	21.1	12.9 15.2 (n=175)	17.0	9.0 9.5 (n=109)	9.8	5.9 6.2 (n=71)	6.4
Other Race	48.9 46.6 (n=664)	44.6	23.7 24.4 (n=347)	25.0	13.3 13.6 (n=194)	13.9	9.5 9.7 (n=138)	9.8	4.6 5.7 (n=81)	6.6
Puerto Rican	37.6 35.4 (n=688)	33.6	22.8 23.6 (n=459)	24.3	16.9 16.7 (n=325)	16.6	11.8 13.7 (n=267)	15.5	11.0 10.5 (n=203)	10.0
Unknown Race	40.3 39.0 (n=744)	37.5	22.5 22.9 (n=437)	23.3	16.0 16.9 (n=323)	17.9	11.5 12.2 (n=233)	13.0	9.7 9.0 (n=172)	8.3
White, Non-Hisp.	35.9 32.9 (n=2085)	30.1	22.9 22.6 (n=1433)	22.3	15.7 17.6 (n=1115)	19.3	12.3 13.6 (n=866)	14.8	13.2 13.3 (n=846)	13.5
All Applicants	46.6 (n=5553)	44.7 (n=8896)	20.9 (n=2498)	22.1 (n=4407)	13.9 (n=1653)	14.6 (n=2901)	10.2 (n=1216)	10.5 (n=2085)	8.5 (n=1008)	8.2 (n=1633)
	45.4 (n=14449)		21.7 (n=6905)		14.3 (n=4554)		10.4 (n=3301)		8.3 (n=2641)	

Table 19b
URiM AMCAS Applicants 2002-2008: Science GPA Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-3.02		2 nd Quintile 3.03-3.33		3 rd Quintile 3.34-3.56		4 th Quintile 3.57-3.79		5 th Quintile 3.80-4.0	
	M	W	M	W	M	W	M	W	M	W
African American	48.6	51.2	20.6	20.9	13.1	12.0	10.0	9.3	7.6	6.6
	50.4 (n=10968)		20.8 (n=4525)		12.4 (n=2691)		9.6 (n=2081)		6.9 (n=1509)	
Asian	34.9	41.1	20.5	23.6	18.6	17.0	13.8	10.9	12.2	7.4
	38.5 (n=345)		22.3 (n=200)		17.7 (n=158)		12.1 (n=108)		9.4 (n=84)	
Cuban	46.8	51.4	11.7	20.0	16.9	13.3	16.9	6.7	7.8	8.6
	49.5 (n=90)		16.5 (n=30)		14.8 (n=27)		11.0 (n=20)		8.2 (n=15)	
Foreign	0	0	0	0	0	0	0	0	0	0
	0		0		0		0		0	
Hawaiian/P.Island.	33.3	41.0	16.4	21.0	18.2	19.0	17.0	11.0	15.2	8.0
	37.5 (n=137)		18.9 (n=69)		18.6 (n=68)		13.7 (n=50)		11.2 (n=41)	
Hispanic	38.0	40.7	23.4	23.4	15.4	15.3	13.5	11.7	9.8	8.9
	39.4 (n=3103)		23.4 (n=1842)		15.4 (n=1210)		12.6 (n=989)		9.3 (n=736)	
Mexican American	38.4	40.0	23.2	23.4	14.8	15.5	13.9	11.3	9.7	9.7
	39.2 (n=2117)		23.3 (n=1256)		15.2 (n=818)		12.6 (n=679)		9.7 (n=525)	
Native American	35.7	36.9	21.8	21.4	14.2	16.3	15.2	14.3	13.1	11.1
	36.3 (n=999)		21.6 (n=595)		15.3 (n=420)		14.7 (n=405)		12.1 (n=332)	
Other Hispanic	46.3	48.9	22.9	22.5	13.0	13.0	10.3	9.9	7.4	5.7
	47.8 (n=544)		22.7 (n=258)		13.0 (n=148)		10.1 (n=115)		6.4 (n=73)	
Other Race	45.5	47.3	23.3	22.1	14.2	14.6	11.1	9.2	5.9	6.8
	46.5 (n=644)		22.7 (n=314)		14.4 (n=200)		10.1 (n=140)		6.3 (n=88)	
Puerto Rican	33.6	37.7	23.8	23.0	17.7	17.1	13.6	13.7	11.3	8.6
	35.8 (n=688)		23.3 (n=449)		17.4 (n=334)		13.6 (n=262)		9.9 (n=190)	
Unknown Race	37.0	43.1	26.4	23.7	14.0	15.3	14.0	11.9	8.7	6.0
	39.8 (n=647)		25.1 (n=408)		14.6 (n=237)		13.0 (n=211)		7.5 (n=121)	
White, Non-Hisp.	32.3	33.1	23.0	22.7	16.7	17.9	15.1	14.4	12.9	11.9
	32.7 (n=1973)		22.9 (n=1378)		17.3 (n=1045)		14.7 (n=887)		12.4 (n=746)	
All Applicants	43.5	47.9	21.6	21.3	14.1	13.1	11.7	10.2	9.1	7.4
	(n=5009)	(n=9284)	(n=2490)	(n=4130)	(n=1620)	(n=2543)	(n=1352)	(n=1982)	(n=1047)	(n=1441)
	46.3 (n=14293)		21.4 (n=6620)		13.5 (n=4163)		10.8 (n=3334)		8.1 (n=2488)	

