MOVING FROM INJUSTICE TO EQUITY: A TIME FOR THE PHARMACY PROFESSION TO TAKE ACTION

REVIEW

The Evolving Role of Historically Black Pharmacy Schools in a Changing Environment

Aisha Morris Moultry, PharmD, MS

Texas Southern University, College of Pharmacy and Health Sciences, Houston, Texas

Submitted February 9, 2021; accepted June 16, 2021; published October 2021.

Objective. To provide a comprehensive review of the contributions of historically Black colleges and universities (HBCUs) to creating a diverse pharmacist workforce and identify opportunities for future contributions. This was accomplished by comparing enrollment at HBCUs to overall US enrollment of African American pharmacy students and then comparing those numbers to national enrollment of pharmacy students, analyzing contributions of HBCUs to underrepresented pharmacy student enrollment, evaluating overall changes to pharmacy school enrollment and impact on enrollment at HBCUs, and identifying areas of opportunity to enhance the future contributions of HBCUs.

Findings. There are six HBCU pharmacy schools in the United States. Although HBCU pharmacy schools made up only 4% of the total number of US pharmacy schools, they accounted for an average of 22.8% of the total African American student enrollment in pharmacy schools over a five-year period (2015-2019). An average of 13.8% of the total population of underrepresented people of color (UPOC) enrolled in US pharmacy schools from 2015-2019 attended an HBCU pharmacy school.

Summary. Historically Black colleges and universities have consistently made significant contributions to the total pharmacy school population of African Americans, as well as that of Native Hawaiian and other Pacific Islanders and American Indian and Alaska Natives. These institutions have an opportunity to enhance their impact and serve in graduating the diverse pharmacy workforce needed in the future. Historically Black colleges and universities can achieve this goal by making significant efforts to recruit LatinX pharmacy students and by increasing their recruitment of African Americans, Native Hawaiian and other Pacific Islanders, and American Indian and Alaska Natives.

Keywords: HBCU, diverse health care workforce, African American pharmacists, underrepresented pharmacists, minority pharmacists

INTRODUCTION

Underrepresented people of color (UPOC) comprise 33.4% of the United States population and 12.5% of practicing pharmacists.^{1,2} From 2015 through 2019, there was a relatively low number of underrepresented students of color in general and specifically a low number of African Americans in pharmacy school.³⁻⁷ The US Department of Health and Human Services (HHS) defines underrepresented as “a lower representation of racial and ethnic group members in a health occupation relative to their numbers in the general population.”⁸ African Americans make up only

10.5% of practicing pharmacists but 13.4% of the US population, deeming them underrepresented in the pharmacy profession.^{1,2} Other UPOC identified in pharmacy schools include those who identify as LatinX, Native Hawaiian or other Pacific Islander, and American Indian.⁹

People of color (POC) are disproportionately impacted by chronic diseases and have the greatest need for attention from health care providers.¹⁰ Despite efforts made to combat health disparities following the release of the Institute of Medicine’s (IOM) Unequal Treatment report in 2003, the 2018 National Healthcare Quality and Disparities Report notes that disparities in health care quality and outcomes by income, race, and ethnicity continue to exist.^{11,12} A 2004 IOM report revealed that POC who are health care professionals have a higher likelihood of successfully treating patients from similar backgrounds

Corresponding Author: Aisha Morris Moultry, Texas Southern University, College of Pharmacy and Health Sciences, 3100 Cleburne St., Houston, TX 77004. Tel: 713-313-7553. Email: aisha.moultry@tsu.edu

because patients tend to be more receptive to receiving treatment from someone similar to themselves.¹³ Therefore, it is important to have racial and ethnic diversity in the health workforce to ensure a health care system that supports quality health care access for all.¹⁴ In alignment with the IOM, the Accreditation Council for Pharmacy Education (ACPE) guides pharmacy schools to engage in an admissions process that fosters a diverse student body.^{13,15} Additionally, the American Association of Colleges of Pharmacy (AACP) charges pharmacy schools with recruiting and admitting students with diverse backgrounds, perspectives, and experiences that are similar to the communities they will serve as pharmacists.⁹

