An Environmental Scan of Faculty Diversity Programs at U.S. Medical Schools

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Abstract

Purpose

To update the information available on the number and type of faculty diversity programs at U.S. MD-degree-granting medical schools.

Method

The authors conducted an environmental scan of the 124 MD-degree-granting medical schools included in the 2010 Faculty Roster. They interviewed key informants in the faculty affairs and/or minority affairs offices and conducted Web site searches to identify relevant schoolwide programs. Using a conceptual framework, they categorized the faculty programs that they identified into four domains: mentorship, career development, social climate, and financial support.

Results

Of 124 eligible schools, the authors interviewed key informants from 84 schools (67.7%) and conducted Web site searches for 40 schools (32.2%). They identified diversity programs at 36 schools (29.0%) including mentoring (20/36; 16.1%), career development (20/36; 16.1%), social climate (17/36; 13.7%), and financial support programs (15/36; 12.1%). Schools with diversity programs were similar to schools without diversity programs in terms of year established, public/private status, and designation as historically black but were more likely to rank in the highest quartile and have a greater number of total faculty, and less likely to be located in the South.

Conclusions

Less than a third of medical schools had programs targeting underrepresented minority (URM) faculty, and those programs that do exist differ in scope and goals. These findings suggest that a lack of resources and a preference for programs that target all faculty may limit the development of programs targeting URM faculty. Future research should examine whether diversity programs contribute to URM faculty recruitment and retention.

Although many institutions have endorsed diversity in medicine, underrepresented minority (URM) physicians and scientists are still inadequately represented among medical school faculty.[1,2] Currently, URM faculty constitute only 7.5% of all medical school faculty, but they represent 14.1% of medical students and 30.0% of the U.S. population.[3] Faculty statistics compiled by the Association of American Medical Colleges (AAMC) show that, although their representation has increased over time, URM faculty are less likely than their non-URM colleagues to be promoted from assistant to associate professor (34.9% of non-URM faculty versus 25.2% of URM faculty) and from associate to full professor (40.2% of non-URM faculty versus 31.1% of URM faculty) and, when promoted, spend more time at a probationary rank.[4–6] URM faculty are also less likely to hold senior faculty positions.[7] These differences hold even after adjustment for potential confounding factors, including gender, tenure status, and status as a recipient of a National Institutes of Health (NIH) grant.[5] As a result, URM faculty report lower career satisfaction than non-URM faculty.[8]

Researchers have found associations between the current underrepresentation of URM faculty and the prior career decisions of medical school graduates.[9] URM medical school graduates appear less likely to enter academic medicine, which can disrupt the pipeline for future URM faculty. The percentage of URM medical school graduates who later attain faculty positions in medical schools is significantly less than that of non-URM graduates.[9] As a result, the percentage of URM medical school graduates seeking faculty positions has dropped over time.

The reasons why medical schools are less likely to recruit, promote, and retain URM faculty are complex. URM faculty may be less likely to receive adequate mentoring as junior faculty, which is important in developing a competitive academic plan for promotion.[10] In addition, URM faculty may be burdened by committee assignments, a lack of institutional commitment, a dearth of resources for career development, social isolation, a lack of protected time to pursue scholarly endeavors, and perceived discrimination, which act as barriers to promotion.[11–14]

The AAMC views increasing the diversity of medical school faculty as a way to improve the excellence of medical education and research.[2] The "dividends of diversity" argument suggests that increasing faculty diversity both can contribute to a better educational climate and can improve educational outcomes, particularly for URM students.[15,16] URM

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faculty provide important perspectives and experiences that may differ from those of non-URM faculty and can help increase our understanding of health disparities and health conditions within vulnerable populations.[17,18] URM faculty are more likely than their non-URM colleagues to work in diverse communities, to be successful in recruiting minority subjects for research investigations, and to address health conditions that are prevalent in minority communities.[17,19–22] For these reasons, the Institute of Medicine also has advocated for greater faculty diversity.[23]

As a result of these and other calls for greater faculty diversity, numerous medical schools have implemented programs to increase the recruitment and retention of URM faculty. For example, the AAMC initiated "Project 3000 by 2000" in 1990 to increase both URM enrollment in medical schools and the number of URM faculty. Although this program fell short of its desired goal, it did increase the percentage of URM medical students to 12% by 2000.[24,25] The latest survey of U.S. MD-degree-granting medical schools in 1989 reported that 62 of 113 responding schools (55%) had affirmative action programs to increase the diversity of their medical school faculty.[26] Although a handful of URM faculty recruitment and development programs have received recognition since then,[27,28] it is not clear how these and other faculty diversity programs have evolved over time, been sustained, or disseminated to other schools. In this study, we sought to update the information available on the number and types of faculty diversity programs at U.S. MD-degree-granting medical schools.

