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IMPACT OF THE GEIER CONSENT DECREE: MEDICAL SCHOOL ADMISSIONS  
FOR AFRICAN AMERICAN STUDENTS

by

Dustin Fulton

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Education

Major: Higher and Adult Education

The University of Memphis

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## **Abstract**

The United States has a storied history in terms of race, equality, and acceptance of minority populations. Racial constructs have caused division in America since its inception and there has been a long journey in terms of equal opportunity in education for minority populations. From the establishment of higher education in America until current time, race has had a great impact on access for African Americans. Even beyond undergraduate education, there are potential obstacles for African American student success. Obstacles related to the matriculation and success of African American students extends to graduate education such as medical school. As a result, African Americans continue to be underrepresented in medical education and the physician workforce. The purpose of this quantitative study was to examine admissions data for a medical school in the Southeast United States given state-specific efforts to increase minority participation in education. A single research question guided this study: Did the Geier Consent Decree of 2001 impact the rate of admissions of African Americans to the college of medicine at a large, public university in the state? A quantitative analysis was conducted to determine if African Americans tended to get into medical school at the same rate as applicants in the White and Other race categories. A subsequent analysis was conducted to determine statistically significant differences of GPAs by racial groups. Findings suggest that there was an increase in acceptance rates across all race categories during the years of the state-specific provision. However, the proportion of African Americans accepted was not statistically significant over time. Additionally, there were statistically significant differences in GPA across race categories.

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# Impact of the Geier Consent Decree: Medical School Admissions for African American Students

## Chapter 1

### Introduction

#### Background

The United States has a storied history in terms of race, equality, and acceptance of minority populations. Racial constructs have caused division in the United States since its inception. Discussions of race related to African Americans in the mid-19th century sought to justify discrimination, mistreatment, and slavery. Although many people disapproved of the idea of slavery, others were proponents of ideas of racial inferiority. This led to widespread oppression of African Americans in the United States. While African Americans were not the only victims, they were the main group. As time went on, certain racial/ethnic groups such as African Americans became linked to social issues such as economic inequality and intelligence.

More specifically, there has been a long journey in terms of equal opportunity in education for African Americans. During the 19<sup>th</sup> Century, de jure segregation was practiced in public primary and secondary schools by southern states, while de facto segregation was common in other states (Olden, 2015). From the establishment of higher education in America until current time, race has had a great impact on access for African Americans in terms of admission and matriculation. It is noted by Cohen and Kisker (2010) that few people in the American colonies participated in higher education and that the average student was a white male whose father was wealthy. Additionally, Cohen and Kisker (2010) noted that “prior to the Civil War, scarcely two dozen African Americans had graduated from colleges in the United

States, despite the fact that freedmen numbered close to one-quarter of a million in 1825 and nearly half a million by the time the Civil War started” (p. 119).

The scarce number of African Americans participating in higher education was a direct result of limited access for this particular racial/ethnic group. This was met by a variety of societal responses for equal access in Southern states, such as “separate, but equal” which was upheld by the decision of the Supreme Court in *Plessy v. Ferguson* (1896), marking the end of the post-Civil War reconstruction era (Sykes, 1995). In *Plessy v. Ferguson*, Homer Plessy refused a racial assignment for a seat on a train because it did not have sleeping accommodations (Moreno, 2003). The arrest of Plessy led to a legal battle and his case was ultimately heard by the U.S. Supreme Court. The Court’s ruling maintained that the railroad could segregate White and Black passengers as long as the sleeping accommodations for Black passengers were similar or equal to those of White passengers (Moreno, 2003). Caldes and Blankston (2003) explain that the idea of “separate, but equal” was used to justify racial segregation and began to apply to things such as water fountains, restrooms, and cemeteries, but also extended to public higher education. Even after the concept of “separate, but equal” was ruled unconstitutional, Jackson-McCoy (2008) notes the practice of segregating social interactions of White and Black people continued causing both groups to internalize a two-tiered social order determined by race. Olden (2015) shares that many scholars now believe race to be a social construction with a binary color line (White and Black) that “powers over our lives” (p. 251).

Even beyond undergraduate education, there are potential obstacles for African American student success. Obstacles related to the matriculation of and success of African American students extends to graduate or professional education such as medical school. As a result, African Americans continue to be underrepresented in the classrooms, as well as in the health



professions. A significant issue in graduate and professional education is the lack of policy and practice to address racial inequities. The representation of African Americans within the healthcare professions is far below their respective representation of the greater population (Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce, 2004). The Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce (2004) posits that as a result of a lack of diversity in the health professions, access to healthcare is also impacted as minority healthcare professionals are more likely to provide service to underrepresented minorities and in rural areas.

### **Problem Statement**

Overall, there is a great disparity in the acceptance rates of African Americans to medical school relative to some other racial groups. According to the Association of American Medical Colleges (AAMC) publication *Altering the Course: Black Males in Medicine* (2015), “In 1978, there were 1,410 black male applicants to medical school, and in 2014, there were just 1,337” (p.3). It is noted that a similar trend exists where in 1978, there were 542 African American male matriculates versus only 515 in 2014 (AAMC, 2015).

The South has a storied history of racial injustices related to segregation in higher education and the state of Tennessee is not exempt from these injustices. A lawsuit was filed by Rita Sanders Geier versus the State of Tennessee in 1968 which alleged segregation by the University of Tennessee with its plans to expand to Nashville, Tennessee, placing a campus just miles from Tennessee State University. Tennessee State University is a public Historically Black College or University (HBCU). The lawsuit maintained that by creating the Nashville campus, it would divert funds away from Tennessee State University and Middle Tennessee State

University, thus likely decreasing the number of African American students at these institutions. The lawsuit was finally settled in 2001 with the Geier Consent Decree which aimed to improve equal opportunity for Black students in the public higher education system of Tennessee. This resulted in wide-spread efforts throughout public state institutions to recruit Black students, including medical schools, through programs such as the Tennessee Institute for Pre-professionals (TIP).

As the U.S. grows increasingly more diverse, the inclusion of African American students in U.S. medical schools continues to present a contrasting story. For example, AAMC (2017a) reports that in 2017-2018, there was a total of 4,308 applicants to U.S. medical schools who identified as Black or African American, representing 8.3% of all applicants. Of those 4,308 Black or African American applicants, only 1,559 were accepted and 1,505 matriculated to a U.S. medical school (AAMC, 2017b). The United States Census Bureau (2017) reported that in 2017, Black or African American people represented 13.4% of the population, yet Black or African American students were grossly underrepresented in medical education, making up only 7.1% of matriculants to medical school during that same year.

In the United States, three major court cases have shed light on affirmative action in medical school admissions: *Regents of University of California v. Bakke* (1978), *Grutter v. Bollinger* (2003), and *Fisher v. University of Texas at Austin* (2012-2013) (Blake, 2012). *Geier v. State of Tennessee* proved to be landmark for higher education desegregation efforts in Tennessee. However, more than fifty years after the Geier Lawsuit, African Americans continue to be under-represented in medical education in Tennessee, as well as in the state's physician workforce (AAMC, 2017c). As one of the state's greatest efforts to eliminate segregation in higher education, the Geier Consent Decree had a heavy focus on desegregation in Middle

Tennessee. Thus, a lot of research (Davis, 1992; Winn, 2008; Jackson-McCoy, 2008) related to undergraduate admissions and enrollment as a result of these efforts has been conducted. To date, there has not been any significant research related to the state's desegregation efforts in higher education related to medical education.

### **Purpose of the Study**

In an effort to further the literature related to desegregation efforts in Tennessee higher education related to medical education, this study examines impact of the Geier Consent Decree of 2001 on the rate of admissions of African Americans to the college of medicine at a large, public university in the state. While not the only public medical school in the state, the particular institution of study has produced more than 70% of the state's physicians.

Specifically, the purpose of this study is to examine the underrepresentation of African American students in admission rates to medical school in Tennessee. The data examined is based on students' response to race and ethnicity questions as part of the application process. An analysis of the impact of the state's higher education desegregation efforts relative to the Geier Consent Decree is presented. A second purpose is to understand the potential impact policy and funding has to increase the number of African Americans in medical education and the physician workforce. The quantitative research design utilizes secondary admissions data from medical school applicants at the state's only public academic health institution.

### **Significance of the Study**

There is a great deal of research that addresses the lack of representation of underrepresented populations in health professions (IOM, 2004; Smedley, et al., 2006; Thompson, et al., 2003). African American and other minority racial groups are outnumbered in the healthcare professions (IOM, 2004). Smedley, Butler, and Bristow (2006) posit that the

answer is graduating ethnically and racially diverse medical physicians to enter the workforce. However, if there is disparate impact in terms of African American students being able to access medical school, the problem will only persist. Currently in the U.S., there exists a health equity issue relative to ethnic and racial minorities (US DHHS, 2011).

Examining how African American students have been able to access medical school in Tennessee and examining the roadblocks that might still exist with regard to student success is critical in leveling the playing field for African American participation in the physician workforce. This examination will also afford medical schools the opportunity to address this growing issue by crafting admissions policies and programs that support the engagement of African American students in medical education. There is a fair amount of data available to support the expected shortage of physicians in the coming years and the impact this might have on underserved patient populations. *Increasing Access to Medical Education for Students from Medically Underserved Communities: One Program's Success* (Thompson, Ferry, King, Martinez-Wedig, and Michael, 2003) traced matriculates to medical school at Baylor College of Medicine in Texas as a result of a program created to increase the number of doctors to address the needs of underserved populations. This is noteworthy for medical education in Tennessee, as increasing African American participation in medical education may improve barriers to medical access for underserved populations in the state. Ultimately, this research is significant in measuring the impact of desegregation efforts in Tennessee related to medical education on alleviating the under-representation in medicine. Studies show that even amidst the growing number of college graduates over the past couple of decades who identify as Black, there has not been a corresponding uptick in the number of medical applications from the same group. A study by Rao and Flores (2007) examined perceptions of high school juniors in terms of barriers to

careers in medicine. Perceived barriers included limited knowledge about the particular pathway to medicine and a shortage of African American role models, among other things (Rao and Flores, 2007). Findings of this research have the potential to justify increased and more robust funding of programs and initiatives.

### **Study Overview and Organization**

Educating students from underrepresented populations continues to be important in terms of ensuring African Americans are well represented in the physician workforce in Tennessee and beyond. Since the number of African American students who matriculate to medical school in Tennessee seems to not have had significant growth over the past several decades, it is important to examine how students are being admitted to medical school. The following chapters discuss relevant research on medical education and desegregation efforts, the theoretical framework which supports this study, and the methodology by which the current study was designed. Specifically, the research question addressed in this study is: Did the Geier Consent Decree of 2001 impact the rate of admissions of African Americans to the college of medicine at a large, public university in the state?

## **Chapter 2**

### **Literature Review**

This chapter presents an overview of the relevant literature for this research. It begins with a discussion Critical Race Theory followed by the history of medical education and higher education. Next, a discussion of the desegregation efforts related to higher education in Tennessee is presented. The chapter concludes with an overview of medical education and the physician workforce for Tennessee, leading to a statement on current knowledge and the significance of this study in expanding the knowledge of admissions of African American medical students and the impact on the state's physician workforce.

A discussion of historical perspectives of race and medical education is presented first. It serves as the introduction to the study that is the primary focus of this research described in this dissertation, which seeks to understand the application and admissions rates of students matriculating to medical school in the State of Tennessee. This research will investigate medical school admissions for African American students at a state public medical school and analyze the impact of state-specific desegregation efforts related to higher education.

#### **Review of Relevant Literature**

In education, the racial climate of an institution is largely influenced by policy. Ledesma and Calderon (2015) posit that public policy impact marginalized communities more than White communities and believe that these disparities can be challenged if educators use Critical Race Theory (CRT). Many institutions of higher education have contributed to CRT in their admissions processes which have included policies/practices related to Affirmative Action. CRT maintains that in the absence of a commitment to redesign policies, processes, and funding, no

real progress can be made in terms of race and power (Ledesma and Calderon, 2015). As a result, the tenets of CRT have been applied to this research.

CRT emerged from critical legal studies in an effort to address the persistence of systemic racial bias. The movement gained ground in the 1970s after civil rights agendas slowed (Delgado & Stefancic, 2012). CRT is rooted in transforming the relationship between race, racism, and power (Delgado & Stefancic, 2001). Critical legal studies and radical feminism are credited with being the forethought and previous movements of CRT. Feminist insights with regard to power and the construction of social roles and patriarch was used as a springboard for further development in critical race theory (Delgado & Stefancic, 2012). Critical Legal Studies did not examine race and racism, so CRT scholars such as Derrick Bell, Jr., Alan Freeman, Charles Lawrence, Patricia Williams, Mai Matsuda, Lani Guinier, Kimberle Crenshaw, and Richard Delgado started a movement beyond legal studies to fight subtle racism in sociology, education, and women's studies (Delgado & Stefancic, 2001; Hiraldo, 2010; Taylor, 1998). Crenshaw (1989) credits CRT with changing a narrative to focus more on minorities through an exploration of their lived experiences.

Yosso and Solorzano (2007) share that while CRT initially tended to focus on civil rights agendas and legislation related to Black vs. White, other marginalized racial groups have caused the theory to expand, including women, Latinas/os, Asian Americans, and Native Americans. Over the years, there have been various interpretations of CRT. CRT is not a set rules through which social ideas are examined, however through scholarship various themes have been identified. Delgado and Stefancic (2001) offer the following as basic tenets of CRT: 1) CRT holds that racism is an ordinary or common experience in the United States; 2) CRT addresses how racism aids in interest convergence; 3) CRT insists race is a social construction; 4) CRT

argues that dominant society racializes different minority groups at different times; 5) CRT is intersectional; and 6) CRT serves as a means to reveal lived experiences of oppression with the hope of eliminating it. This work focuses on the permanence of racism, challenging the dominant ideology, and interest convergence related to education.

There has been a lot of criticism of Affirmative Action in admissions, but as noted by Ledesma and Calderon (2015), such use of Affirmative Action in admissions processes supports interest convergence which is why many PWIs continue to defend it. Yosso, Parker, Solorazano, and Lynn (2005) share that attacks on the use of Affirmative Action claim preferential treatment of students of color which negatively impact White students. Furthermore, the claims support the idea that all students should compete for admissions based on the same criteria, and Affirmative Action results in the denial of admission to White students due to unqualified students of color being admitted. CRT tenets can help administrators understand that these claims are attempts to have race-neutral and colorblind admissions processes. Such processes and policies only have the ability to further perpetuate what has been the status quo in medical school admissions which has resulted in the under-representation of African American students. As a result, CRT can be used to implement socially adept admissions processes, which can create more diverse student populations. This is important for medical schools as such processes could lead to greater participation of African Americans in the physician workforce.

Students of color have the ability to contribute to a richer learning experience for all and their knowledge is equally important. Examining the acceptance rates of African Americans, this study seeks to illuminate the importance of socially adept admissions processes that have the potential to increase the participation of African Americans in medical education and the physician workforce. To date, there has not been an examination of the impact of state-specific



desegregation efforts in higher education related to medical education and the effects on the acceptance of African American students in medical school. A current lack of research in relation to the admission of African American students in the state warrants an investigation. Recruitment of African American students to medical school is an important step towards creating a more diverse workforce of healthcare professionals to address health disparities and access to healthcare for citizens of the State.

The primary purpose of this literature review was to examine previous research on medical school admissions in the United States. It served as a springboard for deeper development of the research to be conducted and informed the design of the research process. A review of previous works was two-fold in the development of this study. First, it proved useful in terms of developing opportunities for aligning the topic of this study with existing data. Second, it enabled a critical analysis of information and data collected relevant to the primary focus of this research.

Contributing to the bibliography, data sources were utilized for finding prior literary works for this review. The majority of these works take the form of peer-reviewed articles. Garces and Mickey-Pabello (2015) published research examining the impact of bans on affirmative action in California, Washington, Florida, Michigan, Texas, and Nebraska related to rates of matriculation for students of color in public medical schools. Further searches led to other publications on race, medical school admissions, and the physician workforce. Smedley, Butler, and Bristow (2004) reported the need to reduce policy-related barriers to underrepresented minority engagement in healthcare and a need to increase demand for underrepresented minority students across all institutions. A review of earlier works such as *Increasing Access to Medical Education for Students from Medically Underserved Communities:*

One Program's Success (Thompson, Ferry, King, Martinez-Wedig, & Michael, 2003) gives an overview of this research and gave context for the data collection. The outcomes study by Thompson, et al. (2003) traced matriculates to medical school at Baylor College of Medicine in Texas as a result of a program created to increase the number of doctors to address health needs of underserved populations in Texas. The review of existing literature (Garces and Mickey-Pabello (2015); Smedley, et al. (2004); US DHHS (2011)) revealed a gap in research related to the State of Tennessee and the impact of programs developed to eliminate discrimination and level the playing field for students applying to medical school. While the existing research recognizes the historical segregation in medical schools for the majority of the twentieth century and a shift in admissions policies for medical schools across the US, there is no specific research that explores how this impacted the State of Tennessee (Smedley, et al., 2004). This gap led to the adoption of the study topic and theoretical framework outlined in this dissertation.