In 2016, there were approximately 300,000 active pharmacists in the United States. The Health Resources and Services Administration (HRSA) predicts this number will grow by 36% to 410,490 in 2030. However, if pharmacists do not change their practice model, the demand is expected to increase by only 19% to 359,770, and if pharmacists change their practice model to adjust to the evolving health care system, demand is projected to grow by 29% to 391,850 FTEs in 2030.¹⁶ By the year 2060, POC are predicted to be the majority in the United States, with the proportion of African Americans increasing slightly and the number of LatinX increasing significantly.¹⁷ While HRSA 2030 projections identify an oversupply of pharmacists, current trends do not reflect that there will be a demographic representation of pharmacists to support the diverse population at that time.

The US Department of Education recognizes historically Black colleges and universities (HBCUs) as higher education institutions that were established to provide African Americans access to a postsecondary education when they were denied access at White institutions.¹⁸ These HBCUs have been identified as an underutilized resource to achieve health equity.¹⁹ There are six HBCUs with Doctor of Pharmacy (PharmD) degree programs.³ Consistent with their history, three of the HBCUs specifically identify African Americans as a target population in their mission statements. Additionally, three include language that addresses having a multicultural/ethnically diverse environment, and three include language regarding their intention to develop practitioners who will address underserved populations, critical and urban issues, and health disparities. Only one HBCU does not include similar language in its mission statement; however, that HBCU includes cultural proficiency in its values.²⁰⁻²⁵

OBJECTIVE

Using data from the annual AACP Profile of Pharmacy Students between the 2014-2015 and 2018-2019

admission cycles, the author conducted a comprehensive review of the trends in contributions of HBCUs producing a diverse pharmacist workforce and identified opportunities for future contributions. To accomplish this, the author analyzed the contributions of HBCUs to African American pharmacy student enrollment and compared that to national pharmacy student enrollment; analyzed the contributions of HBCUs to underrepresented pharmacy student enrollment and compared that of the national pharmacy student enrollment population; evaluated overall pharmacy school enrollment changes and their impact on enrollment at HBCUs and identified opportunities to enhance the future contributions of HBCUs.

FINDINGS

During the 2014-2015 admissions cycle, there were 76,525 applications submitted to 133 entry-level PharmD degree programs. Underrepresented people of color submitted 17% of the applications, with 11.5% from African American applicants and 5.1% from LatinX applicants. The remaining applications were from Native Hawaiian or other Pacific Islander and American Indian applicants. During this same period, 13.6% of students enrolled in PharmD programs were UPOC, with African Americans making up 7.9% and LatinX making up 5.0% of that population.²⁶

The 2018-2019 applicant pool was significantly smaller than that during the 2014-2015 admissions cycle, with 50,842 applications submitted to 143 pharmacy programs. Despite this decrease, there was a notable increase in the percentage of applications received from UPOC, with this group making up 22.9% of the applicant pool. Of this 22.9%, 13.5% were African American students and 9.2% were LatinX students. Additionally, there was an increase in the percentage of UPOC enrolled in PharmD programs at 17% with 9.3% attributed to African Americans, up by 1.4%, and 7.2% attributed to LatinX students, up by 2.2%.²⁷ Although there was a decrease in overall applications and enrollment in pharmacy school, the percentage of UPOC who submitted applications and subsequently enrolled increased.