Table 20
URiM AMCAS Pool 2002-2008: MCAT Quintiles by Racial/Ethnic Background and Gender

	1 st Quintile 0-23		2 nd Quintile 24-27		3 rd Quintile 28-29		4 th Quintile 30-32		5 th Quintile 33-45	
	M	W	M	W	M	W	M	W	M	W
African American	56.5 65.0 (n=14409)	69.0	23.6 21.6 (n=4789)	20.6	7.9 6.1 (n=1352)	5.2	7.4 4.9 (n=1080)	3.7	4.6 2.5 (n=545)	1.5
Asian	19.3 34.0 (n=311)	44.5	34.0 31.1 (n=284)	29.0	12.7 12.5 (n=114)	12.3	17.4 13.7 (n=125)	11.0	16.6 8.8 (n=80)	3.2
Cuban	45.7 49.5 (n=92)	52.4	23.5 25.3 (n=47)	26.7	13.6 9.7 (n=18)	6.7	8.6 9.1 (n=17)	9.5	8.6 6.5 (n=12)	4.8
Foreign	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0
Hawaiian/P.Island.	26.7 38.8 (n=146)	49.0	33.1 30.6 (n=115)	28.4	12.8 11.4 (n=43)	10.3	11.0 9.6 (n=36)	8.3	16.3 9.6 (n=36)	3.9
Hispanic	37.6 45.4 (n=4183)	52.7	28.3 27.6 (n=2541)	26.9	12.8 10.7 (n=986)	8.8	12.7 10.1 (n=926)	7.6	8.6 6.2 (n=573)	4.0
Mexican American	36.3 43.6 (n=2920)	50.7	28.9 28.6 (n=1916)	28.4	12.9 11.0 (n=737)	9.3	13.3 10.5 (n=702)	7.8	8.6 6.2 (n=416)	3.9
Native American	29.9 39.4 (n=1139)	48.7	29.3 28.2 (n=815)	27.1	13.8 11.9 (n=344)	10.1	16.9 13.1 (n=379)	9.4	10.1 7.4 (n=214)	4.7
Other Hispanic	42.6 53.3 (n=651)	61.5	28.6 24.5 (n=299)	21.4	12.1 9.7 (n=118)	7.8	8.7 7.4 (n=90)	6.3	8.0 5.2 (n=63)	3.0
Other Race	47.3 56.0 (n=897)	63.9	29.6 25.8 (n=413)	22.3	9.3 8.6 (n=138)	8.0	9.2 6.6 (n=105)	4.2	4.7 3.1 (n=50)	1.7
Puerto Rican	41.7 48.5 (n=949)	54.4	25.1 24.8 (n=484)	24.5	12.8 10.2 (n=199)	7.9	10.9 9.5 (n=185)	8.2	9.5 7.1 (n=138)	5.0
Unknown Race	40.4 48.6 (n=1025)	57.7	29.8 28.5 (n=600)	27.0	12.6 10.0 (n=210)	7.1	11.1 8.2 (n=173)	5.0	6.1 4.7 (n=100)	3.2
White, Non-Hisp.	27.6 34.7 (n=2319)	41.0	27.9 29.1 (n=1947)	30.2	15.2 13.2 (n=881)	11.4	16.9 13.8 (n=921)	10.9	12.4 9.3 (n=623)	6.5
All Applicants	63.6 (n=12954)	46.8 (n=5790)	22.7 (n=4260)	26.0 (n=3218)	6.4 (n=1312)	10.3 (n=1274)	5.0 (n=1013)	10.3 (n=1271)	2.3 (n=463)	6.7 (n=828)
	57.2 (n=18744)		23.9 (n=7838)		7.9 (n=2586)		7.0 (n=2284)		3.9 (n=1291)	