Method

Data

We identified eligible U.S. MD-degree-granting medical schools using the AAMC's Faculty Roster, a database of faculty used to support national program studies.[29] The Faculty Roster contains comprehensive information on the characteristics of paid faculty members at accredited U.S. medical schools. Institutional participation in the Faculty Roster is voluntary but has grown to contain records on approximately 128,000 active full-time faculty. To be eligible for participation in our study, medical schools had to report faculty data in the Faculty Roster for the most recent year (2010) and be located in 1 of the 50 states or the District of Columbia.

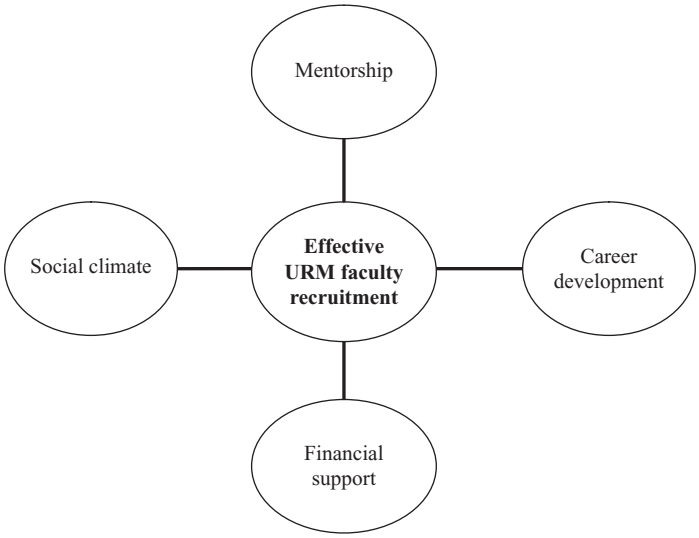

Figure 1 Conceptual framework for classifying domains of underrepresented minority (URM) faculty development programs. According to this model, effective URM faculty retention is a function of school policies that are implemented through various programs contained within four domains: mentorship, career development, social climate, and financial support.

Procedures

We conducted an environmental scan of all U.S. MD-degree-granting medical schools to identify programs related to URM faculty recruitment and retention. We identified potential key informants at each of the 124 eligible schools through Web site searches of faculty affairs and/or minority affairs offices (E. Adanga). From January through October 2011, we conducted interviews with these key informants to identify specific programs (E. Adanga and E. Avakame). We provided a consent script to each individual prior to the interview, and we audio taped each interview for further analysis. We also collected demographic data for each individual (age, gender, race/ethnicity, position, and years at position) during the interview. For schools that we were unable to reach or that declined to participate, we conducted Web site searches to identify any faculty programs targeted to diverse faculty (E. Adanga and E. Avakame).

Two of us (E. Adanga and J.G.) categorized faculty diversity programs into the following domains using a conceptual framework (see Figure 1): mentorship, career development, social climate, and financial support. Mentorship programs involved the establishment of faculty-to-faculty mentoring to enable individual faculty to solicit advice, facilitate opportunities, and receive support. Career development programs involved classes or workshops designed to help faculty develop the skills necessary for promotion, including grant writing and teaching. Social climate programs enhanced the educational and promotional environment and provided opportunities for networking, peer support, and a reduction in feelings of social isolation. Financial support programs involved monetary or equivalent support that relieved faculty of clinical and/or administrative duties to pursue scholarly research or educational endeavors. We based our conceptual framework on our review of the related literature and on our discussions with senior URM faculty nationwide. We categorized some programs into multiple domains depending on their scope. We settled any differences by consensus (E. Adanga and J.G.).