African American student enrollment in all pharmacy schools and HBCUs is shown in Table 1. Although the amount of pharmacy schools accepting applications increased nationally from 133 in 2014-2015 to 143 in 2018-2019, the number of HBCU pharmacy schools remained constant at six. During this same period, the number of African Americans enrolled went from 5,031 to 5,624, reflecting a 1% gain in their percentage representation in all pharmacy schools. Additionally, HBCUs went from contributing 27% of the total enrollment of African

Table 1. Enrollment of African American Students in US Pharmacy Schools³⁻⁷

	2015		2016		2017		2018		2019	
	Amount AAPSs	% Total	Amount AAPSs	% Total	Amount AAPSs	% Total	Amount AAPSs	% Total	Amount AAPSs	% Total
Total AAPSs nationally	5,031	8	5,308	8	5,673	9	5,719	9	5,624	9
Total AAPSs at HBCUs	1,342		1,296		1,295		1,188		1,080	
% AA HBCU contribution		27		24		23		21		19
Total enrollment	63,460		63,464		63,087		62,504		60,594	

Abbreviations: AAPSs=African American Pharmacy Students, HBCUs=Historically Black Colleges and Universities.

Americans in 2014-2015 to 19% in 2018-2019. Although HBCUs represent only 4% of the total number of pharmacy schools, African American students enrolled at these schools represented 22.8% of the total African American student enrollment in US pharmacy schools over the five-year period.^{3,7}

The number of African Americans enrolled in HBCU pharmacy schools declined from 1,342 in 2015 to 1,080 in 2019, while enrollment in all pharmacy schools nationally increased from 5,031 in 2015 to 5,624 in 2019. Individual HBCUs consistently had an African American student population of roughly 35% or more (Table 2). Although the total pharmacy student population at HBCUs accounts for only 3% of all students enrolled in US pharmacy schools, African American students enrolled in HBCUs account for approximately 20% or more of all African Americans enrolled in pharmacy school.³ Nationwide increases in the number of African Americans enrolled in pharmacy schools from 2015 to 2019 are shown in Tables 1 and 2.³⁻⁷ This increase seems to reflect the impact of new pharmacy schools and more schools making efforts to increase diversity in admissions classes as encouraged by ACPE and AACP.^{9,15}

Although the number of African Americans enrolled in pharmacy schools has increased by approximately 11% nationally over the past five years (5,031 in 2015 vs 5,624 in 2019), African Americans still only make up an estimated 9% of the total US pharmacy school population, reflecting only a 1% gain.³ Given the 2020 Census projections that African Americans will comprise 13.4% of the United States population, they are still considered underrepresented in pharmacy schools.²

As noted in Table 3, HBCUs not only educate a significant percentage of African American students enrolled in pharmacy school, they also educate other UPOC pharmacy students. Except for LatinX students, HBCUs have consistently enrolled a larger percentage of UPOC students than the total percent enrolled in all pharmacy schools. In the past five years HBCUs have enrolled 6.6% of the total American Indian and Alaska Native population

in comparison to the national average of 0.3%. Additionally, HBCUs have enrolled 2% of the total Native Hawaiian and other Pacific Islander in comparison to the 0.3% national average. Conversely, HBCUs have enrolled 1.6% of the LatinX student population in pharmacy school compared to the 5% national average of LatinX students enrolled in pharmacy school.

Despite only representing 3%-4% of the total number of pharmacy schools, HBCUs have enrolled an average of 13.8% of the total UPOC population enrolled in US pharmacy schools since 2015. However, the contributions of HBCUs to UPOC in pharmacy is trending downward (Table 2). When comparing the contribution trend to the number of pharmacy schools, the data reveals there is a converse relationship; as the amount of pharmacy schools increase, the contribution of HBCUs to the UPOC student population decreases.

When comparing current student enrollment demographics to future United States census projections, there is the potential for a continued disparity in populations that are currently underrepresented in pharmacy school (Table 4). When evaluating current UPOC in the profession, the largest growth is predicted to occur in the LatinX population, followed by the African American population. African Americans are predicted to increase by 0.4% by 2030 and increase by 1.6% by 2060. However, the LatinX population is predicted to grow by 2.6% in 2030 and by 9% in 2060.