Table 21

Summary of Logistic Regression Analysis for Variables Predicting Acceptance to Medical School for 2002-2008 AMCAS Applicants (N=265,190)

Predictor	<i>r</i>	Block 1			Block 2			Block 3		
		<i>B</i>	<i>SE B</i>	<i>e^B</i>	<i>B</i>	<i>SE B</i>	<i>e^B</i>	<i>B</i>	<i>SE B</i>	<i>e^B</i>
Sex	.01***	.04***	.01	1.04	-.40***	.01	.67	-.40***	.01	.67
Asian	.00	-.09***	.01	.92	-.16***	.01	.85	-.17***	.01	.84
URiM Status	-.03***	-.08***	.01	.93	1.90***	.02	6.70	1.8***	.02	6.2
Parent Educational Attainment	.13***	.31***	.01	1.4	.13***	.01	1.14	.16***	.01	1.2
Graduate Degree Attainment	-.01***				-.64***	.11	.53	-.65***	.11	.52
Cumulative MCAT Score	.48***				.25***	.00	1.29	.26***	.00	1.3
Cumulative Science GPA	.41***				.02***	.00	1.02	.02***	.00	1.0
Disadvantaged Status	-.08***							.31***	.02	1.4
Constant		-.73	.01	.48	.07	.07	.00	-14.5***	.07	.00

Note: *r* = Pearson Correlation with independent variable. *e^B* = exponentiated *B*. Acceptance predictors (Asian, URiM Status, Graduate Degree Attainment, Disadvantaged Status) are coded as 1 for *yes* and 0 for *no*. White is the reference category for the race/ethnicity predictors (Asian and URiM). Sex is coded as 1 for *male* and 0 for *female*. Parent Educational Attainment (AParentEd1) is scored from 1 for *no college degree*, 2 for *college degree*, and 3 for *graduate degree*. Cumulative MCAT Score (MCAT_Total) is scored from 3 to 45, and Cumulative Science GPA (GPA_CU_SCI) is scored from 0 to 400. **p* < .05. ***p* < .01. ****p* < .001.

Table 22

Dimensions of Disadvantage Discussed Among URiM Applicants

	Overall Sample	URiMs	Non-URiMs
Financial	82.1	82.8	81.7
Education	66.3	71.4*	62.5
First Generation Student	17.4	19.0	16.2
Health	38.5	38.8	38.3
Medically Underserved	13.4	11.7	14.6
No Medical Insurance	4.5	5.1	4.0
Community	34.8	39.9*	31.0
Home Life	40.5	50.9*	32.9
Single Parent	16.6	21.6*	12.9
Immigration	32.6	24.2*	38.8
Language	15.7	9.2*	20.5
Family Support of Education	12.6	15.0	10.8
Race	13.0	24.2*	4.9
Gender	4.8	8.4*	2.2
Give Back	8.2	7.7	8.6
Overcome	41.0	45.1	38.0

*indicates statistical significance or $p < .05$

Table 23
Dimensions of Disadvantage Discussed Among Conformers and Reframers

	Overall Sample	Conformers	Reframers
Financial	82.1	82.6*	81.5*
Education	66.3	60.6*	73.7*
First Generation Student	17.4	12.9*	23.1*
Health	38.5	39.4	37.4
Medically Underserved	13.4	14.0	12.5
No Medical Insurance	4.5	4.1	5.0
Community	34.8	30.3*	40.6*
Home Life	40.5	37.5	44.5
Single Parent	16.6	13.2*	21.0*
Immigration	32.6	29.8	36.3
Language	15.7	14.3	17.4
Family Support of Education	12.6	9.6*	16.4*
Race	13.0	9.6*	17.4*
Gender	4.8	3.6	6.4