We gathered information on the availability, goals, scope, duration, and results of all schoolwide programs designed to enhance the recruitment and retention of the general faculty population. We then asked specific questions regarding programs targeted toward URM faculty. The following is an example of a line of questioning regarding potential diversity programs in the mentorship domain:

- Do you have a formal faculty mentorship program at _____ Medical School?
- Can you tell me about the program? *Probe regarding name of program, year of initiation of program, goals of program, scope of program, program elements.*
- Whom does the program target? *Probe whether program exists in only certain departments or is schoolwide, target of program being all faculty or only subset of faculty, criteria for participation in program.*
- Are there any programs that you know of that are specifically for minority faculty?
- What are the results of the program to date? *Probe regarding effect of program on minority recruitment and retention.*

The institutional review board at the Children's Hospital of Philadelphia deemed our study exempt from review.

Measures

We collected data on the characteristics of the medical schools from the AAMC, medical school Web sites, the Faculty Roster database, and U.S. News & World Report's 2010 Best Medical Schools rankings.[30] These characteristics included mean faculty size, historically black college status, geographic region (West, Midwest, South, and Northeast), funding status (public versus private), and reputation (current U.S. News & World Report ranking by quartile to preserve school confidentiality).

Analysis

We collected and managed these data using the Research Electronic Data Capture (REDCap) software (Version 4.11.0, Nashville, Tennessee)[31] hosted at the Children's Hospital of Philadelphia. We used descriptive statistics (χ^2) to assess the differences in school characteristics and faculty programs between schools with and without faculty diversity programs. We considered *P* values less than .05 to be statistically significant.

Results

Of the 131 schools included in the 2010 Faculty Roster, we excluded 4 schools not located in 1 of the 50 states or the District of Columbia and 3 schools missing faculty data. We contacted key informants at the remaining 124 schools by phone or e-mail to ask them to participate in our study. Overall, we interviewed individuals from 84 schools (67.7%). We were unable to complete interviews with key informants from 24 schools (19.4%) because of scheduling difficulties. At the remaining 16 schools (12.9%), key informants declined to be interviewed, citing a lack of time and/or interest as reasons for not participating. For the 40 schools (32.3%) at which we did not interview a key informant, we instead conducted a Web site search.

Table 1

Demographics of Interviewees in an Environmental Scan of Faculty Diversity Programs, 2011*

Characteristic	Interviewees
Mean age (SD)†	54.8 years (±7.8)
Gender, no. (% of 84)	
Male	24 (28.6)
Female	60 (71.4)
Race/ethnicity, no. (% of 84)	
Caucasian	62 (73.8)
African American	10 (11.9)
Hispanic	4 (4.8)
Asian	5 (5.9)
Other/no response	3 (3.6)
Rank/position, no. (% of 84)	
Provost/chancellor	6 (7.1)
Associate dean level‡	57 (67.9)
Department/chair position	9 (10.7)
Program director	9 (10.7)
Other	3 (3.6)
Years at position (SD)	17.6 years (±10.3)

*SD indicates standard deviation.
† Only 81 interviewees stated their age.
‡ Includes senior associate, associate, and assistant dean levels.

In Table 1, we present the demographics for the participating key informants. The majority (60/84; 71.4%) were white females. The average age was 55. Fifty-seven (67.9%) were senior, associate, or assistant deans in their school's equivalent of an office for faculty affairs or development. The average time at their respective institutions was about 18 years.

In total, we identified 36 of the 124 schools (29.0%) as having a faculty diversity program that fell into one or more of the four domains in our study (see Table 2). Of the 84 schools at which we interviewed a key informant, 28 schools (33.3%) had at least one URM faculty program. Of the 40 schools for which we completed a Web site search, 8 (20.0%) had at least one URM faculty program. The remaining 88 schools of the 124 eligible schools (71.0%) did not have specific programs targeted to URM faculty.

We examined various medical school characteristics to determine their relationship with the availability of URM faculty programs. In Table 2, we present the results of this comparison. We found no association between the year the medical school was established, its public or private status, or its designation as a historically black school and the availability of diversity programs. Schools with diversity programs were more likely to be ranked in the highest quartile than schools without diversity programs (16/36 [44.4%] versus 18/88 [20.5%], $P = .05$). They were also less likely to be located in the South (8/36 [22.2%] versus 40/88 [45.5%], $P = .05$). Finally, schools with diversity programs had a larger mean faculty size (1,347 versus 995, $P = .049$) than schools without diversity programs.