Changes in the number of American Indians and Alaska Natives, as well as the Native Hawaiian and other Pacific Islanders are projected to be minimal, with a growth of only 0.1% in both groups by 2030 and 2060. Nevertheless, there is still opportunity to increase American Indian and Alaska Native pharmacy student enrollment to ensure it is reflective of US population trends.

When comparing the US general population to the enrollment at pharmacy HBCUs, pharmacy HBCUs currently exceed the general population with their enrollment contributions for African American (19% vs 13.4%), American Indian and Alaska Native (2% vs 1.3%), and

Table 2. Enrollment of African American Students in Pharmacy School at Historically Black Colleges and Universities³⁻⁷

	2015 Student Enrollment			2016 Student Enrollment			2017 Student Enrollment			2018 Student Enrollment			2019 Student Enrollment		
	African American	Total, %	African American	African American	Total, %	African American	African American	Total, %	African American	African American	Total, %	African American	African American	Total, %	African American
HBCU-A ^a	176	68	172	191	70	172	151	65	151	165	67	165	165	67	165
HBCU-B	464	67	457	438	67	438	415	70	415	330	71	330	330	71	330
HBCU-C	189	74	179	166	73	166	146	73	146	107	76	107	107	76	107
HBCU-D	219	36	209	241	34	241	239	41	239	279	46	279	279	46	279
HBCU-E	203	45	183	169	44	169	156	44	156	137	43	137	137	43	137
HBCU-F	91	49	96	90	52	90	81	53	81	62	44	62	62	44	62
Total AAPSS at HBCUs	1,342		1,296	1,295		1,295	1,188		1,188	1,080		1,080	1,080		1,080
Total AAPSS Nationally	5,031	8	5,308	5,673	8	5,673	5,719	9	5,719	5,624	9	5,624	5,624	9	5,624

Abbreviations: AAPSS=African American Pharmacy Students, HBCU=Historically Black Colleges and Universities.

^a Each HBCU included in the review was assigned an alphabet in no particular order to conceal the specific identity of the HBCU.

Native Hawaiian and other Pacific Islander (4% vs 0.2%) populations. For the same populations, pharmacy HBCUs also exceed the current total pharmacy school enrollment percentages. However, HBCUs do not contribute a comparable percentage of LatinX students when comparing their enrollment with the United States population (1% vs 18.5%) and the collective pharmacy school enrollment threshold (1% vs 7.2%).

Of note, students who identify as being two or more races is a group that the AACCP Profile of Pharmacy Students has started monitoring in recent years. There are indicators that this group may be classified as underrepresented. People of two or more races currently make up 2.8% of the United States population, with a predicted growth of 0.8% by 2030 and 3.4% by 2060. However, this group currently makes up only 2% of pharmacy school enrollment, with 2% of that enrollment coming from students enrolled at HBCUs.

DISCUSSION

Although there has been an increase in the number of US pharmacy schools, the AACCP Profiles of Pharmacy Students published between 2015-2019 reveal a downward trend in total pharmacy school applications and an upward trend in degrees conferred. These same AACCP Profiles also reveal that, while there is an increase in the number of African Americans enrolling in and graduating from pharmacy schools, their percentage distribution has only slightly increased. Although these students account for 3% of all students enrolled in 143 US pharmacy schools, HBCUs have enrolled 19%-27% of all African American pharmacy students in the United States and 11%-17% of all underrepresented students over the past five years.³⁻⁷ These findings are consistent with those of HBCU medical schools, whereas less than 3% of medical schools are HBCUs yet 14% of African Americans enrolled in medical school attend an HBCU medical school.²⁸ As more pharmacy schools enter the market and there is a greater focus on diversity initiatives, the competition for African American and other underrepresented students increases.