### **History of Medical School in the United States**

Utilizing a historical perspective for research as prescribed by CRT, it is noteworthy to mention that from the establishment of higher education in America until current time, race has had a great impact on access for African Americans (Cohen & Kisker, 2010). It is noted by Cohen and Kisker (2010) that few people in the American colonies went to school and that the average student was a White male whose father was wealthy. This holds true within U.S. medical education as well. The field of medicine has always been a top choice as a profession due to its prestige and perceived association with a high socioeconomic status (Hauser & Warren, 2008). However, the historical context of the profession lacks such prestige. Going back to the 18<sup>th</sup> century, reports show that there were less than 200 medical schools in the U.S., and students were not required to have obtained an undergraduate degree. Admission to medical school also

lacked any kind of a competitive process (Thelin, 2004). Often times, the credibility of medical education was challenged due to the fact that these institutions were rarely associated with research or baccalaureate-granting institutions. The credence of medical education would further be questioned by Abraham Flexner, a Johns Hopkins University graduate, in the early 1900s, who issued a report on medical training in the U.S. The report led to a new wave of medical education in the U.S. via a model employed by Johns Hopkins University, where the medical school is rooted in biological sciences research and connected to universities (Thelin, 2004). This led to medicine being one of the most competitive programs.

### **Medical Education and Affirmative Action**

The exclusivity of medical education in the U.S. which began at the turn of the 19<sup>th</sup> century further perpetuated a lack of access for people of color. “For the first two-thirds of the twentieth century, U.S. medical schools were de facto segregated,” (Smedley, et al., p. 237). In 1964, men accounted for 93% of all U.S. medical students and non-Hispanic Whites were 97% (Smedley, et al., 2004, p. 238). Smedley, et al. (2004) reports “Of the remaining 3 %, all but a few were enrolled in the nation’s (then) two predominantly black medical schools, Howard University in Washington, DC, and Meharry Medical College in Nashville, Tennessee” (p. 238). Arguably, the current state U.S. medical schools where White matriculates are the dominant group can be traced to the country’s history of systemic racism.

The lack of representation of Black students in medical schools could be felt in the workforce which also lacked diversity. The Civil Rights Movement in the U.S. fueled policy changes in support of increased diversity among student populations within medical schools. Favoring a more integrated student body, many medical schools shifted their admissions policies in the late 1960s so that they were more aligned with Affirmative Action (Smedley, et al., 2004).

The Association of American Medical Colleges (AAMC) even encouraged medical schools to expand efforts to increase student diversity (Smedley, et al., 2004). Fiscbach and Hunt (1999) outline the historical evolution of medical school admissions, presenting information about the stark reality of African American enrollment. In 1965, African American students only accounted for 2.2% of enrollment at U.S. medical schools. The majority were enrolled at Howard University College of Medicine and Meharry Medical College (Fiscbach & Hunt, 1999). While federal funding allowed for the creation of minority offices at AAMC in the 1960s, private organizations such as the Robert Wood Johnson Foundation also began focusing their attention on providing resources for medical schools to recruit minority students (Ready, 2001).

AAMC labeled African Americans as underrepresented minorities in medicine in 1970 and by 1976, Black students represented 6.3% of U.S. medical school enrollment with only 20% attending a HBCU (Fiscbach & Hunt, 1999). Later in 1978, higher education institutions were prohibited from utilizing quotas for recruiting minority students via a U.S. Supreme Court decision in *Regents of the University of California v. Bakke* case (Ready, 2001). This was problematic to established recruitment efforts in the wake of alarming and low representation of minorities in the physician. A study by the American Medical Student Association (AMSA) (1996) showed that in 1976 minorities were still just 3% of the physician workforce. There was no significant growth in minority enrollment until 1990, “when the AAMC established Project 3000 by 2000” (Smedley, et al., 2004, p. 238). This priority, recognizing that institutions had a responsibility to increase educational opportunities for youth, challenged medical schools to increase minority student enrollment to 3,000 by the year 2000 (Smedley, et al., 2004). Terrell and Beaudreau (2003) report a 36.3% increase in minority representation of medical school matriculates in the U.S. to 12.4% from 1990 until 1994. The 1990s also brought about challenges

for affirmative action. In 1995, the University of California Board of Regents began prohibiting race, ethnicity, and national origin, among other things, to be used as criteria for admissions to any academic program (Smedley, et al., 2004). It was supported by state constitutional backing and supported by voters in 1996.

Equity continues to be an issue that is critiqued with regard to public and social issues. According to the US Department of Health and Human Services (2011), there is currently a health equity issue in the U.S. where ethnic and racial minorities aren't afforded the same access as others or experience certain barriers to health care. This brings into question policies and practices of medical schools in the U.S. to address such issues. Smedley, et al. (2004) posit that the answer is graduating ethnically and racially diverse medical physicians to enter the workforce. While the U.S. Supreme Court has upheld carefully implementing race as part of the admissions process via *Fisher v. University of Texas* (2013) to develop a racially and ethnically diverse student body, affirmative action bans have been implemented in several states. Particularly, results of the study by Garces and Mickey-Pabello (2015) examine the effects of such bans on the field of medicine for underrepresented students. Garces and Mickey-Pabello define underrepresented as students who self-reported as Black/ African American, Latino or Hispanic, or Native American/Alaska Native. The findings of their study show that within the six states examined (California, Washington, Florida, Texas, Michigan, and Nebraska, initiated in 1997, 1999, 2001, 1997, 2007, and 2009 respectively), bans of affirmative action resulted in a 17% decline in matriculation of underrepresented students of color to medical school (Garces and Mickey-Pabello, 2015, p. 287). A 2015 article by NPR highlights the fact that there were fewer Black male medical students in 2014 than there were in 1978. AAMC (2015) reported that in 1978, a total of 1, 410 Black male students applied to medical school with 542 actually

enrolling. These figures were lower in 2014 where 1,337 Black male students applied and only 515 enrolled.

Affirmative Action in admissions is important as policies related Affirmative Action have the potential to be a way to ensure the matriculation of African American students to medical school. A study by Garces and Mickey-Pabello (2015) found the bans on Affirmative Action across all six states to be statistically significant and accounted for the decline in minority enrollment. The authors posit “Racial and ethnic diversity in medical school also prepares students to become better doctors, as it helps them be more aware of other cultures, languages, and perspectives” (p. 269).

### **Medical School and Admissions**

Admissions requirements for colonial colleges limited the student population of such institutions. Thus, few people in the American colonies went to college (Cohen & Kisker, 2010). Cohen and Kisker (2010) explain, "Either they had no need to go, or college was not accessible to them since college purposes and curricula did not match the interest and aspirations of most of the youth" (p. 26). Many families couldn't afford tuition and depended on their sons to contribute to their family's industrious efforts. The typical student was a white male whose father was a wealthy landowner, minister, or lawyer/judge. Language (ability to speak Latin and decline Greek) and age requirements were imposed by institutions. It wasn't until the latter part of the Colonial Era that the religious orientation tapered off, inviting the idea of civil community based on principles of morality and public service separate from an established church (Cohen & Kisker, 2010).

These perspectives are critically important and truly carry great historical significance. Understanding how education was limited to a select few in its early stages sheds light on what

could still be considered a systemic issue today. Particularly, institutions still have Affirmative Action measures for admissions in place to counteract the lack of representation of underrepresented minorities pursuing high education. Ultimately, understanding the demographical nuances of access in the past allows administrators to put into practice measures in hope of positively impacting the reach for future generations. Today, scholarships, pipeline programs, and bridge programs have been put in place to attract and retain underrepresented populations at the post-secondary level. Not having equal access in the beginning of higher education in the United States has had a lasting impact.

Cohen and Kisker (2010) explain the Civil War as “the most notable event marking the onset of the University Transformation Era” (p. 105). There was an increase in colleges being built and in this era of American higher education, many new fields of study were available in formal education. Scientific research was one of those. Many times, even the institutions that remained opened struggled financially. "By the time the Association of American Universities was formed in 1900, the research universities had themselves become a special group among American institutions" (Cohen & Kisker, 2010, p.114). These institutions were able to jump start faster because of the funding they received.

The race for status amongst universities resulted in laboratories, football stadiums, residence halls, large auditoriums, and towers being added to campuses. Cohen and Kisker (2010) note that the perceived mission of universities – a quest for knowledge and academic excellence – were not a priority, however, to popular trends. Many did this so as to keep the support of the community. An example would be the discriminatory admissions practices against women, ethnic and racial, and religious minorities (Cohen & Kisker, 2010). Additionally, Cohen and Kisker (2010) noted that:

Prior to the Civil War, scarcely two dozen African Americans had graduated from colleges in the United States, despite the fact that freedmen numbered close to one-quarter of a million in 1825 and nearly half a million by the time the Civil War started (p. 119).

Because of the discriminative practices of colleges and universities during that time, everyone who sought to attend higher education would not be successful in terms of access. Consequently, other types of institutions began to take root. For example, Colleges for Negroes. Wilberforce in Ohio and Lincoln University in Pennsylvania started in the 1850s, while Howard would be created by the U.S. Congress in 1867. These institutions were established specifically to admit African American students (Cohen & Kisker, 2010). After the Civil War, many children from families of recently freed slaves were able to matriculate to post-secondary institutions because church and philanthropic organizations funded private colleges created especially for them. Moreover, greater than fifty historically Black four-year colleges, such as Tuskegee and Fisk, were opened. However, not all were accredited, with some still lacking accreditation well into the mid-twentieth century (Cohen & Kisker, 2010). Help for publicly funded colleges for African Americans came in the form of the passage of the second Morrill Act in 1890, which stipulated that “no appropriations would go to states that denied admission to the college on the basis of race unless they also set up separate but equal facilities” and seventeen states took heed (Cohen & Kisker, 2010, p. 119). Historically black colleges and universities still contribute to higher education in America in a large way, depositing so much into African American students. One thing that continues to plague these institutions today is limited financial and other resources, which causes a debate about the equity in education received at these institutions and whether it is truly equitable to that of a predominantly white institution.



## **Racial Desegregation in Higher Education in Tennessee**

The historic *Brown v. Board* decision in 1954 by the Supreme Court that ruled the policy of “separate but equal” to be in violation of the U.S. Constitution was the start of eliminating racial discrimination in public education. Later, the adoption of the prohibitions of the Civil Rights Act of 1964 enabled the enforcement of desegregation, but the fight for equal opportunity and access to higher education is still alive today. The U.S. Executive Order 11246 was issued in an effort to increase minorities and women in educational institutions and Affirmative Action was designed to tackle systemic issues of discrimination and the marginalization of African Americans (Lark, 2012). Provisions of Title VI of the Civil Rights Act of 1964 permitted Affirmative Action and race conscious undergraduate admissions policies for higher education institutions (Lark, 2012). This would mean that colleges and universities could continue crafting their admissions policies to consider race as criteria for admission.

In the state of Tennessee, some may say that the opening of a graduate school at the University of Tennessee in 1952 was the break in segregation. There were some previous exceptions, but in 1952 Black applicants began to be considered for admission (Long, 1958). This was the first time that any public or private institution of higher education in Tennessee opened its doors to Black students (Long, 1958). By mid-1952, a Black student applied to the University of the South (Sewanee), but was denied access by the board of trustees. A protest by theology professors at the institution caused trouble for the Episcopal Church which sponsored the institution and the board later granted admission to the theological school to Black students (Long, 1958). In the fall of 1952, Scarritt College, a Methodist institution in Nashville, Tennessee, began admitting Black students, causing a shift toward desegregation in the state (Long, 1958). Later, an *Education Directory* was published which listed the desegregation status

for twenty-seven former White Institutions of Learning in Tennessee. It outlined the admissions policies for the 1957-58 school term as it related to admitting Black students, as well as included the total number of students enrolled at the institutions and the number of Black students enrolled. Of the schools reporting information for that term, only ten would admit Black students. The University of Tennessee, which had a total enrollment of 7,600 students, only had 25 Black students (Long, 1958, p. 313). While graduate and professional programs at the University of Tennessee had been accepting Black students since 1952, in 1957-58 no Black students had been accepted to the School of Medicine or Dentistry at the Memphis campus (Long, 1958).

The expansion of higher education as a result of the GI Bill in 1944 led to a few benefits including new facilities, an increase in enrollment, and new programs, but in Tennessee not everyone felt the impact of these benefits (Gonzalez, 2017). During the 1960s in Tennessee and all across the U.S., African Americans began pushing social justice agendas. This extended to college campuses. Tennessee would ultimately become home to the *Geier* lawsuit which led the way for desegregation of higher education institutions.

### **The History of Geier**

Desegregation in higher education in Tennessee was marked with a landmark lawsuit geared towards changing opportunity for African Americans, among other things. Twenty-three-year-old Rita Sanders Geier was the plaintiff. She was a student at Vanderbilt Law School and instructor at Tennessee State University. At the same time, she served as a law clerk for attorney George Barrett. The abolishment of the prohibition of Black students attending traditionally white institutions (TWIs) in Tennessee came in 1960 (Gonzalez, 2017). This would be pivotal as it triggered race neutral admissions in Tennessee. However, Geier had an intimate knowledge of

how the vestiges of segregation negatively affected African American students. In her mind, the new policies simply replaced de facto systems and did very little to remove just vestiges, thus leading to an unlawful de jure segregation system (Gonzalez, 2017). Even in terms of public primary and secondary education, de jure segregation (by law) was practiced by states in the South during the late 19th century and de facto segregation (segregation by social practice) became common in other states (Olden, 2015). Although the Supreme Court desegregated schools via the *Brown v. Board of Education* 1954 decision, racial tensions continued to plague the country. One example can be observed through the Arkansas governor calling for the assistance of the National Guard to keep Black students from gaining entry to Little Rock High School in 1957 (Cohen & Kisker, 2010).

For Tennessee, the new practice of unlawful segregation was observed as the TWIs with the more popular academic programs observed growing enrollments and better funding through modified college funding formulas. The new formula created financial hardships for TSU and it suffered declining enrollment due to the absence of high-demand programs (Gonzalez, 2017). The public perception of the quality of the institution declined, especially as similar graduate programs began to be offered by TWIs in close geographic proximity. Those institutions were the University of Tennessee Nashville (UTN), Austin Peay University, and Middle Tennessee State University (MTSU), with UTN posing the biggest threat to TSU since it was only a few miles away. In 1968, a federal lawsuit was filed after Geier and Barrett learned of UTN's plans to expand the downtown Nashville campus. The lawsuit alleged continued unlawful segregation perpetuated by state policies which discouraged integration at TSU and Black students from attending TWIs (Gonzalez, 2017). Their hope was to bring about reform for higher education in Tennessee. Then Governor Buford Ellington, the University of Tennessee Board of Trustees, the

Tennessee Board of Regents (TBR), Tennessee State University, and the Tennessee Higher Education Commission (THEC) were all named as defendants. Moreover, because Congress had committed \$1 million to the expansion of UTN, the U.S. was also a defendant (Gonzalez, 2017). However, the U.S. was dismissed as a defendant and instead provided assistance to the case by becoming a plaintiff. White (1976) notes that the U.S. intervened to seek an injunction to prevent new construction of the UTN facility and to petition the Court to mandate that the defendants produce a plan for desegregation of public institutions of learning in Tennessee.

Federal Judge Frank Gray, Jr. denied the injunction to stop the expansion of UTN but did side with the plaintiff as he also felt that Tennessee failed to adequately remove vestiges of segregation. The defendants were mandated to submit plans to the court outlining plans to eliminate a dual system and how it planned to desegregate TSU. The first plan by the state came in 1969 with mention of upgraded facilities for TSU and plans to recruit White faculty and students, but no mention of a financial commitment to help TSU meet its goals. The courts allowed more time for reporting on specific means by the state to properly address the issue of desegregation, mandating a new plan by 1972. While TWIs had progress during that time, there was no change at TSU. The state also had to consider merging TSU and UTN.

Between 1972 and 1977, the legal battle continued with faculty at TSU joining the suit. Namely, Dr. Raymond Richardson filed a motion to intervene and vowing to represent interests of faculty and students across the state and at TSU, which was approved by Judge Gray. In 1974, the Tennessee Higher Education Commission (THEC) proposed state-wide efforts to aid desegregation as opposed to only focusing issues related to Nashville (Davis, 1992). According to Davis (1992), the plan would include the Desegregation Monitoring Committee (DMC) as a means to monitor the progress of public institutions with regard to desegregation. In 1977, courts

mandated a merger of UTN and TSU citing any expansion of UTN would impede the dismantling of the dual system (Gonzalez, 2017). During the merger, Judge Gray passed away and Judge Wiseman took on the case in 1978.

It wasn't until 1984 that parties reached the first settlement agreement which included provisions for better facilities and gave TSU priority on all new graduate programs in Middle Tennessee (Gonzalez, 2017). It also prohibited MTSU and Austin Peay from creating doctoral level programs and established enrollment ceilings for their graduate programs. The settlement agreement was not without controversial stipulations, as TSU was required to work toward 50% representation of White students by 1993, and 50% faculty and senior administration by 1989 (Gonzalez, 2017). This was very different since no other institutions had racial enrollment or employment utilization goals. However, with regard to student desegregation, a number of important mandates were stipulated by the agreement (Davis, 1992):

- A. Within a year from the agreement, a study must be conducted to determine if a disparity exists between Blacks and Whites in terms of post-secondary education.
- B. A study must be conducted to determine if there is a disparity in the number of graduates of public institutions who go on to attend public graduate or professional schools in Tennessee.
- C. Prohibitions for racial discrimination and practices that exclude other-race persons by institutions of higher education in Tennessee.
- D. Development of plans to address retention, performance, and progression of students at Tennessee public higher education institutions.
- E. Development of programs to increase the number of Black students enrolled in professional schools, with seventy-five Black sophomores from public institutions

being selected each year for five years for pre-enrollment in the state's medicine, law, dentistry, pharmacy, and veterinary medicine programs.

Furthermore, provisions prohibiting any institution from identifying as a predominately one-race school would mean that TSU would be restricted from its association with being a historically Black institution (Gonzalez, 2017). Protests by student caused national coverage of the settlement amidst criticism of Judge Wiseman. During the early 1990s, TSU students began to focus on other ways the settlement had failed the institution, such as the deplorable conditions of many dorms. Then Governor Ned McWherter toured the campus and committed \$127 million to renovations to the campus (Gonzalez, 2017). This was the first financial support offered as part of the settlement.