In terms of the specific faculty diversity program domains, 20 of the 124 schools (16.1%) had mentoring programs,

Table 2

Medical School Characteristics by Availability of Underrepresented in Medicine (URM) Faculty Programs, 2011

Characteristic	Schools with URM programs	Schools without URM programs	*P* value
Total schools, no. (% of 124)	36 (29.0)	88 (71.0)	—
Year established, no. (% of total)			
1765–1859	6 (16.7)	26 (29.5)	
1860–1909	12 (33.3)	25 (28.4)	
1910–1959	7 (19.4)	12 (13.6)	
1960–2010	11 (30.6)	25 (28.4)	.484
Public/private, no. (% of total)			
Public	21 (58.3)	56 (63.6)	
Private	15 (41.7)	32 (36.4)	.581
Historically black, no. (% of total)			
Yes	1 (2.8)	2 (2.3)	
No	35 (97.2)	86 (97.7)	.868
Rank quartile, no. (% of total)*			
First	16 (51.6)	18 (24)	
Second	7 (22.5)	28 (37.3)	
Third	5 (16.1)	18 (24)	
Fourth	3 (9.6)	11 (14.6)	.053
Mean faculty size (SD)†	1,347 (1,330)	995 (641)	.049
Region, no. (% of total)			
Northeast	10 (27.8)	19 (21.6)	
Midwest	10 (27.8)	21 (23.9)	
South	8 (22.2)	40 (45.5)	
West	8 (22.2)	8 (9.1)	.056

*The total number of schools with URM programs is 31 and without URM programs is 75 because only 106 schools were ranked in *U.S. News & World Report* in 2010.
† SD indicates standard deviation.

20 (16.1%) had career development programs, 17 (13.7%) had social climate programs, and 15 (12.1%) had financial programs. Schools with diversity programs had a greater mean number of faculty programs overall (2.8 versus 1.9, $P < .001$) than schools without diversity programs. Table 3 includes the faculty diversity programs that we identified by the four domains. We found that schools with diversity programs were more likely to have mentoring (27/36 [75.0%] versus 39/88 [44.3%], $P = .002$), social climate (28/36 [77.8%] versus 32/88 [36.4%], $P < .001$), and financial programs (30/36 [83.3%] versus 55/88 [62.5%], $P = .023$) targeted to all faculty than schools without diversity programs.

In Appendix 1, we present a detailed breakdown of the 36 schools that we identified as having faculty diversity programs. Several schools (21/36; 58.3%) had programs that fell into more than one of the four domains, and 5 schools (13.9%) had diversity programs that fell into all four domains. The diversity programs that we identified varied in terms of scope and goals. Most schools offered one-on-one mentoring programs, whereas others offered mentoring programs using committees. The goal of social climate programs often was to develop networking meetings, whereas the goal of career development programs was to provide workshops to enhance teaching and grant-writing skills. Some financial programs aimed to provide funds for faculty hires, whereas other programs targeted existing faculty to provide research or salary support.

Regarding the duration of these diversity programs, 15 schools (41.7%) had established programs only within the last 10 years, whereas 1 school had successfully maintained a diversity program since 1972. Programs were generally open to all URM faculty who were interested in participating, but about 22% (8/36) of schools targeted specific groups, such as junior faculty, fellows, or postdoctoral students. The sources of funding for these programs varied. Some programs were funded through institutional funds, whereas others were funded through grants or endowments, such as Health Resources and Services Administration grants.

Most schools (20/36; 55.6%) reported that they did not evaluate the results of the programs they had in place. Schools that did maintained general evaluations of workshops or seminars to assess overall faculty satisfaction. Some of these schools noted small increases in the overall number of URM faculty recruited and retained. For the majority of schools, they have not tracked the results of these evaluations long enough to determine whether or not their programs had any significant effect on URM recruitment or retention.

As an example of an exemplary program, a key informant from a Northeast school described a well-developed, schoolwide diversity program initiated in 2002 (School #6 in Appendix 1). The program offered structured individual mentoring to URM faculty, specific professional development opportunities, a variety of social events, and salary support to enable participants to pursue scholarly endeavors. The school obtained results on participant satisfaction, tracked faculty statistics over the intervening nine years, and reported that the percentage of URM faculty increased from 4% to 7%.

Discussion

Our study examined the availability and composition of faculty diversity programs aimed at improving the recruitment and retention of URM faculty at U.S. medical schools. Our environmental scan of 124 schools showed that only 36 (29.0%) currently have specific programs targeted to URM faculty and that those programs vary in composition. Schools with diversity programs were more likely to be ranked higher and larger in size, and less likely to be located in the South.