To ensure there are an adequate number of pharmacists of color to care for the predicted demographically diverse US population of 2030 and beyond, schools of pharmacy must continue to make efforts to increase the diversity of its students.¹⁷ This review reveals that the collective effort by pharmacy schools to recruit UPOC has resulted in an overall increase in the number of underrepresented students enrolled. However, HBCUs have seen a decrease in the number of students of color attending pharmacy school at their institutions. This implies that students

Table 3. Underrepresented Student Enrollment Contribution of HBCU Pharmacy Schools³⁻⁷

Race and Hispanic Origin	2015			2016			2017			2018			2019		
	All Schools %	HBCU Contribution %	All Schools %	HBCU Contribution %	All Schools %	HBCU Contribution %	All Schools %	HBCU Contribution %	All Schools %	HBCU Contribution %	All Schools %	HBCU Contribution %	All Schools %	HBCU Contribution %	All Schools %
Black or African American alone	8 (n=5,031)	27	8.4 (n=5,308)	24	9 (n=5,673)	23	9.1 (n=5,719)	21	9.3 (n=5,624)	19					
American Indian and Alaska Native alone	0.3 (n=194)	8	0.3 (n=192)	10	0.3 (n=218)	9	0.4 (n=228)	4	0.4 (n=219)	2					
Native Hawaiian and other Pacific Islander alone	0.4 (n=231)	0	0.4 (n=235)	1	0.2 (n=105)	3	0.2 (n=133)	2	0.2 (n=124)	4					
Hispanic or LatinX	5 (n=3,185)	2	5.3 (n=3,391)	3	5.8 (n=3,675)	1	6.5 (n=4,049)	1	7.2 (n=4,361)	1					
All UPOC	13.6 (N=8,641)	17	14.4 (N=9,126)	15	15.3 (N=9,671)	14	16.2 (N=10,129)	12	17 (N=10,328)	11					
Total pharmacy schools	133		137		140		143		143						

Abbreviations: HBCU=Historically Black College and University, UPOC=Underrepresented People of Color

who may have previously attended an HBCU pharmacy school are either opting to attend a non-HBCU school or not choosing pharmacy as a profession.

HBCUs can continue to be impactful in producing underrepresented pharmacy graduates of color and remain aligned with their mission statements. There has been an average increase in underrepresented students in pharmacy schools of 1% annually, with enrollment of African Americans and LatinX students having the greatest impact on this trend. Given the predicted demographic make-up of the United States in 2030, there is a need for this trend to increase at a greater rate. Additionally, the data indicate an opportunity for HBCUs to target and recruit more LatinX students. With HBCUs falling below the national percentage and total pharmacy enrollment percentage trends of LatinX students, HBCUs have the opportunity to increase their enrollment through this population. However, it is also imperative that HBCUs continue targeting African American students to maintain their position as the leaders in graduating African American pharmacists.³⁻⁷ HBCUs must also work to increase recruitment of American Indians and Alaska Natives, and Native Hawaiians and other Pacific Islanders.^{3-7,20-25}

The decision for African Americans to attend pharmacy school at an HBCU can have a positive impact on their well-being in the future.²⁹ According to a Gallup study in 2015, African American HBCU graduates are more likely to thrive in social well-being (54%) through social connections and purpose well-being (51%) by enjoying what they do in comparison to other African American students who graduate from predominantly white institutions (PWIs). The study also found that African American HBCU graduates are significantly more likely to have felt supported while in college and feel that they are thriving upon graduation in comparison to their peers from PWIs. They are also more than twice as likely as their peers educated at PWIs to recall a time where they felt supported by a professor.²⁹

These findings have some alignment with those from a study by Bush that investigated the experiences of UPOC in pharmacy school at PWIs. Bush found that underrepresented students of color recounted negative experiences, including a lack of diversity, feeling unwelcomed, and having concerns about cultural competency and group work challenges. However, the presence of underrepresented faculty members was impactful, causing students to report feeling motivated by underrepresented faculty members, self-efficacy, and a sense of purpose. These collective findings imply that African American students who attend an HBCU for pharmacy school are more likely to feel supported during their matriculation.^{29,30} Given the ability of HBCUs to create a