*Indicates statistical significance or $p < .05$

Table 24
Conformers versus Reframers by Racial/Ethnic Background

	Proportion of Racial/Ethnic Group Within Conformers/Reframers		Proportion of Conformers/Reframers Within Racial/Ethnic Group	
	Conformer	Reframer	Conformer	Reframer
African American	29.5 (n=107) (n=194)	31.0 (n=87)	55.2 (n=107) (n=194)	44.8 (n=87)
Asian	22.3 (n=81) (n=138)	20.3 (n=57)	58.7 (n=81) (n=138)	41.3 (n=57)
Cuban	1.1 (n=4) (n=7)	1.1 (n=3)	57.1 (n=4) (n=7)	42.9 (n=3)
Foreign	2.8 (n=10) (n=22)	4.3 (n=12)	45.5 (n=10) (n=22)	54.5 (n=12)
Hawaiian/P. Island	0.6 (n=2) (n=6)	1.4 (n=4)	33.3 (n=2) (n=6)	66.7 (n=4)
Hispanic	15.2 (n=55) (n=111)	19.9 (n=56)	49.5 (n=55) (n=111)	50.5 (n=56)
Mexican American	5.8 (n=21) (n=48)	9.6 (n=27)	43.8 (n=21) (n=48)	56.3 (n=27)
Native American	4.7 (n=17) (n=23)	2.1 (n=6)	73.9 (n=17) (n=23)	26.1 (n=6)
Other Hispanic	5.0 (n=18) (n=41)	8.2 (n=23)	43.9 (n=18) (n=41)	56.1 (n=8.2)
Other Race	6.1 (n=22) (n=42)	7.1 (n=20)	52.4 (n=22) (n=42)	47.6 (n=20)
Puerto Rican	3.9 (n=14) (n=20)	2.1 (n=6)	70 (n=14) (n=20)	30.0 (n=6)
Unknown Race	1.9 (n=7) (n=19)	4.3 (n=12)	36.8 (n=7) (n=19)	63.2 (n=12)
White, Non-Hispanic	42.7 (n=155) (n=260)	37.4 (n=105)	59.6 (n=155) (n=260)	40.4 (n=105)
URiM	40.2 (n=146) (n=273)	45.2 (n=127)	53.5 (n=146) (n=273)	46.5 (n=127)

Table 25

Conformers versus Reframers: Household Income Quintiles by Gender

	1 st Quintile \$0-\$19,229		2 nd Quintile \$19,230-\$36,275		3 rd Quintile \$36,276-\$57,890		4 th Quintile \$57,891-\$92,552		5 th Quintile \$92,553+	
	M	W	M	W	M	W	M	W	M	W
Conformers	0 0 (n=0)	0	0 0 (n=0)	0	17.0 16.5 (n=32)	12.6	17.0 19.1 (n=37)	25.3	66.0 64.4 (n=125)	62.1
Reframers	0 0 (n=0)	0	0 0 (n=0)	0	28.6 21.5 (n=35)	20.2	15.9 16.6 (n=27)	13.1	55.6 62.0 (n=101)	66.7
Total Sample	0 (n=0)		0 (n=0)		18.8 (n=67)		17.9 (n=64)		63.3 (n=226)	

Table 26

Conformers versus Reframers: Parent1 Educational Attainment by Gender

	No High School Diploma		High School Diploma		College Degree		Graduate Degree	
	M	W	M	W	M	W	M	W
Conformers	18.0 16.0 (n=57)	14.0	30.9 37.9 (n=135)	44.9	32.0 27.0 (n=96)	21.9	19.1 19.1 (n=68)	19.1
Reframers	23.3 20.6 (n=57)	19.0	42.7 41.5 (n=115)	40.8	18.4 22.7 (n=63)	25.3	15.5 15.2 (n=42)	14.9
Total Sample	18.0 (n=114)		39.5 (n=250)		25.1 (n=159)		17.4 (n=110)	

Table 27a

Conformers versus Reframers: Cumulative GPA Quintiles by Gender

	1 st Quintile 0-3.20		2 nd Quintile 3.21-3.45		3 rd Quintile 3.46-3.63		4 th Quintile 3.64-3.80		5 th Quintile 3.81-4.0	
	M	W	M	W	M	W	M	W	M	W
Conformers	32.8 35.6 (n=129)	38.5	21.1 20.4 (n=74)	19.8	18.3 17.1 (n=62)	15.9	11.7 12.4 (n=45)	13.2	16.1 14.4 (n=52)	12.6
Reframers	40.2 37.4 (n=105)	35.6	17.8 20.3 (n=57)	21.8	14.0 13.9 (n=39)	13.8	15.0 14.2 (n=40)	13.8	13.1 14.2 (n=40)	14.9
Total Sample	36.4 (n=234)		20.4 (n=131)		15.7 (n=101)		13.2 (n=85)		14.3 (n=92)	