In 1992, the Supreme Court decided that the state's implementation of race neutral admissions practices was ineffective in ridding Tennessee higher education of segregation. (Gonzalez, 2017). The state then had to eliminate all policies related to the dual system and, most importantly, decided that an institution's racial identification does not violate the Constitution. Thus, TSU remained tied to its designation as a historically Black institution. There was a nearly ten-year period of time which included litigation dealing with compliance of the 1984 agreement. It was agreed that the case be mediated in an effort to settle it.

### **Geier Consent Decree**

The final settlement was approved on January 4, 2001, as a consent decree (Gonzalez, 2017). The decree had a 5-year implementation plan and outlined three areas:

- 1) Statewide issues;
- 2) Middle Tennessee issues; and
- 3) Monitoring and oversight.

The statewide provisions and monitoring would be the most impactful on medical education in the State of Tennessee in terms of certain provisions from the 1984 settlement being upheld. Governing boards were responsible for the implementation, while funding commitments were a part of the agreement to allow for adequate state budgeting (Gonzalez, 2017). A court appointed monitor was put in place to oversee compliance. The State of Tennessee allocated \$77 million to diversity efforts across the state including recruitment and retention programs for students and faculty, scholarships, and new facilities (The University of Tennessee [UT], 2007). Davis (1992) notes that as part of the consent decree, the UT System and State was to make funding available through minority financial aid programs while maintaining any already-established scholarship programs resulting from the Geier suit. Moreover, the State had to cover 40% of the scholarship program, depending on the level of commitment to funding by UT institutions. The maximum commitment from the State was \$450,000.00 per year for five years, and an additional \$1.125 million was to be made available if UT achieved the full match by the State. The additional funds would be used for other –race financial aid programs at the undergraduate level (Davis, 1992). A pivotal moment came on September 21, 2006, when Final Order of Dismissal was granted by Judge Wiseman some 38 years after the lawsuit was filed. Then Governor Phil Bredesen maintained that the end of the lawsuit was not the end the State’s efforts to ensure equality in higher education (Gonzalez, 2017).

### **Medical Education and the Physician Workforce in Tennessee**

Earlier in this chapter there was a discussion of the efforts by AAMC and foundations to recruit diverse candidates to participate in medical education in the U.S. The lack of racial diversity in student populations across medical schools has a grave impact on the lack of racial diversity observed in the physician workforce. The latest data available from the AAMC (2017c)

shows that in 2016 the State of Tennessee had 16,627 active physicians to serve the state's more than 6.5 million citizens. That is roughly 250 active physicians per 100,000 people, which is lower than the state median of 257.6 across the United States of America for that same year. For the 2016-2017 academic year, there were a total of 2,832 MD or DO students in Tennessee, with student enrollment at public MD or DO schools being 14.7 per 100,000 population (AAMC, 2017c). This public student enrollment earned Tennessee the rank of 28 out of the 50 states, excluding the District of Columbia and Puerto Rico (AAMC, 2017c). It is worth noting that for academic year 2016-2017, the percentage of MD students matriculating in-state for Tennessee is 73.5% (AAMC, 2017c). For 2016, the percentage of physicians retained from public undergraduate medical education is 50.4%, ranking Tennessee 11 out of 50 states, again excluding the District of Columbia and Puerto Rico (AAMC, 2017c).

In a report on the current status of the U.S. Physician Workforce, AAMC states that while Blacks and African Americans make up some 13% of the nation's population, they only make up 4% of the physician workforce (AAMC, 2014). The latest census data shows that in the state of Tennessee Blacks or African Americans make up 17.1% of the total population (U.S. Census Bureau, 2017). Data available from AAMC also shows that Black or African American physicians make up only 5.7% of the physician workforce in Tennessee (AAMC, 2014). Efforts to increase minority participation in medical education and ultimately in medicine are important. Programs geared toward attracting minority students to medical education and admissions policies have the potential to impact the pipeline to medicine. In 1986, Congress approved the Council on Graduate Medical Education to assess the physician workforce trends and give appropriate recommendations to federal/private efforts to address any identified concerns (COGME, 1998). The group issued its first report in 1988 and in every report since then, a



consistent concern has been the underrepresentation of minorities in medicine and the consequences of such a workforce that does not reflect the diversity of the U.S. population (COGME, 1998).

Over the years, recommendations have included incentives such as loan and scholarship programs as a means to increase minorities in medical education (COGME, 1998). COGME (1998) offer information about the role of minority physicians in improving minority access to health care. The twelfth report by COGME (1998) states, “Black Americans are not only poorer than White Americans, but they are also sicker” (p. 7). Data within the report shows that there are major differences found in the health of Blacks with regard to disease, life expectancy, and homicide rates (COGME, 1998). Ultimately, a shortage of providers in underserved areas has historically been the greatest barrier to health care access for minorities (COGME, 1998). In a previous 1994 report, *Recommendations to Improve Access to Health Care Through Physician Workforce Reform – Fourth Report*, COGME stated, “Efforts must be made to increase the pool of minority medical school applicants, to increase the proportion selected, and to meet the needs of minority students for financial and academic assistance in completing medical education” (COMGE, 1994, p. 19).

### **Chapter Summary**

This study reviews existing literature around: (1) minorities and the impact of affirmative action in higher education and medical school admissions in the U.S.; and (2) racial diversity among medical school student populations and within the physician workforce specific to a certain region. Specifically, this study examines data reported by medical school applicants at a particular institution in a state with a storied history of racial segregation in its public education system. Current literature is void of any opportunities to learn about medical school admissions

for Blacks at a particular public institution that is not primarily minority serving. Graduating Black physicians will be important in properly addressing the health care access issues specific to Black and African American citizens. A 1985 study by Keith, Bell, Swanson, and Williams supports the idea that African American physicians are more likely to serve populations consistent with their own racial group. Similarly, Moy and Bartman (1995) utilized the National Medical Expenditure Survey to find that minority patients are significantly more likely to be treated by non-White physicians than were non-Hispanic White patients. These findings support tenets of CRT, which are used in this study. Specifically, tenet 4 is used in this study to articulate a dominant view of Whites and show evidence of racial privilege in medical school admissions for a particular institution in the South. For this study, CRT framework is utilized for research on racial minorities and to examine institutional racism. Yosso (2005) states that CRT recognizes the cultural knowledge, skill, and abilities, among other things, held by members of marginalized groups which can otherwise be ignored. AMCAS applicant information related to race for a particular institution could prove useful to the admissions process in further understanding the potential minorities have in contributing to medical education and, on a larger scale, caring for underserved populations as future physicians. The methods used in this study to address the research question are outlined in Chapter 3.

## **Chapter 3**

### **Methodology**

This chapter describes methods that were used to collect and analyze data relevant to admissions to the college of medicine at large, public institution which was impacted by the Geier Consent Decree. Quantitative methodology is applied to this study. Chapter three details the method utilized which employed descriptive statistics and analyses using frequencies. Variables, methods used, and data sources are detailed. To begin, the purpose and an introduction to the research question which underpinned this study. Finally, the null hypotheses are offered followed by an in-depth discussion of the data analysis and methodology.

#### **Purpose of the Study**

The purpose of this study is to investigate the acceptance rates of African American students to the college of medicine at a large, public institution in the state of Tennessee. This research examines medical school acceptance rates based on applicants' response to race questions as part of the application process. This study is focused on examining the impact of desegregation efforts in higher education (the Geier Consent Decree) on African American admission to medical school. From 1991 – 2017, 41,207 candidates applied to the College of Medicine at the institution examined by this study. During the same time frame, 6,574 were admitted with 4,335 students ultimately matriculating to the College of Medicine. As a result, this inquiry was guided by the following research question: Did the Geier Consent Decree of 2001 impact the rate of admissions of African Americans to the college of medicine at a large, public university in the state? The following null hypotheses will be tested:

H<sub>1</sub>: There is no difference in the acceptance rates by race in the years 1991 – 2017.

H<sub>2</sub>: There is no difference in the total GPA by race for admitted students in the years 1991 – 2017.

H<sub>3</sub>: There is no difference in the science GPA by race for admitted students in the years 1991 – 2017.

The results of the study may provide important information about the State's admissions statistical data. Even today, college campuses can be riddled with instances of racial discrimination, which could suggest that we still live a very racialized society. This study utilizes Critical Race Theory (CRT), which has roots in “transforming the relationship among race, racism, and power” (Delgado & Stefancic, 2012, p.3) in an attempt to shed light on how African American students continue to be under-represented in U.S. medical schools. CRT is a qualitative research framework but has been included in this study as a theoretical lens because of the many tools to help educational systems in terms of admissions policies and practices. The CRT movement gained ground in the 1970s after civil rights agendas slowed (Delgado & Stefancic, 2012). Critical legal studies and radical feminism are credited with being the forethought and previous movements of critical race theory (Delgado & Stefancic, 2012). From legal critical studies, legal indeterminacy suggests a single correct outcome for legal cases (Delgado & Stefancic, 2012). This is problematic, as critical legal studies did not account for elements such as race and racism, thus failing to provide avenues for social transformation from oppressive policies and structures created by the legal system.

CRT considers some of the same issues addressed by conventional civil rights but expands them to include broader perspectives such as economics, group- and self- interest, and feelings (Delgado & Stefancic, 2012). One central piece of CRT is the idea that “race and races are products of social thought and relations” (Delgado & Stefancic, 2012, p. 8). This theme holds

that race is not objective or associated with biological and genetic constructions, but rather are invented by society. Material determinism is a second feature of Critical Race Theory, where interest convergence is explained by large factions without an interest to eliminate racism, believing that it “advances the interests of both white elites (materially) and working-class Caucasians (physically)” (Delgado & Stefancic, 2012, p. 8).

Race and racism remain prevalent in higher education which extends to medical education. Ledesma and Calderon (2014) share that in terms of higher education, CRT reveals a few themes: a) color blindness; b) selective admissions policies; and c) campus racial climate (p. 207). Beginning with admissions, students from marginalized racial groups have had more adverse experiences in higher education than their counterparts. In order to make changes to U.S. medical education in terms of the under-representation of African American students, educators should look at admissions through a CRT lens. Doing so could reveal the prevalence of bias in medical school admissions policies and practices. CRT provides relevant tools to medical to identify ways to remove bias and colorblindness from current practices and move towards practices that allow interest convergence.

Throughout the following sections of this chapter, the applied methodology for the research question is described. An overview of the data source is explained next.

### **Sample Population**

This study focuses on students who applied to the college of medicine at a large, public university in the state. All students had to apply for admission through the application portal supported by the Association of American Medical Colleges (AAMC). Race categories on the application included, but were not limited to, Black or African American, Asian, American Indian, White, Alaska Native, Native Hawaiian, and Other or Unknown. Applicants who

identified their race as Black/ African American were the target population. Over the twenty-seven years of data, there were 41,208 applicants. Less than 3% of the records (953) were excluded from the analysis because they did not include a self-identified race and did not contain a GPA. All remaining 40,255 records were used in the analysis. Because this study utilized population-level data, no sampling occurred.

### **Data Collection**

The data source for the current investigation is drawn from archives maintained by AAMC. The data was de-identified for the purpose of this study. Stored demographic data for applicants for the College of Medicine dating back to 1991 was made available. Secured access was provided after completion of a submission to the Institutional Review Board (IRB) at the institution studied and the University of Memphis (U of M). Access was granted to the researcher as a doctoral student at U of M.

The self-reported demographic data represented in the data set includes gender, race, ethnicity, and age for each year from 1991 to 2017. All data is for the fall application cycle for each respective year. Other areas represented in the data include state residency, U.S. citizenship status, total GPA, and science GPA. All information was transmitted to AAMC through the American Medical College Application Service (AMCAS) which is the AAMC's central medical school application processing portal. The service is only available to first year students applying at U.S. medical schools that subscribe to the service. This study focused on applicants' response to race and the reported GPAs over all represented years.

### **Statistical Analysis**

This section provides an outline of the analytical approaches used to answer the research question presented in this study. Descriptive analyses were conducted to learn the admissions

rates of African American students compared to White and other races. The analytic focus of this study is to examine the role of race in medical school admissions. Applicants had the opportunity to identify with any race and, as time has progressed, these options have expanded. In some years, there was an option to select two or more races. For the purpose of any analysis within this study, Black and African American are used interchangeably for race.

Measurable differences in admission rates by racial groups were conducted using descriptive statistics such as percentages, means, and standard deviations. A trend analysis of the overall admission rates in the College of Medicine was conducted. This was followed by a breakdown of the rates of acceptance to the College of Medicine by race. Across racial groups, the main variables considered in the analysis are the following: number of applicants and percent accepted. Acceptance rate was calculated as the number of accepted students divided by the number of applicants.

For the first hypothesis, there is no difference in the acceptance rates by race in the years 1991 – 2017, a test of two proportions was used. The test of two proportions is used to determine whether the  $z$  score (and associated  $p$  value) for two population proportions is statistically significantly different from zero (Laerd Statistics, 2016). According to Social Science Statistics (2020), the test of two proportions uses the  $z$  score to determine whether two populations differ significantly on a single categorical characteristic. To perform a test of two proportions, four assumptions must be met: 1) the existence of one independent variable and one dependent variable that both have two categorical, independent groups; 2) independence of observations, where there is no relationship between the groups; 3) when sampling occurs, it must be random; and 4) a significantly large sample size (Laerd Statistics, 2016). For this study, the independent variable is race and the dependent variable is admission status, and both have

categorical groups (i.e., admission status and race). Each application year represented in the data is separate and there is no relationship between the records in one year and those of any other year. As mentioned earlier, this study utilizes population-level data, thus no sampling occurred. The study also examines more than 40,000 records, thus there is a sufficiently large sample size. Understanding these facts, all assumptions of the test of two proportions are met.

The test of two proportions for acceptance rates examined whether African American applicants tended to get into medical school at the same rate as applicants in the White and Other racial categories. For the purpose of this study, the analysis was divided into three parts: Pre-Geier, the period during Geier, and Post-Geier. The court approved Geier Consent Decree occurred in 2001; hence, the analysis aims to examine whether population proportions for each racial category changed over the three time periods. The analysis is supplemented by data visualizations such as charts and graphs. The observed population proportions of African American students were compared to White students and, separately, to all other race categories.

The Kruskal-Wallis test by ranks was performed for the second and third hypotheses to determine statistically significant differences of GPAs by racial groups. The Kruskal-Wallis H is a nonparametric test is used to determine “if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable” (Laerd Statistics, 2015, p. 1) when the assumptions of a one-way Analysis of Variance are violated. The assumptions of normality and homogeneity of variance for the data set used were not met. The independent variable was the nominal variable of racial group and the continuous dependent variable was GPA. The Kruskal-Wallis H test was used as an alternative to a parametric test because the data in this study fails to meet the assumptions of the one-way ANOVA. There are some basic assumptions for data to fit the one-way ANOVA model: 1)



homogeneity of variance; and 2) dependent variable normally distributed for each group of the independent variable (Laerd Statistics, 2015). The Levene's test of equality of variances revealed that the data for both total GPA and Science GPA violates the homogeneity of variance assumption. Normality is also violated because the GPA data utilized by this study is skewed. There was an unequal number of Ns adding to the violations of the assumptions of the one-way ANOVA. Thus, the Kruskal-Wallis H test was used as the nonparametric alternative. The data for the Kruskal-Wallis H test was again divided into three parts: Pre-Geier, the period during Geier, and Post- Geier. The analysis is supplemented by data visualizations such as tables. Statistical significance was determined at  $p < .05$ , consistent with social sciences (Brace, Kemp, & Snelgar, 2013).

### **Limitations**

This inquiry is limited by the available data. Data was shared with me by AAMC, which retrieved it from the AMCAS system, cleaned it, and de-identified it. Because the data set was de-identified, retrieving any additional information for students who may have self-reported their race a certain way was not feasible. Although the data included other variables such as age, citizenship, and residency, the analyses were limited to race. The data utilized by this study is also limited to the State's only public academic health institution's College of Medicine. The State has one other public medicine professional program but was not founded until years after the initial *Geier* lawsuit. The program is also much smaller admitting less than half the number of medical students the State's public academic health institution admits.

Having received the data completely de-identified, it was not possible to verify individual student declarations of ethnicity or race as reported on their application to medical school through the AMCAS system. This study focuses on a certain population of students enrolled in

medical school, as the data only includes students at a single institution. The analyses were also for very specific time periods. Furthermore, the data was specific to the state where the institution is located. The study does not focus on persistence or medical education; thus, it might not be generalizable to other medical institutions within or outside the state.

### **Summary**

The results of this study are presented in Chapter 4. The findings begin with an overview of all applicants to the college of medicine by racial group, followed by results of the racial group comparison of the proportion of applicants accepted across three time periods: pre-decree, Consent period, and post-decree. Next, results of the examination of applicants accepted from one time period to another are presented. Finally, a comparison of applicant GPAs across all racial groups is presented.

## **Chapter 4**

### **Results**

Results from analyses conducted in this study are presented in described in this chapter. These findings have been organized by the research question and hypotheses presented in the previous chapter. The research question seeks to understand if the Geier Consent Decree of 2001 had an impact on the rate of admissions of African Americans to the college of medicine at a large, public university in the state. First, an overview of the race categories represented by medical school applicants at the institution addressed in this study during the years 1991-2017 is presented. Race categories represented by applicants to the regional medical school between 1991 – 2017 include have been divided into three categories: Black or African American, White, and Other.