Table 4. Future US Population Projections and Contributions of Historically Black Colleges and Universities to Student Enrollment in Pharmacy School^{2-7,17}

Race and Hispanic Origin	2019 US Population %	2030 US Population %	2060 US Population %	2019 Pharmacy School Enrollment N=60,594 %	2019 Pharmacy HBCUs Contribution to Pharmacy School Enrollment %	2019 UPOC in Profession
Black or African American alone	13.4	13.8	15	9	19	X ^a
American Indian and Alaska Native alone	1.3	1.3	1.4	0.3	2	X
Asian alone	5.9	6.9	9.1	24	2	
Native Hawaiian and other Pacific Islander alone	0.2	0.3	0.3	0.2	4	X
Two or more races	2.8	3.6	6.2	2	2	
Hispanic or LatinX	18.5	21.1	27.5	7	1	X
White alone and not Hispanic or LatinX	60.1	55.8	44.3	48	1	

^a X indicates the referenced population is considered underrepresented based on the HHS definition of underrepresented.⁸

Abbreviations: HBCU=Historically Black College and University, UPOC=Underrepresented People of Color

supportive environment for African American students, HBCUs are poised to be responsive to the needs of other underrepresented students of color.

During the 2020 presidential election cycle, there was much attention given to the role of HBCUs in educating African Americans, with specific attention to the election of Vice President of the United States Kamala Harris, who graduated from an HBCU.³¹ Additionally, the Black Lives Matter protests surrounding police brutality of African Americans in 2020 created a renewed sense of pride among those who had attended or planned to attend HBCUs.³² This resulted in some HBCUs seeing an increase in enrollment, some prominent athletes transferring from PWIs to HBCUs, and highly recruited graduating high school athletes changing their commitments from a PWI to an HBCU.^{32,33} This attention also resulted in increased philanthropic giving to HBCUs.³³ These movements present an

opportunity for HBCUs to capitalize on the attention and work to recruit students to their pharmacy schools.

Given that HBCUs were established to provide African Americans access to a postsecondary education due to their denial of admission to PWIs, HBCUs have a history of significantly impacting the number of African American graduates and continue to make contributions in this regard.¹⁸ As the demographics in the United States shift, HBCUs can continue to make an impact and significantly contribute to the development of a diverse workforce. As competition for enrollment increases, HBCUs must examine their recruitment practices to ensure they are effective in achieving their missions in a changing environment. Pharmacy HBCUs must conduct in-depth analyses to determine the root cause of shifts in enrollment trends and identify strategies that can be implemented or enhanced to secure their position as producers of UPOC pharmacists

and continue contributing to the health care demands of an increasingly diverse patient population.

A limitation of this review article is the data presented is based on information from the AACP Profile of Pharmacy Students, which includes some self-reported information from students. Additionally, the comprehensiveness of the data is dependent on information that was reported to and from institutions. During 2016, there were 138 pharmacy schools; however, only 137 reported application information.⁷ Subsequently, in 2017 there were 142 pharmacy schools, but only 140 reported application information.⁶ As a result, information on some schools for these two years was missing. However, the missing information may have been due to inclusion of institutions with precandidate accreditation status.¹⁵

The data presented are from all US pharmacy schools and not from just a sample. Therefore, these findings are generalizable to the US pharmacy school population. However, because the review is based specifically on pharmacy school enrollment, it is not generalizable to other health profession schools, such as medical or dental schools.