Table 27b

Conformers versus Reframers: Science GPA Quintiles by Gender

	1 st Quintile 0-3.02		2 nd Quintile 3.03-3.33		3 rd Quintile 3.34-3.56		4 th Quintile 3.57-3.79		5 th Quintile 3.80-4.0	
	M	W	M	W	M	W	M	W	M	W
Conformers	32.8 37.6 (n=136)	42.3	20.6 19.6 (n=71)	18.7	15.0 14.4 (n=52)	13.7	16.1 13.8 (n=50)	11.5	15.6 14.6 (n=53)	13.7
Reframers	36.4 38.1 (n=107)	39.1	16.8 17.4 (n=49)	17.8	16.8 17.4 (n=49)	17.8	15.9 12.8 (n=36)	10.9	14.0 14.2 (n=40)	14.4
Total Sample	37.8 (n=243)		18.7 (n=120)		15.7 (n=101)		13.4 (n=86)		14.5 (n=93)	

Table 28
Conformers versus Reframers: MCAT Quintiles by Gender

	1 st Quintile 0-3.02		2 nd Quintile 3.03-3.33		3 rd Quintile 3.34-3.56		4 th Quintile 3.57-3.79		5 th Quintile 3.80-4.0	
	M	W	M	W	M	W	M	W	M	W
Conformers	36.5 45.7 (n=164)	54.7	25.8 26.2 (n=94)	26.5	9.6 8.6 (n=31)	7.7	15.7 10.3 (n=37)	5.0	12.4 9.2 (n=33)	6.1
Reframers	43.4 50.0 (n=139)	54.1	21.7 27.0 (n=75)	30.2	10.4 7.6 (n=21)	5.8	13.2 8.6 (n=24)	5.8	11.3 6.8 (n=19)	4.1
Total Sample	47.6 (n=303)		26.5 (n=169)		8.2 (n=52)		9.6 (n=61)		8.2 (n=52)	

Table 29
 Summary of Logistic Regression Analysis for Variables Predicting Acceptance to Medical School for 2002-2008 Disadvantaged Applicants in
 Essay Sample (n=644)

Predictor	<i>r</i>	Block 1			Block 2			Block 3		
		<i>B</i>	<i>SE B</i>	e^B	<i>B</i>	<i>SE B</i>	e^B	<i>B</i>	<i>SE B</i>	e^B
Sex	.07	.24	.17	1.28	-.30	.23	.74	-.32	.24	.73
Asian	.02	-.10	.22	.91	-.24	.30	.78	-.24	.29	.78
URiM Status	-.08*	-.28	.19	.76	2.21***	.32	9.07	2.20***	.32	9.05
Parent Educational Attainment	.04	.08	.11	1.08	-.14	.15	.87	-.15	.15	.86
Cumulative MCAT Score	.54***				.34***	.03	1.41	.34***	.03	1.41
Cumulative Science GPA	.54***				.02***	.00	1.02	.02***	.00	1.02
Conform	.39***							.15	.23	1.16
Constant		-.65	.24	.52	-16.38	1.45	.00	-16.4	1.5	.00

Note: *r* = Pearson Correlation with independent variable. e^B = exponentiated *B*. Acceptance predictors, Asian, URiM Status, and Conform indicator are coded as 1 for *yes* and 0 for *no*. White is the reference category for the race/ethnicity predictors. Sex is coded as 1 for *male* and 0 for *female*. Parent Educational Attainment (AParentEd1) is scored from 1 for *no college degree*, 2 for *college degree*, and 3 for *graduate degree*. Cumulative MCAT Score (MCAT_Total) is scored from 3 to 45, and Cumulative Science GPA (GPA_CU_SCI) is scored from 0 to 400.

p* < .05. *p* < .01. ****p* < .001

APPENDIX A: FIGURES

Figure 1a. AMCAS Application Screen Shot: Disadvantaged Status Prompt



Figure 1b. AMCAS Application Screen Shot: Disadvantaged Status Prompt Pop-Up Window

DISADVANTAGED STATUS

The following definitions/questions may help you answer the questions on this page:

Underserved: Do you believe, based on your own experiences or the experiences of family and friends, that the area in which you grew up was adequately served by the available health care professionals? Were there enough physicians, nurses, hospitals, clinics, and other health care service providers?