#### **Who Applied to Medical School between 1991 and 2017?**

Over twenty-seven application periods, 40,255 candidates submitted AMCAS applications for admission to the medical school addressed in this study. The largest portion of the applicant pool was White (27,337). Black or African American (5,483) and Other (7,435) applicants were significantly less. Broken down by the time periods (pre-decree, consent period, and post-decree), the representation by racial categories is similar to the total. Pre-decree, there were 2,134 African American applicants, 10,251 White applicants, and 2,578 Other applicants totaling 14,963. During the Consent period, there were 1,007 African American applicants, 4,361 White applicants, and 1,061 Other applicants totaling 6,429. For the period after the Consent Decree, there were 2,342 African American Applicants, 12,725 White applicants, and 3,796 Other applicants totaling 18,863 applications. Table 1 provides application and admission information on the racial groups.

Table 1

*Proportion of Applicants Accepted by Time Period by Race*

Source	African American	White	Other	Total
Application Submitted	5,483	27,337	7,435	40,255
Pre Decree	2,134	10,251	2,578	14,963
Consent Period	1,007	4,361	1,061	6,429
Post Decree	2,342	12,725	3,796	18,863
Applicants Accepted	769	4,643	943	6,355
Pre Decree	276	1,668	262	2,206
Consent Period	144	870	145	1,159
Post Decree	349	2,105	536	2,990
Proportion Accepted to Application	14%	17%	13%	16%
Pre Decree	13%	16%	10%	15%
Consent Period	14%	20%	14%	18%
Post Decree	15%	17%	14%	16%

Findings from the research question that guided this study are presented in the following sections.

### **Key Findings**

Comparing accepted students to applicants over all twenty-seven application cycles, the percentage for African American was 14%, while it was 17% for White and 13% for Other. In total, 16% of all applicants were accepted. For the period prior to the Consent Decree, 13% of African American applicants were accepted. For the same period, 16% of White and 10% of Other applicants were accepted. 15% of all applicants were accepted during the period prior to the Consent Decree. During the period of the Consent Decree, 14% of African American, 20% of White, and 14% of Other applicants were accepted for an overall acceptance rate of 18%. For the period after the Consent Decree, 15% of African American, 17% of White, and 14% of Other

applicants were accepted which resulted in an overall acceptance rate of 16% for this time period.

A test of two proportions was used to determine whether the acceptance rates of applicants differed based on race, comparing African American to the White and Other race categories. African American and Other were also compared to the total. Taking the analysis a step further, White was also compared to Other and total. The comparisons were used to test if the acceptance rates were statistically significantly different from zero.

As mentioned in Chapter 2, Tennessee's history of equal access in higher education is marked by the landmark Geier lawsuit, which ended with a consent decree in 2001 with a 5-year implementation plan aimed at increasing minority participation in post-secondary education among other things. For the purpose of this study, it was important to analyze the acceptance of African American applicants for the time periods before, during, and after the Geier Consent Decree for the data available. For the time period prior to the Consent Decree, there was a statistically significant difference in the comparison of percentages of applicants accepted by racial groups as follows: African American to White ( $p = .001$ ); African American to Other ( $p = .001$ ); African American to Total ( $p = .001$ ); White to Other ( $p = .001$ ); White to Total ( $p = .001$ ); and Other to Total ( $p = .001$ ). For the period during the Consent Decree, there was a statistically significant difference in the comparison of percentages of applicants accepted for African American to White ( $p = .001$ ) and African American to Total ( $p = .003$ ). For the same time period, there was not a statistically significant difference in the comparison of African American to Other. Results also show that during the period of the Consent Decree, there was a statistically significant difference in the comparison of percentages of applicants accepted for White to Other ( $p = .001$ ), White to Total ( $p = .012$ ), and Other to Total ( $p = .001$ ).

Analyzing the results of the test of two proportions for the time period after the Consent Decree, there was a statistically significant difference in the comparison of percentages of applicants accepted by racial groups for African American to White ( $p = .047$ ), White to Other ( $p = .001$ ), and Other to total ( $p = .001$ ). There was not a statistically significant difference in the comparison of African American to Other, African American to Total, or White to Total. Table 2 below illustrates the racial group comparisons of acceptance rates by time periods.

Table 2

*Test of Proportions of Applicants Accepted: Racial Group Comparison by Time Period*

Racial Group Comparison	Pre-Decree		Consent Period		Post-Decree	
	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>
African American to White	-3.86	.001*	-4.12	.001*	-1.97	.047*
African American to Other	2.98	.002*	0.42	.670	0.85	.395
African American to Total	-2.22	.026*	-2.89	.003*	-1.19	.234
White to Other	7.76	.001*	4.71	.001*	3.58	.001*
White to Total	3.31	.001*	2.51	.012*	1.64	.101
Other to Total	-6.18	.001*	-3.47	.001*	-2.68	.001*

\*Indicates statistical significance at  $p < .05$

The change within racial group from one period to the next is presented next. There was a one percentage point change in African American applicants accepted from pre-decree to consent period and from consent period to post-decree (13% to 15%). However, this was not statistically significant different in the percentage of African American applicants accepted over time (pre-decree to consent period, consent period to post-degree, or pre-decree to post decree). There was a four-percentage point change for White applicants accepted from pre-decree to consent period

(16% to 20%) and a three-percentage point change from consent period to post-decree (20% to 17%). This represented a statistically significant change in the percentage of White applicants accepted over time for the pre-decree to consent period and the consent period to the post-decree, but there was no statistically significant change from pre-decree to post-decree. There was a four-percentage point change for Other applicants accepted from pre-decree to consent period (10% to 14%), but no change in percentage from consent period to post-decree. There was a statistically significant difference in the percentage of Other applicants accepted over time for the pre-decree to consent period and pre-decree to post decree. These findings are highlighted in Table 3.

Table 3

*Test of Proportions of Applicants Accepted Time Period to Time Period by Racial Group*

Racial Group	Pre-Decree to Consent Period		Consent Period to Post-Decree		Pre-Decree to Post Decree	
	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>
African American	-1.05	.293	-0.45	.652	-1.89	.057
White	-5.37	.001*	5.12	.001*	-0.55	.582
Other	-3.05	.002*	-0.38	.703	-4.68	.001*
Total	-6.05	.001*	4.07	.001*	-2.81	.004*

\*Indicates statistical significance at  $p < .05$

The null hypothesis ( $H_1$ ) associated with comparisons of percentages of applicants accepted by racial groups states that there is no difference in the admission rates by race in the years 1991 – 2017. Based on the results of the test of proportions, the null hypothesis must be rejected.

The second and third null hypotheses presented in this study state there is no difference in the total GPA or science GPA by race for admitted students in the years 1991 – 2017. To test these hypotheses, the Kruskal-Wallis H test was conducted. Over the twenty-seven admissions cycles, 6,355 students across all racial categories were accepted. For African American students, the mean total GPA was 3.447 ( $N=769$ ,  $SD=.369$ ). For White students, the mean total GPA was 3.663 ( $N=4643$ ,  $SD=.282$ ). The mean total GPA for Other students was 3.626 ( $N=943$ ,  $SD=.284$ ). The total mean GPA for all accepted students for the years 1991 – 2017 was 3.63 ( $N=6355$ ,  $SD=.302$ ). The null hypothesis that the distribution total GPA is the same across categories of race must be rejected ( $p = .000$ ).

Examining the science GPA for all accepted students for the same time period, the mean was 3.57 ( $N=6354$ ,  $SD=.360$ ). The mean science GPA for African American students was 3.319 ( $N=769$ ,  $SD=.465$ ), while the mean science GPA for White was 3.614 ( $N=4642$ ,  $SD=.325$ ) and 3.561 ( $N=943$ ,  $SD=.339$ ) for Other. The null hypothesis that the distribution of science GPA is the same across categories of race must also be rejected ( $p = .000$ ).

### **Summary**

This chapter has presented the findings of the current study, examining the acceptance rates of African Americans compared to White and Other racial categories for a regional medical school in the state of Tennessee. Over the twenty-seven application cycles, the number of African Americans accepted was lower than both the White and Other race categories. The test of two proportions found that there is statistically significant difference in the comparison of percentage of applicants accepted who identified as African American compared to those who identified as White across all three time periods (pre-decree, consent, and post-decree). Prior to the Consent decree there was also a statistically significant difference in acceptance between



African American and Other applicants. Both prior to and during the consent period, there was a statistically significant difference in acceptance for African Americans compared to the total. The comparison of the acceptance of White to Other applicants also yielded a statistically significant difference across all three time periods. Comparisons of acceptance for White to total showed a statistically significant difference for the periods prior to and during the consent decree. In comparing Other to total applicants accepted, there was a statistically significant difference across all three time periods. Comparisons of GPA for accepted applicants revealed that the mean for both total and science GPA of the African American category was lower than White and Other. A discussion of this study is presented and outlined in Chapter 5.

## Chapter 5

### Discussion and Conclusions

This paper began with a discussion of the storied history of race, equality, and acceptance of minority populations in the United States. Many areas of American life such as education had remnants of discrimination and mistreatment dating back many years. The main group affected has been African Americans beginning with slavery. The journey to equity in access to education for African Americans has been an uphill battle. As early as the 19<sup>th</sup> century, very few African Americans participated in higher education (Cohen & Kisker, 2010). In terms of public primary and secondary education, de jure segregation was being practiced in southern states (Olden, 2015). Segregation and other forms of discrimination led to the scarce number of African Americans participating in higher education and, as time went on, doctrines such as “separate but equal” became a means to deal with the issue. Ultimately, this societal response was ruled unconstitutional forcing interactions between White and Black people (Caldes and Blankston, 2003). However, the already established social construction of race with a binary line (White and Black) had been deeply engrained in the minds of people (Olden, 2015). As a result, African Americans have continued to be underrepresented in higher education, including graduate and professional education.

Medical education has seen disparities in terms of participation by African American students, which has resulted in a lack of African American physicians (Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce, 2004). The use of affirmative action to remove vestiges of racial segregation in college admission and medical education has had much debate. Nationally, three major court cases have revealed how affirmative action has influenced medical school

admissions (*Regents of University of California v. Bakke* (1978), *Grutter v. Bollinger* (2003), and *Fisher v. University of Texas at Austin* (2012-2013) (Blake, 2012). In the State of Tennessee, the *Geier v. Tennessee* court case sought to break down vestiges of segregation in higher education. Ultimately, African Americans continue to be under-represented in medical education and the physician workforce in Tennessee (AAMC, 2017c).

All aspiring medical students apply through the AAMC AMCAS system where they have the opportunity to self-identify in terms of race and ethnicity. While selections for race and ethnicity on the AMCAS application have changed over the years, the option to identify as White or Black or African American has been consistent. As explained in previous chapters, this presents an opportunity to examine the numerical under-representation of African Americans in a regional medical school which produces more than 70% of Tennessee's physician workforce, where African Americans continue to be under-represented (AAMC, 2017c). This chapter is a discussion of this study's findings. It also includes implications for future research related to medical education.

## **Discussion**

With CRT guiding this investigation, a single research question was addressed. The research question was an investigation of the acceptance rates for African Americans at a regional medical school in Tennessee compared to White and Other applicants. The racial composition of the applicant pools between 1991 and 2017 at the regional medical school were examined. With the under-representation of African Americans the focus of the current study, acceptance rates and total and science GPAs of African Americans at the regional medical school were compared to other applicants.

In framing the research question, a historical analysis which guided this study was offered, investigating the vestiges of racism and segregation in higher education and U.S. medical education. Per Delgado and Stefancic (2012), Critical Race Theory (CRT) is rooted in transforming the relationship between race, racism, and power. Matsuda (1993) notes that CRT requires a historical analysis, taking the position that “racism has contributed to all contemporary manifestations of group advantage and disadvantage” (p. 6). Through this study, there was an examination of the racial makeup of the applicant pool to a public regional medical school in Tennessee between 1991-1992 and 2017-2018. Roughly 73% of all admitted students were White, while only 12% were African American and nearly 15% Other. During the years prior to the Geier Consent Decree (1991-2000), more than 75% of all admitted students were White, while African American represented only 12.5% and Other accounted for close to 12%. During the years of the Consent Decree (2001-2006), White students again made up 75% of all admitted students and African American and Other race categories both made up roughly 12.5% of admitted students. For the years after the Consent Decree (2007-2017), White students represented greater than 70% of all admitted students. For the same period, African Americans represented roughly 12% of all admitted students and Other accounted for roughly 18%.

Examining the proportion of accepted students to those who applied, the institution had a 16% acceptance rate overall considering all twenty-seven admissions cycles. The African American (14%) and Other (13%) categories were lower than White (17%) over all admissions cycles. Breaking the data down by time period, the African American race category had a 13% proportion of accepted to applications for the period prior to the Consent Decree. This increased one percentage point during the Consent Decree and another percentage point for the period after the decree (13% to 15%). As stated previously, this change was not statistically significant.

However, what was found to be statistically significantly different over time were changes in the proportion of accepted to application for the White race category from pre-decree to consent period (16% to 20%) and consent period to post-decree (20% to 17%). The change from pre-decree to post-decree for White was not statistically significant. Another statistically significant change was observed in the percentage of Other applicants accepted over time from pre-decree to consent period and pre-decree to post decree (10% to 14%). It is worth noting that there was not a percentage change for the Other race category from consent period to post-decree.

The findings demonstrate that African Americans continue to be under-represented as evidenced by the insignificant changes in acceptance over time from pre-decree to post-decree. These findings have the potential to explain the under-representation of African Americans in medical education and the state's physician workforce. Moreover, these findings are consistent with research revealing an under-representation of African Americans in medical education and the physician workforce across the United States. These findings also support literature which suggests that African Americans continue to be a minority (only 5.7%) within the physician workforce in Tennessee (AAMC, 2014).

While this analysis of the applicant pool yielded some predictable results, some findings were unexpected and have implications for future research. For example, while the acceptance African American students paled in comparison to White students, the Other race category had a statistically significant increase in accepted applicants from pre-decree to post-decree. This reveals a need to do more research on this particular category to understand if students in this category might also be described as under-represented in medicine by the AAMC. Another interesting finding is the statistically significant increase in the number of White applicants accepted from pre-decree to consent period (16% to 20%). For the same period, there was only a

one-percentage point increase (13% to 14%) in African American applicants accepted which was found to not be statistically significant. While the Consent Decree sought to increase African American participation in higher education, these results show that instead the participation of White students was increased in terms of medical education.

For the purpose of this study, records without a declaration for race (“Unknown”) were excluded. However, Smith, Moreno, Clayton-Pederson, Parker, and Teraguchi (2005) suggest that most often the “Unknown” category is mostly White students. An exploration to understand why applicants select this category might produce interesting results in future research. Such results could have the potential to show an even greater participation of White students in medical education in relation to this study.

For the purpose of this study, it was important to examine acceptance rates prior to the years of the Consent Decree since public higher education institutions had been operating under the 1984 settlement of the Geier lawsuit. The settlement stipulated a few things as it relates to medical education specifically: 1) through their respective governing board, state-supported medical schools should obtain a list of African American students enrolled at Tennessee public institutions who had taken the Medical College Admissions Test (MCAT) and actively seek applications from qualified students whose names were included on the list; 2) develop programs to increase the number of African American students who enroll in medical school; and 3) beginning in 1985, 75 African American students enrolled in public institutions as Tennessee residents would be selected for pre-enrollment in medical school (*Geier v. Alexander*, 1984). The school had to assist these students with pre-professional curricula, host the students in summer programs, and agree to admit the students if they successfully completed undergraduate coursework and met the minimum admissions standards (*Geier v. Alexander*, 1984). It was

further agreed in the 2001 consent decree that public institutions would adopt certain provisions from the 1984 settlement, including the continuance of all existing *Geier* initiatives and scholarship programs (*Geier v. Sundquist*, 2001).

The Tennessee-Institutes for Pre-Professionals (TIP) program was initiated as a result of the 1984 *Geier* settlement. While many state-supported institutions rolled out this program on their campuses, it was enacted in 1987 at the institution examined in this study and is still funded at the time of this discussion. A 2017 annual report produced by the institution states that TIP is a “state-wide effort whose objective is to increase the representation of various groups of students who are underrepresented in the health professions” (Health Career Programs Annual Report, 2017). The 2017 annual report further acknowledges that since the program’s inception, 1,661 students have participated with “sizeable concentrations of Tennessee residents” (p. 7). While the report does not break down the racial composition or program declaration (i.e., medicine, dentistry, etc.) of participants over the years, data provided by AAMC for the institution provides that between 1991 and 2017, 6,355 students were accepted. Of those, only 769 were African American. For the same time period, 4,161 students matriculated to the institution, with only 415 matriculates identifying as Black or African American, 3,137 White, and 609 as Other. It is also worth noting that of all 40,255 applications to the medical school examined, a very small percentage (12.6%) of applicants graduated from an undergraduate school in Tennessee.

Having examined the extent of the underrepresentation of African American students in a regional medical school, the current study further compared both the total and science GPAs of applicants across categories of race (African American, White, Other, and total) to see if there was a statistically significant difference. There was an observed higher total GPA for White

compared both African American and Other. The same is true for the science GPA, where again the mean GPA for White was higher than the means for both African American and Other. It is also worth noting that for both total and science GPA, the mean GPA for White was higher than the mean total GPA. The mean total and science GPA for Other was also higher than African American but was not higher than the overall mean total and science GPAs. Ultimately, the mean total and science GPAs for African American was consistently lower than White and Other. Total GPA and Science GPA across categories of race were both statistically significantly different. While the differences were statistically significant, GPA is only one measure of a student's ability to be successful. The admissions process also takes into consideration scores of a standardized test (MCAT), evaluations from in-person interviews, and other criteria.