SUMMARY

Despite increases in the total amount of African Americans enrolled in pharmacy schools since 2015, they still only represent approximately 9% of the total pharmacy school population and continue to be considered underrepresented in the profession.¹⁻⁷ Nonetheless, HBCUs have consistently made important contributions to the total pharmacy school population of African Americans, as well as to the pharmacy school populations of Native Hawaiian and other Pacific Islanders and American Indian and Alaska Natives. Despite HBCUs only representing 3% of the total pharmacy student enrollment population, their contributions to African American and UPOC collectively are significant to the diversity that exist in pharmacy school enrollment. While HRSA 2030 projections identify a sufficient supply of pharmacists, current trends do not suggest there will be a sufficient demographic representation of pharmacists to support the historically underserved populations experiencing the greatest health disparities.¹⁶ Therefore, pharmacy schools must continue to ensure that the pipeline of underrepresented pharmacists is sufficient to meet future population projections. Historically Black colleges and universities have an opportunity to enhance their impact and serve as a conduit for providing the anticipated diverse workforce that will be needed. Historically Black colleges and universities can achieve this by making significant efforts to recruit LatinX pharmacy students and continuing or increasing their recruitment of African Americans, Native

Hawaiian and other Pacific Islanders, and American Indian and Alaska Natives students into pharmacy.

REFERENCES

1. United States Department of Labor, Bureau of Labor Statistics. Occupational employment and wages: pharmacists. <https://www.bls.gov/oes/2018/may/oes291051.htm>. Accessed October 9, 2021.
2. United States Department of Commerce, Census Bureau. QuickFacts. <https://www.census.gov/quickfacts/fact/table/US/RHI125219>. Accessed October 9, 2021.
3. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. Profile of pharmacy students: Fall 2019 enrollments. <https://www.aacp.org/sites/default/files/2020-05/fall-2019-pps-enrollments.pdf>. Accessed October 9, 2021.
4. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. Profile of pharmacy students: Fall 2018 enrollments. <https://www.aacp.org/sites/default/files/2019-05/fall-2018-profile-of-pharmacy-students-enrollments.pdf>. Accessed October 9, 2021.
5. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. Profile of pharmacy students: Fall 2017 enrollments. <https://www.aacp.org/sites/default/files/2018-05/fall-2017-profile%20of%20pharmacy%20students-enrollments.pdf>. Accessed October 9, 2021.
6. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. Profile of pharmacy students: Fall 2016 enrollments. https://www.aacp.org/sites/default/files/2017-10/PPS_2016_Enrollments.pdf. Accessed October 9, 2021.
7. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. (2016). Profile of pharmacy students: Fall 2015 enrollments. <https://www.aacp.org/sites/default/files/2017-10/Enrollments.pdf>. Accessed October 9, 2021.
8. United States Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. Sex, race, and ethnic diversity of U.S. health occupations (2011-2015), Rockville, Maryland.
9. White C, Conway JM, Davis PK, et al. AACP special taskforce white paper on diversifying our investment in human capital. *Am J Pharm Educ*, 2017;81(8), S13. doi:10.5688/ajpeS13
10. Wall AL, Aljets A, Ellis SC, et al. White paper on pharmacy admissions: developing a diverse work force to meet the health-care needs of an increasingly diverse society: recommendations of the American Association of Colleges of Pharmacy special committee on admissions. *Am J Pharm Educ*. 2015;79(7),S7. doi:10.5688/ajpe797S7
11. Institute of Medicine. Unequal treatment: confronting racial and ethnic disparities in health care. Washington, DC: The National Academies Press. doi.org/10.17226/10260.
12. United States Department of Health and Human Services, Agency for Healthcare Research and Quality. (2019). 2018 National healthcare quality and disparities report. (AHRQ Pub. No. 19-0070-EF), Rockville, Maryland.
13. Institute of Medicine. In the Nation's compelling interest: ensuring diversity in the health-care workforce. Washington, DC: The National Academies Press. doi.org/10.17226/10885.
14. Council on Graduate Medical Education. Supporting diversity in the health professions (Twenty-Third Report). <https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/graduate-medical-edu/resource-papers/May2016.pdf>. Accessed October 9, 2021.