Our study attempted to fill a gap in the knowledge about faculty diversity programs at U.S. medical schools. Although a 1989 study reported that 62 of

Table 3

Comparison of Schools With and Without Faculty Development Programs Targeting Underrepresented in Medicine (URM) Faculty by Domain, 2011

Program type	Schools with URM programs, no. (% of 36)	Schools without URM programs, no. (% of 88)	*P* value
Any programs			.144
Yes	36 (100)	83 (94.3)	
No	0 (0)	5 (5.7)	
Mentoring			.002
Yes	27 (75.0)	39 (44.3)	
No	9 (25.0)	49 (55.7)	
Career development			.376
Yes	35 (97.2)	82 (93.2)	
No	1 (2.8)	6 (6.8)	
Social climate			<.001
Yes	28 (77.8)	32 (36.4)	
No	8 (22.2)	56 (63.6)	
Financial support			.023
Yes	30 (83.3)	55 (62.5)	
No	6 (16.7)	33 (37.5)	

113 responding schools (55%) reported having affirmative action programs, our results suggest that a smaller percentage of schools currently have faculty diversity programs. Less than half the programs we identified were more than 10 years old, suggesting that many of the programs included in the 1989 study are no longer in existence.

Our findings suggest that the availability of faculty diversity programs may be linked to school resources. We found that larger schools that were ranked higher were more likely to have diversity programs. This may be because these schools have more resources and a greater array of funding to provide these types of programs. Consistent with this theory is our finding that schools with diversity programs had a greater number of faculty programs in general.

Limitations

Our study has a few limitations that may have affected our results. First, key informants may not have been aware of all the programs targeting URM faculty at their institution, which could have led to the underreporting of programs. This is especially true if the informant was relatively new to his or her position. To mitigate this possibility, we aimed to contact senior members in the faculty or minority affairs offices when inviting individuals to participate in an interview. In addition, when an informant was unsure whether a program in a particular domain existed, we sought out additional individuals at those institutions who might have had greater knowledge of such programs. In addition, we supplemented interviews with Web site searches. Second, because we were unable to conduct interviews with key informants at 40 medical schools, we may have misclassified some institutions as not having a diversity program when in fact they did. It is possible that a number of the 40 schools have diversity programs that we could not identify through their Web site. However, our response rate approached 70%, which is a fairly good response rate for this type of study.

Implications and areas for further research

We believe that the results of our study have a number of important implications for academic medicine. For one, few schools have faculty diversity programs in place. Our findings suggest that a lack of resources or preferences for programs that target all faculty may limit the development of programs that target URM faculty specifically. Many of the schools that we identified as having diversity programs were larger in size and ranked higher, suggesting that they may have more resources to devote to faculty development programs. The absence of diversity programs at other medical schools, however, also suggests that those schools may emphasize the recruitment and retention of all faculty as a means of increasing the number of URM faculty and may not prioritize diversity using stand-alone programs. Second, of the schools that we identified as having diversity programs, few measured the impact of those programs on faculty retention. We recommend that medical schools perform and maintain more detailed evaluations of the impact of their programs, especially on faculty recruitment and retention rates over time. Finally, our findings have implications for future research in this area. We did not determine whether faculty diversity programs actually lead to an increase in the recruitment or retention of URM faculty. The data maintained by a few schools, however, suggests that such programs can positively affect URM faculty statistics. Future research should evaluate the impact of diversity programs on the recruitment and retention of URM faculty. This research should examine data at the individual faculty level, examine critical components of programs that may contribute to recruitment and retention, and compare diversity programs with other types of faculty programs. Gathering such information on faculty diversity programs can have a positive impact on the future pipeline of URM faculty pursuing careers in academic medicine.

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References

1 Association of American Medical Colleges. Diversity Research Forum: The Importance and Benefits of Diverse Faculty in Academic Medicine: Implications for Recruitment, Retention, and Promotion. Washington, DC: Association of American Medical Colleges; 2009.