Immediate Family: The Federal Government broadly defines "immediate family" as "spouse, parent, child, sibling, mother or father-in-law, son or daughter-in-law, or sister or brother-in-law, including step and adoptive relationships."

State and Federal Assistance Programs: These programs are specifically defined as "Means-Tested Programs" under which the individual, family, or household income and assets must be below specified thresholds. The sponsoring agencies then provide cash and non-cash assistance to eligible individuals, families, or households. Such programs include welfare benefit programs (federal, state, and local) Aid to Families with Dependent Children (AFDC or ADC); unemployment compensation; General Assistance (GA); food stamps; Supplemental Security Income (SSI); Medicaid; housing assistance; or other federal, state, or local financial assistance programs.

[Close Window](#)

Figure 1c. AMCAS Application Screen Shot: Disadvantaged Status Questions & Essay Prompt

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2007 Application Emilia Marvolo Riddle | AAMC ID: 12298729

1. Identifying Information
 2. Schools Attended
 3. Biographic Information
 4. Course Work
 5. Work/Activities
 6. Medical Schools
 7. Essays
 8. Standardized Tests

DISADVANTAGED STATUS

In what area did you spend the majority of your life from birth to age eighteen? *

State *

County *

City *

Description *

Do you believe that this area was medically underserved? *

Yes No
 Don't Know Decline to Answer

Have you or members of your immediate family ever used federal or state assistance programs? *

Yes No
 Don't Know Decline to Answer

What was the income level of your family during the majority of your life from birth to age eighteen? *

Did you have paid employment prior to age eighteen? *

Yes No
 Decline to Answer

Were you required to contribute to the overall family income (as opposed to working primarily for your own discretionary spending money)? *

Yes No
 Decline to Answer

How many people lived in your primary household during the majority of your life from birth to age eighteen? *

How have you paid or did you pay for your post-secondary education? For each of the applicable options below, indicate the average percentage contribution towards your post-secondary education. The percentages entered should equal 100%:

<input checked="" type="checkbox"/> Academic Scholarship	<input type="text" value="5"/> %
<input checked="" type="checkbox"/> Financial Need-Based Scholarship	<input type="text" value="40"/> %
<input checked="" type="checkbox"/> Student Loan	<input type="text" value="10"/> %
<input type="checkbox"/> Other Loan	<input type="text" value="0"/> %
<input type="checkbox"/> Family Contribution	<input type="text" value="0"/> %
<input checked="" type="checkbox"/> Applicant Contribution	<input type="text" value="45"/> %
<input type="checkbox"/> Other	<input type="text" value="0"/> %
Totals:	<input type="text" value="100"/> %

Explain below why you believe you should be considered a disadvantaged applicant by your designated medical schools. The space available for your explanation is 1325 characters, or approximately ¼ page. *

test

Character Count: (maximum 1325 characters)

Back
Continue

BIOGRAPHIC INFORMATION

Contact Info	Complete
Citizenship	Complete
Legal Residence	Complete
Ethnicity and Race	Complete
Languages	Complete
Disadvantaged Status	Complete
Dependents	Complete
Parents	Complete
Siblings	Complete
Felony Conviction	Complete
Section Summary	

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Figure 2. Pilot Study Dimensions of Disadvantage

 Pilot Study Dimensions of Disadvantage

FIN = financial challenges, e.g., receipt of federal aid, working during high school/college

EDU = academic challenges, e.g., limited resources in public school, no academic mentors

COM = community/environmental challenges, e.g., drugs and/or gangs in the neighborhood, no college-going peers

IMG = immigration-related challenges, e.g., cultural/language barriers, starting over in a new country

HOM = family/household-related challenges, e.g., divorce, substance abuse in the home

HLT = health/injury-related challenges, e.g., personal illness or that of loved one, sudden injury

RCE = racism-related challenges, e.g., racism experienced in pursuit of academics/career