As mentioned earlier, the regional medical school produces more than 70% of the state's physician workforce. These results suggest that while state-specific provisions such as the Geier Consent Decree may have aided in the efforts of the public regional medical school to recruit minorities, there was not a significant difference in the proportion of African Americans accepted. Descriptive statistics also show that there were fewer African American applicants over the twenty-seven application periods compared to White and Other applicants, which suggests that African American candidates are perhaps applying and matriculating to other medical schools both within and outside the state of Tennessee at greater rates. These findings have implications for future research to learn where African American applicants are applying to medical school in Tennessee and beyond. By way of a qualitative study with interviews of recently admitted African American applicants, future research could also explore the factors contributing to this under-represented group's decision regarding where to apply and attend medical school. Moreover, there is a need to do future research on African American medical



school applicants, accepted students, and matriculants in Tennessee compared to other race categories to further understand how they fair in terms of academic ability (i.e., GPA, MCAT score, etc.).

Sponsored by AAMC, the Liaison Committee on Medical Education (LCME) is the accrediting body for many programs leading to the MD degree in the U.S. Any medical education program in the United States leading to the Doctor of Medicine (MD) degree must be in compliance with certain accreditation standards set by LCME. LCME expressly states, “While recognizing the existence and appropriateness of diverse institutional missions and educational objectives, the LCME subscribes to the proposition that local circumstances do not justify accreditation of a substandard program of medical education leading to the MD degree” (LCME, 2020). The latest accreditation standards (*Functions and Structure of a Medical School*) produced by LCME (see Appendix B) include a provision outlining requirements for the academic and learning environment of a medical school. Specifically, it states “A medical school ensures that its medical education program occurs in professional, respectful, and intellectually stimulating academic and clinical environments, recognizes the benefits of diversity, and promotes students’ attainment of competencies required of future physicians” (LCME, 2019, p. 4). Further outlining the requirements of compliance with this standard, there is a subsection dedicated to Diversity/Pipeline Programs and Partnerships which prescribes, in part, that institutions should have effective policies and practices, as well as recruitment and retention activities to support diversity outcomes among “its students, faculty, and senior administrative staff” (LCME, 2019, p. 4). The standard lists the use of programs and partnerships that achieve “mission-appropriate” diversity among applicants for admission as a means to show compliance.

It further explains that such programs and partnerships and any outcomes should be evaluated (LCME, 2019).

To supplement the mention of benefits of diversity in accreditation standards, LCME (2019) provides the following: “In a medical education program, the facts that having medical students and faculty members from a variety of socioeconomic backgrounds, racial and ethnic groups, and other life experiences can: 1) enhance the quality and content of interactions and discussions for all students throughout the preclinical and clinical curricula; and 2) result in the preparation of a physician workforce that is more culturally aware and competent and better prepared to improve access to healthcare and address current and future health care disparities.” (p.21). Mission-appropriate diversity is explained by LCME (2019) as “The inclusion, in a medical education program’s student body and among its faculty and staff and based on the program’s mission, goals, and policies, of persons from different racial, ethnic, economic, and/or social backgrounds and with differing life experiences to enhance the educational environment for all medical students” (p. 24). The inclusion of diversity-specific standards for accreditation which take into account a program’s policies and practices related to the racial composition of admitted classes is of particular importance to this study. Beyond any state-specific provisions which consider increasing the number of African American students in medical educations, the institution examined is also required to be in compliance with all accreditation standards in order to grant the MD degree. Therefore, the institution examined in this study should seek to have a greater understanding of the racial composition of accepted students and how this impacts the overall learning environment. In a 2015 White Paper titled *LCME Consensus Statement Related to Satisfaction with Element 3.3, Diversity/Pipeline Programs and Partnerships* (see Appendix C), LCME outlined the statement of unsatisfactory compliance:

### “Statement of Unsatisfactory

Medical education programs will be found to be unsatisfactory with Element 3.3 when they LACK one or more of the following:

- A mission-appropriate diversity policy with identification of diversity groups for students, faculty and senior administrative staff.
- Ongoing systematic recruitment and retention activities, e.g. pipeline programs and partnerships, to achieve mission-appropriate diversity outcomes in its students, faculty and senior administrative staff.
- Methods to evaluate the effectiveness of activities to achieve the mission-appropriate diversity outcomes.
- Evidence of effective recruitment and retention programs including the offering and acceptance of positions to qualified student, faculty, and staff applicants who are in the school’s diversity groups.
- Sufficient progress toward attaining the numbers of students, faculty, and senior administrative staff from the school’s diversity groups to meet its mission-appropriate diversity outcomes” (p. 1).

Literature supports the idea that a more diverse student population positively impacts the overall learning environment for all students and LCME seems to have adopted the same philosophy in terms of medical education and its requirements of MD-granting programs in the U.S. Any program leading to the MD degree which is found to be out of compliance with any standards risks losing its accreditation and its ability to award the MD degree. At the time of this discussion, the institution examined in this study had information posted on its website that indicated an upcoming LCME review process with planning beginning as early as 2018. This

process occurs every eight years. In preparation for the LCME review, the institution had planned an Independent Student Analysis for Spring 2019 to evaluate strengths and areas of growth and improvement. The analysis had not been completed at the time of this discussion and the review was scheduled to complete in November 2021 with a site visit by LCME.

### **Limitations**

The relatively small class sizes within the college of medicine at the institution investigated is a limitation of this study. The institution investigated in this study is the only public academic health institution in its state, but not the only public Doctor of Medicine degree granting program in the state. Therefore, results of this study might not be applicable to other institutions or programs in the state. Additionally, studies of other ethnic and racial groups may not yield the same results as there are other races and ethnic groups that are considered underrepresented within the field of medicine. The findings are limited to the data set representative of only twenty-seven application cycles (1991-2017) at a regional medical school. Access to this data was granted through an agreement with AAMC. All data received as a result of the agreement was de-identified as a means to protect applicants. It is not practical to conduct future research which could connect subjects with the data.

Another limitation is the change to the method for collecting race/ethnicity data over the years by the AMMC. From academic year 2002-2003 until academic year 2012-2013, the AAMC collected race/ethnicity data in two questions—one question asked about the race or races with which an individual identified, and the other question asked about Hispanic origin. From academic year 2013-2014 to the present, the AAMC has collected race/ethnicity data in a single question that shows all of the race and Hispanic categories that an individual may select. Additionally, race/ethnicity data are only presented for U.S. citizens and permanent residents.

What has been consistent throughout all years of data examined in this study is the ability for an applicant to select White or Black or African American as their race. Given the many different combinations of race with which an individual may self-identify in AAMC data collections, there are numerous ways in which these data could be analyzed and displayed.

Finally, this study only considered counts for individuals who identified as Black or African American alone and not in combination with any other race categories. There may be other applicants who selected Black or African American in combination with other race categories. This study took on a mono-racial approach in an effort to contest dominant race ideas through a CRT lens. This approach was helpful in examining the majority race represented in the data compared to the African American racial group. Future implications for research include studies to examine the multi-race categories within applicant data to understand how these groups might also contribute to efforts to increase diversity in medical education and the physician workforce. A final noteworthy limitation to the current study is the investigative nature utilizing quantitative methodology to give a general overview of 1991-2017 applicants to a regional medical school, specifically focusing on Black or African American applicants compared to White and Other race categories. This approach considered data from AMCAS applicants who responded to questions related to race/ethnicity to learn who applied and was accepted to medical school. Overall, the study revealed information that will be useful for future quantitative and qualitative research.

### **Delimitations**

This study only focused on applicants to the College of Medicine of the institution investigated in this study between 1991 and 2017. While the institution has greater than 3,000 students across six colleges, only admissions data from the Doctor of Medicine degree program

will be considered. Because the majority of all physicians in the state of Tennessee are trained through medical education at the institution studied in this research, data from applicants or admitted/enrolled students at the state's other public medical school will not be examined.

### **Theoretical Implications**

Through descriptive analyses, the findings highlight the extent of the under-representation of African Americans in medical education in the state of Tennessee. These findings further point to the perpetuation of White supremacy in U.S. medical education, which has led to African Americans being under-represented in the physician workforce in Tennessee and beyond. Utilizing a CRT lens proved useful to the examination presented in this study by highlighting important statistics related to African Americans and medical education in Tennessee. In this section I outline how tenets of CRT (Delgado & Stefancic 2001, 2012; Matsuda 1993) have informed the findings of this study.

To start, this study focused primarily on Black or African American applicants to medical school, which is a group described as being under-represented in medicine by AAMC. By doing so, this investigation examined how a minority group has generally been admitted to medical school opposed to society's dominant race. The associated findings revealed that African Americans continue to be a marginalized group in medical education which supports CRT's idea of group advantage and disadvantage in a contemporary form. Within the regional medical school which produces more than 70% of the state's physician workforce, White students continue to make up the majority of the student population and this examination revealed a statistically significant increase in the acceptance for White students during the time of a state-specific provision designed to increase African American participation in education. CRT scholarship connects this to historical privilege based on race, highlighting how dominant society

racializes minority groups at different times and during various processes. Perhaps one implication could be the need to move to a more holistic admissions process which takes into account the lived experiences of marginalized groups of medical school applicants in an effort to shift towards a more inclusive approach.

The current investigation highlights the effects of low acceptance of African Americans in medical education on a state's physician workforce. This has the potential to contribute to health disparities caused by fewer minority physicians available to serve minority populations, and an absence of more culturally proficient providers. As a result, it would be beneficial to the learning environment to increase the racial diversity in the student population and the physician workforce could also benefit from a greater representation of minority providers. Interest convergence as described by CRT could be supported by this idea if ways to remove bias and colorblindness (race-neutral) ideologies from the admissions are identified. Policy implications are plentiful in that focusing on the under-representation of African Americans and other groups in medical education could lead to more race-conscious admissions processes to address the need for more minority physicians and break some barriers to access to healthcare for minority populations.

## **Conclusion**

In Chapter 1, the background of the current study was introduced, citing the storied history of race and equality in the United States in terms of how minority populations have been able to access education. There was also discussion about access to medical education and the resulting physician workforce, which ultimately gave way to the purpose of this study. A review of literary works was presented in Chapter 2 with information about the history of medical School in the United States and how Affirmative Action may have influenced medical school

admissions over the years. Taking a closer look at the South, racial desegregation efforts for higher education in Tennessee was discussed with a particular focus on a state-specific mandate referred to as the Geier Consent Decree. In Chapter 3, there was a discussion of the central tenets of Critical Race Theory as a framework for this quantitative study related to the under-representation of African Americans in the college of medicine at a large, public institution in the state of Tennessee. Most important to this investigation was the admissions data. While not generally applied to quantitative research designs, CRT provided a relevant lens to examine U.S. medical education in terms of admission of groups that still remain under-represented in medicine. The methodology used in this study was also outlined in Chapter 3. Results from the study were presented in Chapter 4, which showed that, even with state-specific legislation geared toward increasing African American participation in higher education, historical privilege has led to greater advantage for White students while African Americans continue to be disadvantaged. Medical education in the U.S., and specifically Tennessee, remains impacted by the binary color line between Whites and Blacks, which the Geier Consent Decree sought to eradicate. Without race-conscious admission practices African Americans will continue to be under-represented in medical education and in the physician workforce.

This study sought to address a gap in existing research on medical school admissions of African American students given state-specific provisions that might influence acceptance rates. In consideration of the lack of representation of underrepresented minorities in health professions (Smedley, Butler & Bristow, 2004), examining how African American students are represented in medical school admissions was critical. As mentioned in Chapter 1, prior research suggests that the answer is graduating racially diverse medical doctors to enter the workforce (Smedley, et al., 2004). The findings of this study suggest that it starts with ensuring that African Americans



are admitted to medical school at a proportionate rate as other racial groups. Future research should be conducted to examine student success outcomes and the experiences of African American students who matriculated to the institution studied in terms of retention and completion.

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## Appendix A

### Definition of Terms

<i>Term</i>	<i>Definition</i>
African American (Black)	Also referred to as Black, African American is an ethnic group with total or partial ancestry from Africa. The term generally refers to descendants of enslaved African people who were brought to the United States by force to work.
Association of American Medical Colleges	Founded in 1876, the Association of American Medical Colleges (AAMC) is a not-for-profit association dedicated to transforming health care through innovative medical education, cutting-edge patient care, and groundbreaking medical research. Its members are all 151 accredited U.S. and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems, including 51 Department of Veterans Affairs medical centers; and more than 80 academic societies.
Geier Consent Decree	In 1984, U.S. District Court ordered a settlement of a 1968 lawsuit filed by Rita Sanders Geier, that imposed racial goals for all Tennessee colleges. In 2001, both sides agreed to replace it with a stipulation agreement—the Geier Consent Decree. That agreement led to the state’s allocating \$77 million for diversity initiatives. Across the state, such efforts as recruiting and retention programs for both faculty members and students, scholarships, new facilities, and endowments affected every state college and university.
Historically Black Colleges and Universities (HBCU)	Any historically black college or university that was established prior to 1964 with the primary mission of educating Black/African American students.
Liaison Committee on Medical Education	The Liaison Committee on Medical Education (LCME) is the U.S. Department of Education-recognized accrediting body for programs leading to the M.D. degree in the United States.
Predominately White Institution	Predominantly white institution (PWI) is the term used to describe institutions of higher learning in which Whites account for 50% or greater of the student enrollment.



Tennessee Institutes for Pre-Professionals

Tennessee Institutes for Pre-Professionals (TIP) is a summer residential program at a large, public institution, designed to increase the representation and active participation of underrepresented groups in the healthcare field.

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## **Appendix B**

### LCME Functions and Structure of a Medical School

Standards for Accreditation of Medical Education Programs Leading to the MD Degree

Published March 2019  
For surveys in the 2020-21 Academic Year  
Standards and Elements Effective July 1, 2020

LCME® Functions and Structure of a Medical School  
Standards for Accreditation of Medical Education Programs Leading to the MD Degree

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## Introduction

Accreditation is a voluntary, peer-review process designed to attest to the educational quality of new and established educational programs. The Liaison Committee on Medical Education (LCME) accredits complete and independent medical education programs leading to the MD degree in which medical students are geographically located in the United States or Canada for their education and which are operated by universities or medical schools chartered in the United States or Canada. Accreditation of Canadian medical education programs is undertaken in cooperation with the Committee on Accreditation of Canadian Medical Schools (CACMS). By judging the compliance of medical education programs with nationally accepted standards of educational quality, the LCME serves the interests of the general public and of the medical students enrolled in those programs.

To achieve and maintain accreditation, a medical education program leading to the MD degree in the U.S. must demonstrate appropriate performance in the standards and elements contained in this document. The accreditation process requires a medical education program to provide assurances that its graduates exhibit general professional competencies that are appropriate for entry to the next stage of their training and that serve as the foundation for lifelong learning and proficient medical care. While recognizing the existence and appropriateness of diverse institutional missions and educational objectives, local circumstances do not justify accreditation of a substandard program of medical education leading to the MD degree.

The LCME regularly reviews the content of the standards and elements, and seeks feedback on their validity, importance, and clarity from members of the medical education community, including its sponsoring organizations. Changes to existing standards and elements that impose

new or additional compliance requirements are reviewed by LCME’s stakeholders and are considered at a public hearing before being adopted. Once approved, new or revised standards are published in the Functions and Structure of a Medical School and in the relevant version of the Data Collection Instrument (DCI), which will indicate when the changes become effective. Such periodic review may result in the creation or elimination of a specific standard and/or element, or a substantial reorganization of the Functions and Structure of a Medical School. It is important, therefore, that school personnel consult the version of these documents specific to the year in which a review (e.g., survey visit, status report) of the medical education program will occur.

The Functions and Structure of a Medical School is organized according to 12 accreditation standards, each with an accompanying set of elements. The language of each of the 12 LCME accreditation standards is a concise statement of the expectations of that standard. The elements within a standard specify the components that collectively constitute the standard; they are statements that identify the variables that need to be examined in evaluating a medical education program’s compliance with the standard. The LCME will consider performance in all the elements associated with a specific standard in the determination of the program’s compliance with that standard.

The Glossary of Terms for LCME Accreditation Standards and Elements has been incorporated into the Functions and Structure of a Medical School for the reader’s convenience. The glossary provides the LCME’s definitions of terms used in the Functions and Structure of a Medical School.

As you read this document, please note the following:

The 12 standards are organized to flow from the level of the institution to the level of the student. As a reference, tables at the end of this document provide a mapping of the standards in place for academic year 2014-15 to the standards and elements in place for academic year 2020-21.

### Standard 1: Mission, Planning, Organization, and Integrity

A medical school has a written statement of mission and goals for the medical education program, conducts ongoing planning, and has written bylaws that describe an effective organizational structure and governance processes. In the conduct of all internal and external activities, the medical school demonstrates integrity through its consistent and documented adherence to fair, impartial, and effective processes, policies, and practices.

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#### 1.1 Strategic Planning and Continuous Quality Improvement

A medical school engages in ongoing strategic planning and continuous quality improvement processes that establish its short and long-term programmatic goals, result in the achievement of measurable outcomes that are used to improve educational program quality, and ensure effective monitoring of the medical education program’s compliance with accreditation standards.

#### 1.2 Conflict of Interest Policies

A medical school has in place and follows effective policies and procedures applicable to board members, faculty members, and any other individuals who participate in decision-making affecting the medical education program to avoid the impact of conflicts of interest in the operation of the medical education program, its associated clinical facilities, and any related enterprises.

### 1.3 Mechanisms for Faculty Participation

A medical school ensures that there are effective mechanisms in place for direct faculty participation in decision-making related to the medical education program, including opportunities for faculty participation in discussions about, and the establishment of, policies and procedures for the program, as appropriate.