2 Association of American Medical Colleges. Striving Toward Excellence: Faculty Diversity in Medical Education. Washington, DC: Association of American Medical Colleges; 2009.
3 Castillo-Page L. Diversity in Medical Education: Facts and Figures 2008. Washington, DC: Association of American Medical Colleges; 2008.
4 Alexander H, Lang J. The Long-Term Retention and Attrition of U.S. Medical School Faculty. Washington, DC: American Association of Medical Colleges; 2008.
5 Fang D, Moy E, Colburn L, Hurley J. Racial and ethnic disparities in faculty promotion in academic medicine. JAMA. 2000;284:1085–1092.
6 Palepu A, Carr PL, Friedman RH, Amos H, Ash AS, Moskowitz MA. Minority faculty and academic rank in medicine. JAMA. 1998;280:767–771.
7 Lewis-Stevenson S, Hueston WJ, Mainous AG 3rd, Bazell PC, Ye X. Female and underrepresented minority faculty in academic departments of family medicine: Are women and minorities better off in family medicine? Fam Med. 2001;33:459–465.
8 Palepu A, Carr PL, Friedman RH, Ash AS, Moskowitz MA. Specialty choices, compensation, and career satisfaction of underrepresented minority faculty in academic medicine. Acad Med. 2000;75:157–160.
9 Lypson ML, Gruppen L, Stern DT. Warning signs of declining faculty diversity. Acad Med. 2002;77(10 suppl):S10–S12.
10 Johnson JC, Williams B, Jayadevappa R. Mentoring program for minority faculty at the University of Pennsylvania School of Medicine. Acad Med. 1999;74:376–379.
11 Mahoney MR, Wilson E, Odom KL, Flowers L, Adler SR. Minority faculty voices on diversity in academic medicine: Perspectives from one school. Acad Med. 2008;83:781–786.
12 Fried LP, Francomano CA, MacDonald SM, et al. Career development for women in academic medicine: Multiple interventions in a department of medicine. JAMA. 1996;276:898–905.
13 Cropsey KL, Masho SW, Shiang R, Sikka V, Kornstein SG, Hampton CL; Committee on the Status of Women and Minorities, Virginia Commonwealth University School of Medicine, Medical College of Virginia Campus. Why do faculty leave? Reasons for attrition of women and minority faculty from a medical school: Four-year results. J Womens Health (Larchmt). 2008;17:1111–1118.
14 Peterson NB, Friedman RH, Ash AS, Franco S, Carr PL. Faculty self-reported experience with racial and ethnic discrimination in academic medicine. J Gen Intern Med. 2004;19:259–265.
15 Sugrue T, Foner E, Camarillo A, et al. The Compelling Need for Diversity in Higher Education. http://www.vpcomm.umich.edu/admissions/research/#um. Accessed July 23, 2012.
16 Cohen JJ, Gabriel BA, Terrell C. The case for diversity in the health care workforce. Health Aff (Millwood). 2002;21:90–102.
17 Claudio L. Making more minority scientists. Environ Health Perspect. 1997;105:174–176.
18 Nivet MA, Taylor VS, Butts GC, et al. Diversity in academic medicine no. 1 case for minority faculty development today. Mt Sinai J Med. 2008;75:491–498.
19 Powell K. Beyond the glass ceiling. Nature. 2007;448:98–100.
20 Cantor JC, Miles EL, Baker LC, Barker DC. Physician service to the underserved: Implications for affirmative action in medical education. Inquiry. 1996;33:167–180.
21 Moy E, Bartman BA. Physician race and care of minority and medically indigent patients. JAMA. 1995;273:1515–1520.
22 Komaromy M, Grumbach K, Drake M, et al. The role of black and Hispanic physicians in providing health care for underserved populations. N Engl J Med. 1996;334:1305–1310.
23 Smedley BD, Butler AS, Bristow LR. In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce. Washington, DC: National Academies Press; 2004.
24 Nickens HW, Ready TP, Petersdorf RG. Project 3000 by 2000. Racial and ethnic diversity in U.S. medical schools. N Engl J Med. 1994;331:472–476.
25 Petersdorf RG. Not a choice, an obligation. Acad Med. 1992;67:73–79.
26 Bickel J. The changing faces of promotion and tenure at U.S. medical schools. Acad Med. 1991;66:249–256.
27 Daley SP, Palermo AG, Nivet M, et al. Diversity in academic medicine no. 6 successful programs in minority faculty development: Ingredients of success. Mt Sinai J Med. 2008;75:533–551.
28 Johnson JC, Jayadevappa R, Taylor L, Askew A, Williams B, Johnson B. Extending the pipeline for minority physicians: A comprehensive program for minority faculty development. Acad Med. 1998;73:237–244.
29 Association of American Medical Colleges. Faculty Roster, 2010. https://www.aamc.org/data/facultyroster/. Accessed July 11, 2012.
30 Morse R, Flanigan S. Methodology: Medical school rankings. U.S. News & World Report. http://www.usnews.com/education/best-graduate-schools/top-medical-schools/articles/2012/03/12/methodology-medical-school-rankings. Accessed July 23, 2012.
31 Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—A metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform. 2009;42:377–381.