FAM = supportive family; this theme came out of CRT, e.g., description of how minority families value and support academic pursuits

GBK = give back; this theme came out of CRT, e.g. agency and empowerment is demonstrated through plans to give back to the community

GDR = gender, e.g., sexism experienced in pursuit of academics and/or career

OVR = overcome; this theme came out of CRT, e.g., resilience is articulated despite disadvantage

Figure 3. Dimensions of Disadvantage from 2002-2008 Sample of Disadvantaged Essays

 Dimensions of Disadvantage from Study of 2002-2008 Sample of Disadvantaged Essays

FIN = financial challenges, e.g., receipt of federal aid, working during high school/college

Example A: When I was eight, my father abandoned our family, leaving my mom to raise seven children. My mom worked two or three jobs to support the family. We relied on government programs such as Food Stamps, the school Free Lunch program, and the support of the community to help make ends meet.

Example B: As a first generation minority, I come from a low-income family, constantly deprived of resources while growing up. My family faced financial instabilities that hindered my ability to participate in many academic activities during my primary education experience. The financial problems have affected me physically, mentally, and emotionally.

EDU = academic challenges, e.g., attended schools with limited resources, little or no exposure to college preparation and/or academic mentors and guidance

Example A: The low quality public school system I attended did little to provide a safe place or a decent education. School was more like a prison as I was subjected to metal detectors and demeaning remarks from teachers who were not capable of dealing with a diverse student population.

Example B: The lack of family support for higher education and work, were the two main obstacles in my path seeking a college degree. Living without my parents prevented me from focusing on my education, the lack of support from my family and the increased violence in the environment in which I lived, did not provide me with a strong educational foundation, the schools I attended were more focused on violence prevention and community awareness rather than programs to prepare those who seek higher education with a better educational background.

COM = community/environmental challenges, e.g., drugs and/or gangs in the neighborhood, no college-going peers

Example A: My hometown is in Alexander County. This county is one of the most disadvantaged counties in Illinois. The median income of an Alexander County household is approximately half of the median household income for the state of Illinois. It also has the highest child poverty, single mother, and teen birth rate of any county in Illinois.

Example B: Twenty-five miles from the nearest town, our isolated cabin in Pioneer did not have access to public transportation or libraries. Growing up in the snow-capped Sierras was beautiful, but it presented limited resources for my family.

IMG = immigration-related challenges, e.g., cultural/language barriers, starting over in a new country.

Example A: The hardships I have encountered in life began with the move of my family from Taiwan to the U.S. in 1989. I was lost in a world of confusion and fear. Besides the obvious language and culture barriers, my family faced financial difficulties.

Example B: Being a child from an immigrant background, my family faced economic hardships as we adjusted to life in the United States. In 1985, my family managed to escape from Vietnam when I was five years of age. We stayed at a refugee camp in Thailand and then moved to the United States.

HOM = family/household-related challenges, e.g., divorce, abuse, neglect, discord or instability in the home.

Example A: As a child my mother was a very angry woman. At the age of eight I was sent to a foster home. My mother was charged with child endangerment. As a child I was terrorized by my mother both physically and mentally. My stay at the foster home was short yet blissful.

Example B: When I was eight years old, my parents divorced. Being the eldest of five siblings, I assumed a more responsible role in my family. After a stint of homelessness, we moved into a housing project and went on welfare. My mother obtained a restraining order as protection for us from harassment and abuse. My father has had several emotional breakdowns and has been diagnosed as paranoid schizophrenic.

HLT = health/injury-related challenges, e.g., personal illness or that of loved one, sudden injury, chronic condition or disability

Example A: My mother was diagnosed with breast cancer when I was a child. Her sickness affected me tremendously; forcing me to grow up at a young age. After many

treatments, she is currently doing well but unemployed.

Example B: Illness and sickness resulting from poor environmental conditions impeded my ability to be properly prepared for school but I insisted under these prevailing constraints to still graduate at the top of my high school class.

RCE = racism-related challenges, e.g., racism experienced in pursuit of academics/career

Example A: While growing up in Brevard County I experienced racism daily. Not only because of the color of my skin but because of my parents interracial marriage. I attended a predominately white high school that consisted of a large violent and racist white supremacy gang called the skinheads.

Example B: As a black teen-ager, my academic self-esteem remained intact, even without the academic companionship of and study-group opportunities with other black male students because I was usually the only black male in the higher-level English, Math, Science and Social Studies classes.