### 1.4 Affiliation Agreements

In the relationship between a medical school and its clinical affiliates, the educational program for all medical students remains under the control of the medical school's faculty, as specified in written affiliation agreements that define the responsibilities of each party related to the medical education program. Written agreements are necessary with clinical affiliates that are used regularly for required clinical experiences; such agreements may also be warranted with other clinical facilities that have a significant role in the clinical education program. Such agreements provide for, at a minimum the following:

The assurance of medical student and faculty access to appropriate resources for medical student education

The primacy of the medical education program's authority over academic affairs and the education/assessment of medical students

The role of the medical school in the appointment and assignment of faculty members with responsibility for medical student teaching

Specification of the responsibility for treatment and follow-up when a medical student is exposed to an infectious or environmental hazard or other occupational injury

The shared responsibility of the clinical affiliate and the medical school for creating and maintaining an appropriate learning environment

### 1.5 Bylaws

A medical school promulgates bylaws or similar policy documents that describe the responsibilities and privileges of its administrative officers, faculty, and committees.

### 1.6 Eligibility Requirements

A medical school ensures that its medical education program meets all eligibility requirements of the LCME for initial and continuing accreditation, including receipt of degree-granting authority and accreditation by a regional accrediting body by either the medical school or its parent institution.

## Standard 2: Leadership and Administration

A medical school has a sufficient number of faculty in leadership roles and of senior administrative staff with the skills, time, and administrative support necessary to achieve the goals of the medical education program and to ensure the functional integration of all programmatic components.

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### 2.1 Administrative Officer and Faculty Appointments

The senior administrative staff and faculty of a medical school are appointed by, or on the authority of, the governing board of the institution.

### 2.2 Dean's Qualifications

The dean of a medical school is qualified by education, training, and experience to provide effective leadership in medical education, scholarly activity, patient care, and other missions of the medical school.

### 2.3 Access and Authority of the Dean

The dean of a medical school has sufficient access to the university president or other institutional official charged with final responsibility for the medical education program and to other institutional officials in order to fulfill his or her responsibilities; there is a clear definition of the dean's authority and responsibility for the medical education program.

### 2.4 Sufficiency of Administrative Staff

A medical school has in place a sufficient number of associate or assistant deans, leaders of organizational units, and senior administrative staff who are able to commit the time necessary to accomplish the missions of the medical school.

### 2.5 Responsibility of and to the Dean

The dean of a medical school with one or more regional campuses is administratively responsible for the conduct and quality of the medical education program and for ensuring the adequacy of faculty at each campus. The principal academic officer at each campus is administratively responsible to the dean.

### 2.6 Functional Integration of the Faculty

At a medical school with one or more regional campuses, the faculty at the departmental and medical school levels at each campus are functionally integrated by appropriate administrative mechanisms (e.g., regular meetings and/or communication, periodic visits, participation in shared governance, and data sharing).

## Standard 3: Academic and Learning Environments

A medical school ensures that its medical education program occurs in professional, respectful, and intellectually stimulating academic and clinical environments, recognizes the benefits of diversity, and promotes students' attainment of competencies required of future physicians.

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### 3.1 Resident Participation in Medical Student Education

Each medical student in a medical education program participates in one or more required clinical experiences conducted in a health care setting in which he or she works with resident physicians currently enrolled in an accredited program of graduate medical education.

### 3.2 Community of Scholars/Research Opportunities

A medical education program is conducted in an environment that fosters the intellectual challenge and spirit of inquiry appropriate to a community of scholars and provides sufficient opportunities, encouragement, and support for medical student participation in the research and other scholarly activities of its faculty.

### 3.3 Diversity/Pipeline Programs and Partnerships

A medical school has effective policies and practices in place, and engages in ongoing, systematic, and focused recruitment and retention activities, to achieve mission-appropriate diversity outcomes among its students, faculty, senior administrative staff, and other relevant members of its academic community. These activities include the use of programs and/or partnerships aimed at achieving diversity among qualified applicants for medical school admission and the evaluation of program and partnership outcomes.

### 3.4 Anti-Discrimination Policy

A medical school does not discriminate on the basis of age, creed, gender identity, national origin, race, sex, or sexual orientation.

### 3.5 Learning Environment/Professionalism

A medical school ensures that the learning environment of its medical education program is conducive to the ongoing development of explicit and appropriate professional behaviors in its medical students, faculty, and staff at all locations. The medical school and its clinical affiliates share the responsibility for periodic evaluation of the learning environment in order to identify positive and negative influences on the maintenance of professional standards, develop and conduct appropriate strategies to enhance positive and mitigate negative influences, and identify and promptly correct violations of professional standards.

### 3.6 Student Mistreatment

A medical school develops effective written policies that define mistreatment, has effective mechanisms in place for a prompt response to any complaints, and supports educational activities



aimed at preventing mistreatment. Mechanisms for reporting mistreatment are understood by medical students, including visiting medical students, and ensure that any violations can be registered and investigated without fear of retaliation.

#### Standard 4: Faculty Preparation, Productivity, Participation, and Policies

The faculty members of a medical school are qualified through their education, training, experience, and continuing professional development and provide the leadership and support necessary to attain the institution's educational, research, and service goals.

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##### 4.1 Sufficiency of Faculty

A medical school has in place a sufficient cohort of faculty members with the qualifications and time required to deliver the medical curriculum and to meet the other needs and fulfill the other missions of the institution.

##### 4.2 Scholarly Productivity

The faculty of a medical school demonstrate a commitment to continuing scholarly productivity that is characteristic of an institution of higher learning.

##### 4.3 Faculty Appointment Policies

A medical school has clear policies and procedures in place for faculty appointment, renewal of appointment, promotion, granting of tenure, remediation, and dismissal that involve the faculty, the appropriate department heads, and the dean and provides each faculty member with written information about his or her term of appointment, responsibilities, lines of communication, privileges and benefits, performance evaluation and remediation, terms of dismissal, and, if relevant, the policy on practice earnings.

##### 4.4 Feedback to Faculty

A medical school faculty member receives regularly scheduled and timely feedback from departmental and/or other programmatic or institutional leaders on his or her academic performance and progress toward promotion and, when applicable, tenure.

##### 4.5 Faculty Professional Development

A medical school and/or its sponsoring institution provides opportunities for professional development to each faculty member in the areas of discipline content, curricular design, program evaluation, student assessment methods, instructional methodology, and research to enhance his or her skills and leadership abilities in these areas.

##### 4.6 Responsibility for Medical School Policies

At a medical school, the dean and a committee of the faculty determine the governance and policymaking processes within their purview.

## Standard 5: Educational Resources and Infrastructure

A medical school has sufficient personnel, financial resources, physical facilities, equipment, and clinical, instructional, informational, technological, and other resources readily available and accessible across all locations to meet its needs and to achieve its goals.

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### 5.1 Adequacy of Financial Resources

The present and anticipated financial resources of a medical school are derived from diverse sources and are adequate to sustain a sound program of medical education and to accomplish other programmatic and institutional goals.

### 5.2 Dean's Authority/Resources

The dean of a medical school has sufficient resources and budgetary authority to fulfill his or her responsibility for the management and evaluation of the medical curriculum.

### 5.3 Pressures for Self-Financing

A medical school admits only as many qualified applicants as its total resources can accommodate and does not permit financial or other influences to compromise the school's educational mission.

### 5.4 Sufficiency of Buildings and Equipment

A medical school has, or is assured the use of, buildings and equipment sufficient to achieve its educational, clinical, and research missions.

### 5.5 Resources for Clinical Instruction

A medical school has, or is assured the use of, appropriate resources for the clinical instruction of its medical students in ambulatory and inpatient settings and has adequate numbers and types of patients (e.g., acuity, case mix, age, gender).

### 5.6 Clinical Instructional Facilities/Information Resources

Each hospital or other clinical facility affiliated with a medical school that serves as a major location for required clinical learning experiences has sufficient information resources and instructional facilities for medical student education.

### 5.7 Security, Student Safety, and Disaster Preparedness

A medical school ensures that adequate security systems are in place at all locations and publishes policies and procedures to ensure student safety and to address emergency and disaster preparedness.

## 5.8 Library Resources/Staff

A medical school provides ready access to well-maintained library resources sufficient in breadth of holdings and technology to support its educational and other missions. Library services are supervised by a professional staff that is familiar with regional and national information resources and data systems and is responsive to the needs of the medical students, faculty members, and others associated with the institution.

## 5.9 Information Technology Resources/Staff

A medical school provides access to well-maintained information technology resources sufficient in scope to support its educational and other missions. The information technology staff serving a medical education program has sufficient expertise to fulfill its responsibilities and is responsive to the needs of the medical students, faculty members, and others associated with the institution.

## 5.10 Resources Used by Transfer/Visiting Students

The resources used by a medical school to accommodate any visiting and transfer medical students in its medical education program do not significantly diminish the resources available to already enrolled medical students.

## 5.11 Study/Lounge/Storage Space/Call Rooms

A medical school ensures that its medical students have, at each campus and affiliated clinical site, adequate study space, lounge areas, personal lockers or other secure storage facilities, and secure call rooms if students are required to participate in late night or overnight clinical learning experiences.

## 5.12 Required Notifications to the LCME

A medical school notifies the LCME of any substantial change in the number of enrolled medical students; of any decrease in the resources available to the institution for its medical education program, including faculty, physical facilities, or finances; of its plans for any major modification of its medical curriculum; and/or of anticipated changes in the affiliation status of the program's clinical facilities. The program also provides prior notification to the LCME if it plans to increase entering medical student enrollment on the main campus and/or in one or more existing regional campuses above the threshold of 10 percent, or 15 medical students in one year or 20 percent in three years; or to start a new or to expand an existing regional campus; or to initiate a new parallel curriculum (track).

## Standard 6: Competencies, Curricular Objectives, and Curricular Design

The faculty of a medical school define the competencies to be achieved by its medical students through medical education program objectives and is responsible for the detailed design and

implementation of the components of a medical curriculum that enable its medical students to achieve those competencies and objectives. Medical education program objectives are statements of the knowledge, skills, behaviors, and attitudes that medical students are expected to exhibit as evidence of their achievement by completion of the program.

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### 6.1 Program and Learning Objectives

The faculty of a medical school define its medical education program objectives in outcome-based terms that allow the assessment of medical students' progress in developing the competencies that the profession and the public expect of a physician. The medical school makes these medical education program objectives known to all medical students and faculty. In addition, the medical school ensures that the learning objectives for each required learning experience (e.g., course, clerkship) are made known to all medical students and those faculty, residents, and others with teaching and assessment responsibilities in those required experiences.

### 6.2 Required Clinical Experiences

The faculty of a medical school define the types of patients and clinical conditions that medical students are required to encounter, the skills to be performed by medical students, the appropriate clinical settings for these experiences, and the expected levels of medical student responsibility.

### 6.3 Self-Directed and Life-Long Learning

The faculty of a medical school ensure that the medical curriculum includes self-directed learning experiences and unscheduled time to allow medical students to develop the skills of lifelong learning. Self-directed learning involves medical students' self-assessment of learning needs; independent identification, analysis, and synthesis of relevant information; appraisal of the credibility of information sources; and feedback on these skills.

### 6.4 Inpatient/Outpatient Experiences

The faculty of a medical school ensure that the medical curriculum includes clinical experiences in both outpatient and inpatient settings.

### 6.5 Elective Opportunities

The faculty of a medical school ensure that the medical curriculum includes elective opportunities that supplement required learning experiences and that permit medical students to gain exposure to and expand their understanding of medical specialties, and to pursue their individual academic interests.

### 6.6 Service-Learning/Community Service

The faculty of a medical school ensure that the medical education program provides sufficient opportunities for, encourages, and supports medical student participation in service-learning and/or community service activities.

## 6.7 Academic Environments

The faculty of a medical school ensure that medical students have opportunities to learn in academic environments that permit interaction with students enrolled in other health professions, graduate and professional degree programs, and in clinical environments that provide opportunities for interaction with physicians in graduate medical education programs and in continuing medical education programs.

## 6.8 Education Program Duration

A medical education program includes at least 130 weeks of instruction.

## Standard 7: Curricular Content

The faculty of a medical school ensure that the medical curriculum provides content of sufficient breadth and depth to prepare medical students for entry into any residency program and for the subsequent contemporary practice of medicine.

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### 7.1 Biomedical, Behavioral, Social Sciences

The faculty of a medical school ensure that the medical curriculum includes content from the biomedical, behavioral, and socioeconomic sciences to support medical students' mastery of contemporary medical science knowledge and concepts and the methods fundamental to applying them to the health of individuals and populations.

### 7.2 Organ Systems/Life Cycle/Prevention/Symptoms/Signs/Differential Diagnosis, Treatment Planning

The faculty of a medical school ensure that the medical curriculum includes content and clinical experiences related to each organ system; each phase of the human life cycle; continuity of care; and preventive, acute, chronic, rehabilitative, and end-of-life care.

### 7.3 Scientific Method/Clinical/Translational Research

The faculty of a medical school ensure that the medical curriculum includes instruction in the scientific method and in the basic scientific and ethical principles of clinical and translational research, including the ways in which such research is conducted, evaluated, explained to patients, and applied to patient care.

### 7.4 Critical Judgment/Problem-Solving Skills

The faculty of a medical school ensure that the medical curriculum incorporates the fundamental principles of medicine, provides opportunities for medical students to acquire skills of critical judgment based on evidence and experience, and develops medical students' ability to use those principles and skills effectively in solving problems of health and disease.

## 7.5 Societal Problems

The faculty of a medical school ensure that the medical curriculum includes instruction in the diagnosis, prevention, appropriate reporting, and treatment of the medical consequences of common societal problems.

## 7.6 Cultural Competence and Health Care Disparities

The faculty of a medical school ensure that the medical curriculum provides opportunities for medical students to learn to recognize and appropriately address gender and cultural biases in themselves, in others, and in the health care delivery process. The medical curriculum includes instruction regarding the following:

The manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments

The basic principles of culturally competent health care

Recognition of the impact of disparities in health care on medically underserved populations and potential solutions to eliminate health care disparities

The knowledge, skills, and core professional attributes (e.g., altruism, accountability) needed to provide effective care in a multidimensional and diverse society

## 7.7 Medical Ethics

The faculty of a medical school ensure that the medical curriculum includes instruction for medical students in medical ethics and human values both prior to and during their participation in patient care activities and require medical students to behave ethically in caring for patients and in relating to patients' families and others involved in patient care.

## 7.8 Communication Skills

The faculty of a medical school ensure that the medical curriculum includes specific instruction in communication skills as they relate to communication with patients and their families, colleagues, and other health professionals.

## 7.9 Interprofessional Collaborative Skills

The faculty of a medical school ensure that the core curriculum of the medical education program prepares medical students to function collaboratively on health care teams that include health professionals from other disciplines as they provide coordinated services to patients.

These curricular experiences include practitioners and/or students from the other health professions.

## Standard 8: Curricular Management, Evaluation, and Enhancement

The faculty of a medical school engage in curricular revision and program evaluation activities to ensure that medical education program quality is maintained and enhanced and that medical

students achieve all medical education program objectives and participate in required clinical experiences and settings.

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### 8.1 Curricular Management

A medical school has in place an institutional body (i.e., a faculty committee) that oversees the medical education program as a whole and has responsibility for the overall design, management, integration, evaluation, and enhancement of a coherent and coordinated medical curriculum.

### 8.2 Use of Medical Educational Program Objectives

The faculty of a medical school, through the faculty committee responsible for the medical curriculum, ensure that the medical curriculum uses formally adopted medical education program objectives to guide the selection of curriculum content, and to review and revise the curriculum. The faculty leadership responsible for each required course and clerkship link the learning objectives of that course or clerkship to the medical education program objectives.

### 8.3 Curricular Design, Review, Revision/Content Monitoring

The faculty of a medical school, through the faculty committee responsible for the medical curriculum, are responsible for the detailed development, design, and implementation of all components of the medical education program, including the medical education program objectives, the learning objectives for each required curricular segment, instructional and assessment methods appropriate for the achievement of those objectives, content and content sequencing, ongoing review and updating of content, and evaluation of course, clerkship, and teacher quality. These medical education program objectives, learning objectives, content, and instructional and assessment methods are subject to ongoing monitoring, review, and revision by the responsible committee.

### 8.4 Evaluation of Educational Program Outcomes

A medical school collects and uses a variety of outcome data, including national norms of accomplishment, to demonstrate the extent to which medical students are achieving medical education program objectives and to enhance the quality of the medical education program as a whole. These data are collected during program enrollment and after program completion.

### 8.5 Medical Student Feedback

In evaluating medical education program quality, a medical school has formal processes in place to collect and consider medical student evaluations of their courses, clerkships, and teachers, and other relevant information.

### 8.6 Monitoring of Completion of Required Clinical Experiences

A medical school has in place a system with central oversight that monitors and ensures completion by all medical students of required clinical experiences in the medical education program and remedies any identified gaps.

#### 8.7 Comparability of Education/Assessment

A medical school ensures that the medical curriculum includes comparable educational experiences and equivalent methods of assessment across all locations within a given course and clerkship to ensure that all medical students achieve the same medical education program objectives.

#### 8.8 Monitoring Student Time

The medical school faculty committee responsible for the medical curriculum and the program's administration and leadership ensure the development and implementation of effective policies and procedures regarding the amount of time medical students spend in required activities, including the total number of hours medical students are required to spend in clinical and educational activities during clerkships.

### Standard 9: Teaching, Supervision, Assessment, and Student and Patient Safety

A medical school ensures that its medical education program includes a comprehensive, fair, and uniform system of formative and summative medical student assessment and protects medical students' and patients' safety by ensuring that all persons who teach, supervise, and/or assess medical students are adequately prepared for those responsibilities.