15. Accreditation Council for Pharmacy Education. Guidance for the accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree. <https://www.acpe-accredit.org/pdf/GuidanceforStandards2016FINAL.pdf>. Accessed October 9, 2021.
16. United States Department of Health and Human Services, Health Resources and Services Administration. National Center for Health Workforce Analysis. (2019). Allied health workforce projections, 2016-2030: pharmacists. <https://bhwh.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/pharmacists-2016-2030.pdf>. Accessed October 9, 2021.
17. Vespa J, Medina L, Armstrong DM. Demographic turning points for the United States: population projections for 2020 to 2060. <https://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1144.pdf>. Accessed October 9, 2021.
18. United States Department of Education, Office for Civil Rights. Historically black colleges and universities and higher education desegregation. <https://www2.ed.gov/about/offices/list/ocr/docs/hq9511.html>. Accessed October 9, 2021.
19. Noonan A, Lindong I, Jaitley VN. The role of historically black colleges and universities in training the health care workforce. *Am J Public Health*. 2013;103(3):412-415. doi:10.2105/AJPH.2012.300726
20. Florida Agricultural and Mechanical University. Archived catalog: College of Pharmacy and Pharmaceutical Sciences. http://catalog.famu.edu/preview_entity.php?catoid=5&ent_oid=404&returnto=203. Accessed October 10, 2021.
21. Hampton University School of Pharmacy. School of pharmacy mission statement. <https://home.hamptonu.edu/pharmacy/mission-and-vision-statements-hampton-university-school-of-pharmacy/>. Accessed October 9, 2021.
22. Howard University College of Pharmacy. About. <https://pharmacy.howard.edu/about>. Accessed October 9, 2021.
23. Texas Southern University College of Pharmacy and Health Sciences. About us. <http://www.tsu.edu/academics/colleges-and-schools/college-of-pharmacy-and-health-sciences/about-us/index.html>. Accessed October 9, 2021.
24. University of Maryland Eastern Shore. Mission and vision. <https://www.umes.edu/Pharmacy/Pages/Mission-and-Vision/#:~:text=The%20University%20of%20Maryland%20Eastern,Maryland%2C%20and%20around%20the%20world>. Accessed October 9, 2021.
25. Xavier University of Louisiana. About the college of pharmacy. <https://www.xula.edu/aboutcollegeofpharmacy>. Accessed October 9, 2021.
26. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. Fall 2015 introduction - profile of pharmacy students. <https://www.aacp.org/sites/default/files/2017-10/Introduction.pdf>. Accessed October 9, 2021.
27. American Association of Colleges of Pharmacy, Office of Institutional Research and Effectiveness. Fall 2019 introduction - profile of pharmacy students. <https://www.aacp.org/sites/default/files/2020-05/fall-2019-pps-introduction.pdf>. Accessed October 9, 2021.
28. Rodríguez JE, López IA, Campbell KM, et al. The role of historically black college and university medical schools in academic medicine. *J Health Care Poor Underserved*. 2017;28(1):266-278. DOI: 10.1353/hpu.2017.0022
29. Seymour S, Ray J. Grads of historically black colleges have well-being edge. Gallup. <https://news.gallup.com/poll/186362/grads-historically-black-colleges-edge.aspx>. Accessed October 9, 2021.
30. Bush AA. A conceptual framework for exploring the experiences of underrepresented racial minorities in pharmacy school. *Am J Pharm Educ*. 2020;84(1), 7544. doi.org/10.5688/ajpe7544
31. Howard Newsroom Staff. Howard University celebrates Vice President Kamala Harris. <https://newsroom.howard.edu/newsroom/article/13741/howard-university-celebrates-vice-president-kamala-harris>. Accessed October 9, 2021.
32. Weissman S. Enrollment at some HBCUs increases in the wake of Black lives matter protests. *Diverse Issues in Higher Education*. <https://diverseeducation.com/article/186536/>. Accessed October 9, 2021.
33. Stewart P. HBCUs have benefitted from philanthropy in wake of recent 'Black lives matter' protests. *Diverse Issues in Higher Education*. 2020;37(12):25-27. <https://diverseeducation.com/article/186527/>. Accessed October 9, 2021.