FAM = supportive family; this theme came out of CRT, e.g., description of how minority families value and support academic pursuits

Example A: Though my parents did not finish high school, they encouraged my siblings and me to complete our high school education. Whenever my school work became more challenging, my mother would seek assistance from others to help me with my homework assignments.

Example B: I became a second parent inside the household to teach my younger siblings to be successful in America through my experiences in school because my dad was not sure how to help them.

GBK = give back; this theme came out of CRT, e.g., agency and empowerment is demonstrated through plans to give back to the community.

Example A: I am the only person who excelled in school to this extent among my relatives. As a result, I plan to be a peer counselor for children who are disadvantaged and are suffering from inferiority complex, low self-esteem and lack of parental leadership. Despite of all of my challenges in life, I have a vigorous determination to serve my community through medicine and to one day fulfill my life-long dream of being a doctor.

Example B: I always knew that I wanted to become a doctor from a very young age and most importantly make something better out of my life. I am aware of the fact that there is a low percentage of blacks and minorities in the field of medicine. I know that I can use the skills that a medical education will offer me to be of service to those in need of medical attention.

GDR = gender, e.g., experienced sexism

Example A: Being a female born to a traditional Mexican family, I was expected to stay at home and quit school after high school. Going away to college was very difficult emotionally due to lack of support from my family.

Example B: Throughout my education there have been many hurdles that I had to overcome because I am an African American male in a Caucasian dominated society.

OVR = overcome; this theme came out of CRT, e.g., resilience is articulated despite disadvantage

Example A: My experiences of dealing with language, culture, and financial obstacles may have somewhat interfered with my educational pursuits, but these challenges have also taught me the importance of hard work and shaped me into the person I am today.

Example B: Despite the aforementioned, I have made it an issue to achieve my goals and excel beyond people's expectations. Although my circumstances may resemble those of a disadvantaged person, my state of mind does not and I know that I am capable of achieving in the medical profession.

FGN = first-generation college student; sub-theme of EDU, e.g., first in family to pursue post-secondary education

Example A: This had a terrible effect on me - I did not have proper guidance from my parents: they did not know about Science High Schools, from which I would have benefitted, and they could not give me advice on college, employment, and career choices

Example B: As the first person in my family to attend college, I faced many new challenges alone. Not only were my parents uninformed about many aspects of the college experience, but also most people in our community (Eveleth, Minnesota) had never completed college.

INS = no medical insurance; sub-theme of HLT

Example A: For the first four to five years of my life, my family was not covered under any health insurance plan. Adequate medical care was often unaffordable during the critical years of my development.

Example B: Since my father was self-employed and had a low income, my family could not afford health insurance. My father had to have three back surgeries due to several herniated discs, which were impairing his ability to work. As a result, a majority of our family's income went to paying for his back surgeries.

MUN = medically underserved; sub-theme of HLT

Example A: There is a shortage of primary care physicians in our area. There are no clinics or hospitals in the area in which I grew up. The nearest clinic was approximately an hour and a half away from where we lived. The need for primary care physicians in rural areas is very high.

Example B: Although Lagos is considered a city, it is a terribly medically-underserved area. We did not even have a qualified ambulance service or an emergency care unit. My family was lucky because my grandmother was a nurse and she treated the family herself.

SPR = single parent; sub-theme of HOM

Example A: I grew up fatherless. My mother raised four girls alone. She taught for the Jersey City Board of Education most of my life making under \$30,000 a year to support all five of us. She told me to make straight A's so I could get a scholarship into college.

Example B: Raising 6 children alone after my mother died, my father was barely able to provide for all of our needs.

LNG = language-related challenges; sub-theme of IMG

Example A: My parent s English was very bad, so at the age of 14 it was up to me as the eldest of 4 children to assume a lot of the family responsibilities. I worked closely with my parents doing everything from looking for apartments to rent, doing our taxes, and calling from and answering the phone.

Example B: I was raised in a community of people who mainly spoke Cantonese. Therefore, when I needed help with my schoolwork, there was no one for me to turn to because nobody, including my family, spoke both Cantonese and English. This language barrier proved to be extremely difficult for me, especially regarding my studies. Instead of spending my time learning for content, I spent most of my efforts trying to learn English. As a result, I was usually behind in school.

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