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#### 9.1 Preparation of Resident and Non-Faculty Instructors

In a medical school, residents, graduate students, postdoctoral fellows, and other non-faculty instructors in the medical education program who supervise or teach medical students are familiar with the learning objectives of the course or clerkship and are prepared for their roles in teaching and assessment. The medical school provides resources to enhance residents' and non-faculty instructors' teaching and assessment skills and provides central monitoring of their participation in those opportunities.

#### 9.2 Faculty Appointments

A medical school ensures that supervision of medical student learning experiences is provided throughout required clerkships by members of the school's faculty.

#### 9.3 Clinical Supervision of Medical Students



A medical school ensures that medical students in clinical learning situations involving patient care are appropriately supervised at all times in order to ensure patient and student safety, that the level of responsibility delegated to the student is appropriate to his or her level of training, and that the activities supervised are within the scope of practice of the supervising health professional.

#### 9.4 Assessment System

A medical school ensures that, throughout its medical education program, there is a centralized system in place that employs a variety of measures (including direct observation) for the assessment of student achievement, including students' acquisition of the knowledge, core clinical skills (e.g., medical history-taking, physical examination), behaviors, and attitudes specified in medical education program objectives, and that ensures that all medical students achieve the same medical education program objectives.

#### 9.5 Narrative Assessment

A medical school ensures that a narrative description of a medical student's performance, including his or her non-cognitive achievement, is included as a component of the assessment in each required course and clerkship of the medical education program whenever teacher-student interaction permits this form of assessment.

#### 9.6 Setting Standards of Achievement

A medical school ensures that faculty members with appropriate knowledge and expertise set standards of achievement in each required learning experience in the medical education program.

#### 9.7 Formative Assessment and Feedback

The medical school's curricular governance committee ensures that each medical student is assessed and provided with formal formative feedback early enough during each required course or clerkship to allow sufficient time for remediation. Formal feedback occurs at least at the midpoint of the course or clerkship. A course or clerkship less than four weeks in length provides alternate means by which a medical student can measure his or her progress in learning.

#### 9.8 Fair and Timely Summative Assessment

A medical school has in place a system of fair and timely summative assessment of medical student achievement in each course and clerkship of the medical education program. Final grades are available within six weeks of the end of a course or clerkship.

#### 9.9 Student Advancement and Appeal Process

A medical school ensures that the medical education program has a single set of core standards for the advancement and graduation of all medical students across all locations. A subset of medical students may have academic requirements in addition to the core standards if they are

enrolled in a parallel curriculum. A medical school ensures that there is a fair and formal process for taking any action that may affect the status of a medical student, including timely notice of the impending action, disclosure of the evidence on which the action would be based, an opportunity for the medical student to respond, and an opportunity to appeal any adverse decision related to advancement, graduation, or dismissal.

## Standard 10: Medical Student Selection, Assignment, and Progress

A medical school establishes and publishes admission requirements for potential applicants to the medical education program and uses effective policies and procedures for medical student selection, enrollment, and assignment.

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### 10.1 Premedical Education/Required Coursework

Through its requirements for admission, a medical school encourages potential applicants to the medical education program to acquire a broad undergraduate education that includes the study of the humanities, natural sciences, and social sciences, and confines its specific premedical course requirements to those deemed essential preparation for successful completion of its medical curriculum.

### 10.2 Final Authority of Admission Committee

The final responsibility for accepting students to a medical school rests with a formally constituted admission committee. The authority and composition of the committee and the rules for its operation, including voting privileges and the definition of a quorum, are specified in bylaws or other medical school policies. Faculty members constitute the majority of voting members at all meetings. The selection of individual medical students for admission is not influenced by any political or financial factors.

### 10.3 Policies Regarding Student Selection/Progress and Their Dissemination

The faculty of a medical school establish criteria for student selection and develop and implement effective policies and procedures regarding, and make decisions about, medical student application, selection, admission, assessment, promotion, graduation, and any disciplinary action. The medical school makes available to all interested parties its criteria, standards, policies, and procedures regarding these matters.

### 10.4 Characteristics of Accepted Applicants

A medical school selects applicants for admission who possess the intelligence, integrity, and personal and emotional characteristics necessary for them to become competent physicians.

### 10.5 Technical Standards

A medical school develops and publishes technical standards for the admission, retention, and graduation of applicants or medical students in accordance with legal requirements.

#### 10.6 Content of Informational Materials

A medical school's academic bulletin and other informational, advertising, and recruitment materials present a balanced and accurate representation of the mission and objectives of the medical education program, state the academic and other (e.g., immunization) requirements for the MD degree and all associated joint degree programs, provide the most recent academic calendar for each curricular option, and describe all required courses and clerkships offered by the medical education program.

#### 10.7 Transfer Students

A medical school ensures that any student accepted for transfer or admission with advanced standing demonstrates academic achievements, completion of relevant prior coursework, and other relevant characteristics comparable to those of the medical students in the class that he or she would join. A medical school accepts a transfer medical student into the final year of a medical education program only in rare and extraordinary personal or educational circumstances.

#### 10.8 Visiting Students

A medical school does all of the following:

Verifies the credentials of each visiting medical student

Ensures that each visiting medical student demonstrates qualifications comparable to those of the medical students he or she would join in educational experiences

Maintains a complete roster of visiting medical students

Approves each visiting medical student's assignments

Provides a performance assessment for each visiting medical student

Establishes health-related protocols for such visiting medical students

Identifies the administrative office that fulfills each of these responsibilities

#### 10.9 Student Assignment

A medical school assumes ultimate responsibility for the selection and assignment of medical students to each location and/or parallel curriculum (i.e., track) and identifies the administrative office that fulfills this responsibility. A process exists whereby a medical student with an appropriate rationale can request an alternative assignment when circumstances allow for it.

### Standard 11: Medical Student Academic Support, Career Advising, and Educational Records

A medical school provides effective academic support and career advising to all medical students to assist them in achieving their career goals and the school's medical education program objectives. All medical students have the same rights and receive comparable services.

### 11.1 Academic Advising

A medical school has an effective system of academic advising in place for medical students that integrates the efforts of faculty members, course and clerkship directors, and student affairs staff with its counseling and tutorial services and ensures that medical students can obtain academic counseling from individuals who have no role in making assessment or promotion decisions about them.

### 11.2 Career Advising

A medical school has an effective career advising system in place that integrates the efforts of faculty members, clerkship directors, and student affairs staff to assist medical students in choosing elective courses, evaluating career options, and applying to residency programs.

### 11.3 Oversight of Extramural Electives

If a medical student at a medical school is permitted to take an elective under the auspices of another medical school, institution, or organization, a centralized system exists in the dean's office at the home school to review the proposed extramural elective prior to approval and to ensure the return of a performance assessment of the student and an evaluation of the elective by the student. Information about such issues as the following are available, as appropriate, to the student and the medical school in order to inform the student's and the school's review of the experience prior to its approval:

- Potential risks to the health and safety of patients, students, and the community

- The availability of emergency care

- The possibility of natural disasters, political instability, and exposure to disease

- The need for additional preparation prior to, support during, and follow-up after the elective

- The level and quality of supervision

- Any potential challenges to the code of medical ethics adopted by the home school

### 11.4 Provision of MSPE

A medical school provides a Medical Student Performance Evaluation required for the residency application of a medical student only on or after October 1 of the student's final year of the medical education program.

### 11.5 Confidentiality of Student Educational Records

At a medical school, medical student educational records are confidential and available only to those members of the faculty and administration with a need to know, unless released by the student or as otherwise governed by laws concerning confidentiality.

### 11.6 Student Access to Educational Records

A medical school has policies and procedures in place that permit a medical student to review and to challenge his or her educational records, including the Medical Student Performance

Evaluation, if he or she considers the information contained therein to be inaccurate, misleading, or inappropriate.

## Standard 12: Medical Student Health Services, Personal Counseling, and Financial Aid Services

A medical school provides effective student services to all medical students to assist them in achieving the program's goals for its students. All medical students have the same rights and receive comparable services.

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### 12.1 Financial Aid/Debt Management Counseling/Student Educational Debt

A medical school provides its medical students with effective financial aid and debt management counseling and has mechanisms in place to minimize the impact of direct educational expenses (i.e., tuition, fees, books, supplies) on medical student indebtedness.

### 12.2 Tuition Refund Policy

A medical school has clear policies for the refund of a medical student's tuition, fees, and other allowable payments (e.g., payments made for health or disability insurance, parking, housing, and other similar services for which a student may no longer be eligible following withdrawal).

### 12.3 Personal Counseling/Well-Being Programs

A medical school has in place an effective system of personal counseling for its medical students that includes programs to promote their well-being and to facilitate their adjustment to the physical and emotional demands of medical education.

### 12.4 Student Access to Health Care Services

A medical school provides its medical students with timely access to needed diagnostic, preventive, and therapeutic health services at sites in reasonable proximity to the locations of their required educational experiences and has policies and procedures in place that permit students to be excused from these experiences to seek needed care.

### 12.5 Non-Involvement of Providers of Student Health Services in Student Assessment/Location of Student Health Records

The health professionals who provide health services, including psychiatric/psychological counseling, to a medical student have no involvement in the academic assessment or promotion of the medical student receiving those services, excluding exceptional circumstances. A medical school ensures that medical student health records are maintained in accordance with legal requirements for security, privacy, confidentiality, and accessibility.

### 12.6 Student Health and Disability Insurance

A medical school ensures that health insurance and disability insurance are available to each medical student and that health insurance is also available to each medical student's dependents.

#### 12.7 Immunization Requirements and Monitoring

A medical school follows accepted guidelines in determining immunization requirements for its medical students and monitors students' compliance with those requirements.

#### 12.8 Student Exposure Policies/Procedures

A medical school has policies in place that effectively address medical student exposure to infectious and environmental hazards, including the following:

The education of medical students about methods of prevention

The procedures for care and treatment after exposure, including a definition of financial responsibility

The effects of infectious and environmental disease or disability on medical student learning activities

All registered medical students (including visiting students) are informed of these policies before undertaking any educational activities that would place them at risk.

#### Glossary of Terms for LCME Accreditation Standards and Elements

**Adequate numbers and types of patients (e.g., acuity, case mix, age, gender):** Medical student access, in both ambulatory and inpatient settings, to a sufficient mix of patients with a range of severity of illness and diagnoses, ages, and both genders to meet medical educational program objectives and the learning objectives of specific courses, modules, and clerkships. (Element 5.5)

**Admission requirements:** A comprehensive listing of both objective and subjective criteria used for screening, selection, and admission of applicants to a medical education program. (Standard 10)

**Admission with advanced standing:** The acceptance by a medical school and enrollment in the medical curriculum of an applicant (e.g., a doctoral student), typically as a second or third-year medical student, when that applicant had not previously been enrolled in a medical education program. (Element 10.7)

**Any related enterprises:** Any additional medical school-sponsored activities or entities. (Element 1.2)

**Assessment:** The systematic use of a variety of methods to collect, analyze, and use information to determine whether a medical student has acquired the competencies (e.g., knowledge, skills, behaviors, and attitudes) that the profession and the public expect of a physician. (Standard 9; Elements 1.4, 4.5, 6.1, 8.3, 8.7, 9.1, 9.4, 9.5, 10.3, 10.8, 11.1, 11.3, and 12.5)

Benefits of diversity: In a medical education program, the facts that having medical students and faculty members from a variety of socioeconomic backgrounds, racial and ethnic groups, and other life experiences can: 1) enhance the quality and content of interactions and discussions for all students throughout the preclinical and clinical curricula; and 2) result in the preparation of a physician workforce that is more culturally aware and competent and better prepared to improve access to healthcare and address current and future health care disparities. (Standard 3)

Central monitoring: Tracking by institutional (e.g., decanal) level offices and/or committees (e.g., the curriculum committee) of desired and expected learning outcomes by students and their completion of required learning experiences. (Elements 8.6 and 9.1)

Clinical affiliates: Those institutions providing inpatient medical care that have formal agreements with a medical school to provide clinical experiences for the education of its medical students. (Elements 1.4 and 3.5)

Clinical research: The conduct of medical studies involving human subjects, the data from which are intended to facilitate application of the studies' findings to medical practice in order to enhance the prevention, diagnosis, and treatment of medical conditions. (Element 7.3)

Coherent and coordinated medical curriculum: The design of a complete medical education program, including its content and modes of presentation, to achieve its overall educational objectives. Coherence and coordination include the following characteristics: 1) the logical sequencing of curricular segments, 2) coordinated and integrated content within and across academic periods of study (i.e., horizontal and vertical integration), and 3) methods of instruction and student assessment appropriate to the student's level of learning and to the achievement of the program's educational objectives. (Element 8.1)

Community service: Services designed to improve the quality of life for community residents or to solve particular problems related to their needs. Community service opportunities provided by the medical school complement and reinforce the medical student's educational program. (Element 6.6)

Comparable educational experiences: Learning experiences that are sufficiently similar so as to ensure that medical students are achieving the same learning objectives at all educational sites at which those experiences occur. (Element 8.7)

Competency: Statements of defined skills or behavioral outcomes (i.e., that a physician should be able to do) in areas including, but not limited to, patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and ethics, and systems-based practice for which a medical student is required to demonstrate mastery at an appropriate level prior to completion of his or her medical education program and receipt of the MD degree. (Standards 3 and 6; Element 6.1)

Core curriculum: The required components of a medical curriculum, including all required courses/modules and clinical clerkships/rotations. (Element 7.9)

Core standards for the advancement and graduation of all medical students across all locations: The academic and non-academic criteria and levels of performance defined by a medical education program and published in programmatic policies that must be met by all medical students on all medical school campuses at the conclusion of each academic year for advancement to the next academic year or at the conclusion of the medical education program for receipt of the MD degree and graduation. (Element 9.9)

Critical judgment: The consideration, evaluation, and organization of evidence derived from appropriate sources and related rationales during the process of decision-making. The demonstration of critical thinking requires the following steps: 1) the collection of relevant evidence; 2) the evaluation of that evidence; 3) the organization of that evidence; 4) the presentation of appropriate evidence to support any conclusions; and 5) the coherent, logical, and organized presentation of any response. (Element 7.4)

Curricular management: Involves the following activities: leading, directing, coordinating, controlling, planning, evaluating, and reporting. An effective system of curriculum management exhibits the following characteristics: 1) evaluation of program effectiveness by outcomes analysis, using national norms of accomplishment, as available, as a frame of reference, 2) monitoring of content and workload in each discipline, including the identification of omissions and unplanned redundancies, and 3) review of the stated objectives of each individual curricular component and of methods of instruction and student assessment to ensure their linkage to and congruence with programmatic educational objectives. (Element 8.1)

Direct educational expenses: The following educational expenses of an enrolled medical student: tuition, mandatory fees, books and supplies, and a computer, if one is required by the medical school. (Element 12.1)

Direct faculty participation in decision-making: Faculty involvement in institutional governance wherein faculty input to decisions are made by the faculty members themselves or by representatives chosen by faculty members (e.g., versus appointed by administrators). (Element 1.3)

Diverse sources [of financial revenues]: Multiple sources of predictable and sustainable revenues that include, but are not unduly dependent upon any one of, the following: tuition, gifts, clinical revenue, governmental support, research grants, endowment, etc. (Element 5.1)

Effective: Supported by evidence that the policy, practice, and/or process has produced the intended or expected result(s). (Standard 1, 10, and 12; Elements 1.1, 1.2, 1.3, 2.2, 3.3, 3.6, 7.6, 8.8, 10.3, 11.1, 11.2, and 12.3)

Eligibility requirements [for initial and continuing accreditation]: Receipt and maintenance of authority to grant the MD degree from the appropriate governmental agency and initial and continuing accreditation by one of the six regional accrediting bodies. (Element 1.6)

Equivalent methods of assessment: The use of methods of medical student assessment that are as close to identical as possible across all educational sites at which core curricular activities take place within a given discipline, but which may not occur in the same timeframe. (Element 8.7)



Evaluation: The systematic use of a variety of methods to collect, analyze, and use information to determine whether a program is fulfilling its mission(s) and achieving its goal(s). (Standard 8; Elements 3.3, 3.5, 4.3, 4.5, 5.2, 8.1, 8.3, 8.4, 11.3, 11.4, and 11.6)

Fair and formal process for taking any action that may affect the status of a medical student: The use of policies and procedures by any institutional body (e.g., student promotions committee) with responsibility for making decisions about the academic progress, continued enrollment, and/or graduation of a medical student in a manner that ensures: 1) that the student will be assessed by individuals who have not previously formed an opinion of the student's abilities, professionalism, and/or suitability to become a physician; and 2) that the student has received timely notice of the proceedings, information about the purpose of the proceedings, and any evidence to be presented at the proceedings; his or her right to participate in and provide information or otherwise respond to participants in the proceedings; and any opportunity to appeal any adverse decision resulting from the proceedings. (Element 9.9)

Fair and timely summative assessment: A criterion-based determination, made as soon as possible after the conclusion of a curricular component (e.g., course/module, clinical clerkship/rotation) by individuals familiar with a medical student's performance, regarding the extent to which he or she has achieved the learning objective(s) for that component such that the student can use the information provided to improve future performance in the medical curriculum. (Element 9.8)

Final responsibility for accepting students to a medical school rests with a formally constituted admission committee: Ensuring that the sole basis for selecting applicants for admission to the medical education program are the decisions made by the faculty committee charged with medical student selection in accordance with appropriately approved selection criteria. (Element 10.2)

Formative feedback: Information communicated to a medical student in a timely manner that is intended to modify the student's thinking or behavior in order to improve his or her subsequent learning and performance in the medical curriculum. (Element 9.7)

Full-time faculty: Full-time faculty includes all faculty members who are considered by the medical school to be full-time, whether funded by the medical school directly or supported by affiliated institutions and organizations. Reporting of full-time faculty members should include those who meet the preceding definition and who are based in affiliated hospitals or in schools of basic health sciences, or who are research faculty. Residents, clinical fellows, or faculty members who do not receive full-time remuneration from institutional sources (e.g., medical school, parent university, affiliated hospital, or healthcare organization) should not be included as full-time faculty. (Elements 3.3, 3.6, and 4.1)

Functionally integrated: Coordination of the various components of the medical school and medical education program by means of policies, procedures, and practices that define and inform the relationships among them. (Element 2.6)

Health care disparities: Differences between groups of people, based on a variety of factors including, but not limited to, race, ethnicity, residential location, sex, age, and socioeconomic status, educational status, and disability status, that affect their access to health care, the quality of the health care they receive, and the outcomes of their medical conditions. (Element 7.6)

Independent study: Opportunities either for medical student-directed learning in one or more components of the core medical curriculum, based on structured learning objectives to be achieved by students with minimal faculty supervision, or for student-directed learning on elective topics of specific interest to the student. (Element 6.3)

Learning objectives: A statement of the specific, observable, and measurable expected outcomes (i.e., what the medical students will be able to do) of each specific component (e.g., course, module, clinical clerkship, rotation) of a medical education program that defines the content of the component and the assessment methodology and that is linked back to one or more of the medical education program objectives. (Elements 6.1, 8.2, 8.3, and 9.1)

Major location for required clinical learning experiences: A clinical affiliate of the medical school that is the site of one or more required clinical experiences for its medical students. (Element 5.6)

Medical education program objectives: Broad statements, in measurable terms, of the knowledge, skills, behaviors, and attitudes (typically linked to a statement of expected competencies) that a medical student is expected to exhibit as evidence of his or her achievement of all programmatic requirements by the time of medical education program completion. (Standards 6 and 11; Elements 6.1, 8.2, 8.3, 8.4, 8.7, and 9.4)

Mission-appropriate diversity: The inclusion, in a medical education program's student body and among its faculty and staff and based on the program's mission, goals, and policies, of persons from different racial, ethnic, economic, and/or social backgrounds and with differing life experiences to enhance the educational environment for all medical students. (Element 3.3)

Narrative assessment: Written comments from faculty that assess student performance and achievement in meeting specific objectives of a course or clerkship, such as professionalism, clinical reasoning. (Element 9.5)

National norms of accomplishment: Those data sources that would permit comparison of relevant medical school-specific medical student performance data to national data for all medical schools and medical students (e.g., USMLE scores, AAMC GQ data, specialty certification rates). (Element 8.4)

Need to know: The requirement that information in a medical student's educational record be provided only to those members of the medical school's faculty or administration who have a legitimate reason to access that information in order to fulfill the responsibilities of their faculty or administrative position. (Element 11.5)

Outcome-based terms: Descriptions of observable and measurable desired and expected outcomes of learning experiences in a medical curriculum (e.g., knowledge, skills, attitudes, and behavior). (Element 6.1)

Parallel curriculum (track): A parallel program of study for a subset of the medical student body that requires participating students to complete specific programmatic learning objectives (e.g., in research, primary care, leadership) in addition to the medical educational program objectives required of all medical students. (Elements 5.12, 9.9, and 10.9)

Pre-clerkship curriculum: The curriculum year(s) before the start of required clinical clerkships. (Standard 6; Elements 2.6, 4.1, 5.10, 5.11, 6.3, 7.2, 7.4, 7.7, 8.3, 9.5, 9.7, 9.8, and 10.9)

Primacy of the medical education program's authority over academic affairs and the education/assessment of medical students: The affirmation and acknowledgement that all decisions regarding the creation and implementation of educational policy and the teaching and assessment of medical students are, first and foremost, the prerogative of the medical education program. (Element 1.4)

Principal academic officer at each campus is administratively responsible to the dean: The administrator identified by the dean or the dean's designee (e.g., associate or assistant dean, site director) as having primary responsibility for implementation, management, and evaluation of the components of the medical education program that occur at that campus. (Element 2.5)

Problem-solving: The initial generation of hypotheses that influence the subsequent gathering of information. (Element 7.4)

Publishes: Communicates in hard-copy and/or on-line in a manner that is easily available to and accessible by the public. (Standard 10; Elements 5.7 and 10.5)

Regional accrediting body: The six bodies recognized by the U.S. Department of Education that accredit institutions of higher education located in their regions of the U.S.: 1) Higher Learning Commission; 2) Middle States Commission on Higher Education; 3) New England Association of Schools and Colleges Commission on Institutions of Higher Education; 4) Northwest Commission on Colleges and Universities; 5) Southern Association of Colleges and Schools Commission on Colleges; and 6) Western Association of Schools and Colleges Senior Colleges and University Commission. (Element 1.6)

Regional campus: A regional campus is an instructional site that is distinct from the central/administrative campus of the medical school and at which some students spend one or more complete curricular years. (Standards 11 and 12; Elements 2.5, 2.6, and 5.12)

Regularly scheduled and timely feedback: Information communicated periodically and sufficiently often (based on institutional policy, procedure, or practice) to a faculty member to ensure that the faculty member is aware of the extent to which he or she is (or is not) meeting institutional expectations regarding future promotion and/or tenure. (Element 4.4)

Scientific method: A method of procedure consisting in systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses. Typically, the method consists of the following steps: 1) identifying and defining a problem; 2) accumulating relevant data; 3) formulating a tentative hypothesis; 4) conducting experiments to test the hypothesis; 5) interpreting the results objectively; and 6) repeating the steps until an acceptable solution is found. (Element 7.3)

Self-directed learning: Includes all of the following components as a single unified sequence that occurs over a relatively short time: 1) the medical student's self-assessment of his/her learning needs; 2) the medical student's independent identification, analysis, and synthesis of relevant information; and 3) the medical student's appraisal of the credibility of information sources; and 4) the facilitator's assessment of and feedback to the student on his/her information seeking skills. (Element 6.3)

Senior administrative staff: People in academic leadership roles, to include but not limited to, associate/assistant deans, directors, academic department chairs, and people who oversee the operation of affiliated clinical facilities and other educational sites. Many, if not most, of these people also have faculty appointments, and for tracking purposes should only be counted in one category when completing tables such as those listed in the DCI under Element 3.3. (Standard 2; Elements 2.1, 2.4, and 3.3)

Service-learning: Educational experiences that involve all of the following components: 1) medical students' service to the community in activities that respond to community-identified concerns; 2) student preparation; and 3) student reflection on the relationships among their participation in the activity, their medical school curriculum, and their roles as citizens and medical professionals. (Element 6.6)

Standards of achievement: Criteria by which to measure a medical student's attainment of relevant learning objectives and that contribute to a summative grade. (Element 9.6)

Technical standards for the admission, retention, and graduation of applicants or medical students: A statement by a medical school of the: 1) essential academic and non-academic abilities, attributes, and characteristics in the areas of intellectual-conceptual, integrative, and quantitative abilities; 2) observational skills; 3) physical abilities; 4) motor functioning; 5) emotional stability; 6) behavioral and social skills; and 7) ethics and professionalism that a medical school applicant or enrolled medical student must possess or be able to acquire, with or without reasonable accommodation, in order to be admitted to, be retained in, and graduate from that school's medical educational program. (Element 10.5)

Transfer: The permanent withdrawal by a medical student from one medical school followed by his or her enrollment (typically in the second or third year of the medical curriculum) in another medical school. (Elements 5.10 and 10.7)

Translational research: Translational research includes two areas of investigation. In the first, discoveries generated during research in the laboratory and in preclinical studies are applied to the development of trials and studies in humans. In the second, the efficacy and cost-

effectiveness of prevention and treatment strategies are studied to accelerate adoption of best practices in communities and populations (Element 7.3)

Visiting students: Students enrolled at one medical school who participate in clinical (typically elective) learning experiences for a grade sponsored by another medical school without transferring their enrollment from one school to the other. (Elements 5.10, 10.8, and 12.8)

Mapping of the 2014-15 Standards and 2020-21 Standards and Elements  
Sorted by the 2014-15 Standards

2014-15 STANDARD	2020-21 ELEMENT
IS-1	1.1
IS-2	deleted
IS-3	1.6
IS-4	1.5
IS-5	1.2
IS-6	deleted
IS-7	2.1
IS-8	2.3
IS-9	2.3
IS-10	2.2
IS-11	2.4
IS-12	6.7
IS-13	3.2
IS-14	3.2
IS-14-A	6.6
IS-16	3.3 and 7.6

2014-15 STANDARD	2020-21 ELEMENT
ED-1	8.2
ED-1-A	6.1
ED-2	6.2 and 8.6
ED-3	6.1
ED-4	6.8
ED-5	reflected in Standard 7
ED-5-A	6.3
ED-6	7.4
ED-7	deleted
ED-8	8.7
ED-9	5.12
ED-10	7.1 and 7.2

ED-11	7.1
ED-12	7.3
ED-13	7.2
ED-14	7.2
ED-15	7.2
ED-16	6.4

2014-15 STANDARD	2020-21 ELEMENT
ED-17	requested in data collection instrument
ED-17-A	7.3
ED-18	6.5
ED-19	7.8
ED-19-A	7.9
ED-20	7.5
ED-21	7.6
ED-22	7.6
ED-23	7.7
ED-24	9.1
ED-25	9.2
ED-25-A	9.3
ED-26	9.4
ED-27	9.4
ED-28	9.4
ED-29	9.6
ED-30	4.5 and 9.8
ED-31	9.7
ED-32	9.5
ED-33	8.1
ED-34	8.3 and Standard 6
ED-35	8.3
ED-36	5.2
ED-37	8.3
ED-38	8.8
ED-39	2.5
ED-40	2.5
ED-41	2.6
ED-42	9.9
ED-43	10.9
ED-44	reflected in Standards 11 and 12

ED-46	8.4
ED-47	8.5

2014-15 STANDARD	2020-21 ELEMENT
MS-1	10.1
MS-2	10.1
MS-3	10.3
MS-4	10.2
MS-5	10.4
MS-6	10.4
MS-7	10.2
MS-8	3.3
MS-9	10.5
MS-10	10.6
MS-11	10.3
MS-12	5.10
MS-13	10.7
MS-14	10.7
MS-15	10.7
MS-16	10.8
MS-17	10.8
MS-18	11.1
MS-19	11.2
MS-20	11.3
MS-21	deleted
MS-22	11.4
MS-23	12.1
MS-24	12.1
MS-25	12.2
MS-26	12.3
MS-27	12.4
MS-27-A	12.5
MS-28	12.6
MS-29	12.7
MS-30	12.8
MS-31	3.4
MS-31-A	3.5
MS-32	3.6
MS-33	10.3
MS-34	9.9
MS-35	11.5
MS-36	11.6
MS-37	5.11

2014-15 STANDARD	2020-21 ELEMENT
FA-2	4.1
FA-3	deleted
FA-4	4.5
FA-5	4.2
FA-6	10.3 and 11.2
FA-7	4.3
FA-8	1.2
FA-9	4.3
FA-10	4.4
FA-11	4.5
FA-12	4.6
FA-13	1.3
FA-14	1.3

2014-15 STANDARD	2020-21 ELEMENT
ER-1	5.12
ER-2	5.1
ER-3	5.3
ER-4	5.4
ER-5	5.7
ER-6	5.5
ER-7	5.6 and 5.11
ER-8	3.1
ER-9	1.4 and 5.12
ER-10	1.4
ER-11	5.8
ER-12	5.8
ER-13	5.9
ER-14	5.9



Mapping of the 2014-15 Standards and 2020-21 Standards and Elements  
Sorted by the 2020-21 Elements

2020-21 ELEMENT	2014-15 STANDARD
1.1	IS-1
1.2	IS-5 and FA-8
1.3	FA-13 and FA-14
1.4	ER-9 and ER-10
1.5	IS-4
1.6	IS-3

2020-21 ELEMENT	2014-15 STANDARD
2.1	IS-7
2.2	IS-10
2.3	IS-8 and IS-9
2.4	IS-11
2.5	ED-39 and ED-40
2.6	ED-41

2020-21 ELEMENT	2014-15 STANDARD
3.1	ER-8
3.2	IS-13 and IS-14
3.3	IS-16 and MS-8
3.4	MS-31
3.5	MS-31-A
3.6	MS-32

2020-21 ELEMENT	2014-15 STANDARD
4.1	FA-2
4.2	FA-5
4.3	FA-7 and FA-9
4.4	FA-10
4.5	ED-30, FA-4, FA-11
4.6	FA-12

2020-21 ELEMENT	2014-15 STANDARD
5.1	ER-2
5.2	ED-36
5.3	ER-3
5.4	ER-4
5.5	ER-6
5.6	ER-7
5.7	ER-5
5.8	ER-11 and ER-12
5.9	ER-13 and ER-14
5.10	MS-12
5.11	MS-37 and ER-7
5.12	ED-9, ER-1, ER-9

2020-21 ELEMENT	2014-15 STANDARD
6.1	ED-1-A and ED-3
6.2	ED-2
6.3	ED-5-A
6.4	ED-16
6.5	ED-18
6.6	IS-14-A
6.7	IS-12
6.8	ED-4

2020-21 ELEMENT	2014-15 STANDARD
7.1	ED-10 and ED-11
7.2	ED-10, ED-13, ED-14, ED-15
7.3	ED-12 and ED-17-A
7.4	ED-6
7.5	ED-20
7.6	IS-16, ED-21, ED-22
7.7	ED-23
7.8	ED-19
7.9	ED-19-A

2020-21 ELEMENT	2014-15 STANDARD
8.1	ED-33
8.2	ED-1
8.3	ED-34, ED-35, ED-37
8.4	ED-46
8.5	ED-47
8.6	ED-2
8.7	ED-8
8.8	ED-38

2020-21 ELEMENT	2014-15 STANDARD
9.1	ED-24
9.2	ED-25
9.3	ED-25-A
9.4	ED-26, ED-27, ED-28
9.5	ED-32
9.6	ED-29
9.7	ED-31
9.8	ED-30
9.9	ED-42 and MS-34

2020-21 ELEMENT	2014-15 STANDARD
10.1	MS-1 and MS-2
10.2	MS-4 and MS-7
10.3	MS-3, MS-11, MS-33, FA-6
10.4	MS-5, MS-6
10.5	MS-9
10.6	MS-10
10.7	MS-13, MS-14, MS-15
10.8	MS-16, MS-17
10.9	ED-43

2020-21 ELEMENT	2014-15 STANDARD
11.1	MS-18
11.2	MS-19 and FA-6
11.3	MS-20
11.4	MS-22
11.5	MS-35
11.6	MS-36

2020-21 ELEMENT	2014-15 STANDARD
12.1	MS-23 and MS-24
12.2	MS-25
12.3	MS-26
12.4	MS-27
12.5	MS-27-A
12.6	MS-28
12.7	MS-29
12.8	MS-30

## Appendix C

### LCME Consensus Statement Related to Satisfaction with Element 3.3, Diversity/Pipeline Programs and Partnerships

*The document that follows pertains to Element 3.3, Diversity/Pipeline Programs and Partnerships. It was created by the LCME in an effort to assist schools in understanding what the LCME considers important when it makes judgments related to diversity in the learning environment. This information is provided as a guide for those who are working in this important area. It is important to understand that, like all accreditation issues, there will be evolution over time, and that these guidelines should be taken as just that - guidelines. The LCME retains the ability to make individual judgments related to this and all standards and elements in the full context of the medical education program leading to the MD degree.*

## **LCME CONSENSUS STATEMENT RELATED TO SATISFACTION WITH ELEMENT 3.3, DIVERSITY/PIPELINE PROGRAMS AND PARTNERSHIPS**

**March 31, 2015**

### **A. Statement of Satisfactory**

Medical education programs will be found to be satisfactory with Element 3.3 when they have all of the following:

- A mission-appropriate diversity policy with identification of diversity groups for students, faculty and senior administrative staff.
- Ongoing systematic recruitment and retention activities, e.g. pipeline programs and partnerships, to achieve mission-appropriate diversity outcomes in its students, faculty and senior administrative staff.
- Methods to evaluate the effectiveness of activities to achieve the mission-appropriate diversity outcomes.
- Evidence of effectiveness of the diversity efforts, including offers made and numbers reflecting progress in achieving mission-appropriate diversity outcomes. Evaluation of the sufficiency of the numbers may consider the context of the institution, reasonable timelines for achieving measurable mission-appropriate diversity outcomes, and other supporting data indicative of success in achieving mission-appropriate diversity outcomes.

### **B. Statement of Satisfactory with a Need for Monitoring**

Medical education programs will be found to be satisfactory with a need for monitoring with Element 3.3 when they have satisfactory findings for most areas listed in section A above, but may have one or more of the following:

- Appropriate policies and/or activities so recent as to not yet have demonstrable results.
- Evidence of effectiveness in recruiting and retaining identified diversity groups for students, faculty, and senior administrative staff including offers made and numbers reflecting early progress. Monitoring is necessary to assess the longer-term effectiveness of practices.

### **C. Statement of Unsatisfactory**

Medical education programs will be found to be unsatisfactory with Element 3.3 when they LACK one or more of the following:

- A mission-appropriate diversity policy with identification of diversity groups for students, faculty and senior administrative staff.
- Ongoing systematic recruitment and retention activities, e.g. pipeline programs and partnerships, to achieve mission-appropriate diversity outcomes in its students, faculty and senior administrative staff.
- Methods to evaluate the effectiveness of activities to achieve the mission-appropriate diversity outcomes.
- Evidence of effective recruitment and retention programs including the offering and acceptance of positions to qualified student, faculty, and staff applicants who are in the school's diversity groups.

- Sufficient progress toward attaining the numbers of students, faculty, and senior administrative staff from the school's diversity groups to meet its mission-appropriate diversity outcomes.