Appendix 1

Comparison of U.S. Medical Schools With Underrepresented in Medicine (URM) Faculty Programs, 2011

School	Location	Type of program*	Year established	Goals/elements	Target population	Funding source	Results found?
1	Northeast	SC	1972	To hold lectures and events for diverse faculty and staff	All faculty, particularly URM faculty	Unknown	No results kept
2	Northeast	CD, SC	1990	To offer workshops and networking events for diverse faculty	URM residents and junior faculty who apply	University	General evaluations
3	Northeast	M, CD, SC, FP	Unknown	To offer mentoring support, workshops, networking events, and salary support	URM faculty	Provost's office	No results kept
4	Northeast	CD	1991	To provide workshops on professional development	URM faculty	HRSA	No results kept
5	Northeast	M, CD	Unknown	To offer mentoring and professional development seminars	URM faculty	HRSA	General evaluations
6	Northeast	M, CD, SC, FP	2002	To mentor, provide professional development programs, monthly social events, and salary support	URM faculty, postdocs, and fellows	HRSA	URM faculty has risen from 4% to 7% from 2002 to 2011
7	Northeast	M, SC	2011	Pilot program with individual mentoring and monthly social events	URM faculty	University grant	No results
8	Northeast	M, CD, SC	2011	Pilot program with mentoring and professional development	URM faculty	Grant and university	No results
9	Northeast	CD	2009	To provide quarterly professional development workshops	URM faculty	University	No results
10	Northeast	M, CD, SC, FP	2009	To provide mentoring, professional development, networking and social events, and salary support	URM faculty	Provost's office	General evaluations
11	Midwest	M, CD, SC	2005	To provide mentoring, professional development workshops, and monthly networking events	URM faculty	Endowment	General evaluations
12	Midwest	M, CD, FP	2003	To provide mentoring, professional development, and salary support	URM junior faculty	University	General evaluations
13	Midwest	M, CD, SC, FP	2009	To offer individual mentoring, professional development workshops, networking events, and salary support	URM faculty	University grant	General evaluations
14	Midwest	FP	Unknown	To provide salary support	URM faculty	HRSA	No results
15	Midwest	CD	2009	To help faculty learn skills to advance in a career in primary care	Preference to URM faculty in primary care specialties	University	No results
16	Midwest	FP	2007	To provide salary support for hiring URMs	URM faculty	University	No results
17	Midwest	M	2004	To provide individual mentoring based on research interests	URM faculty	HRSA	Results show small increase in promotion and retention
18	Midwest	M, CD	1991	To offer individual mentoring and professional development in leadership skills	URM faculty	HRSA	General evaluations
19	Midwest	M, CD	Unknown	To offer mentoring and professional development workshops	URM faculty	University	No results
20	Midwest	M, CD, SC, FP	Unknown	To provide mentoring committees, professional development, social events, and salary support	URM faculty	University	Reported a doubling in URM faculty population
21	South	M, FP	2002	To offer mentoring and departmental salary support	URM faculty	University	No results
22	South	CD	1993	To train URM primary care physicians by increasing skills in teaching and writing	URM faculty in primary care specialties	HRSA, currently university	Over 200 full-time primary care faculty trained

(*Appendix Continues*)

Appendix 1, Continued

School	Location	Type of program*	Year established	Goals/elements	Target population	Funding source	Results found?
23	South	FP	Unknown	To provide departmental salary support	URM faculty	University	No results
24	South	SC	Unknown	To provide networking and social events to diverse faculty	URM faculty and staff	Unknown	No results
25	South	SC	2008	To give lectures in various research topics	URM faculty	Unknown	No results
26	South	SC	Unknown	To provide networking and social events	URM faculty	University	No results
27	South	SC	Unknown	To provide support to URM faculty through networking and social events	Open to all faculty but targeted to URM faculty	Unknown	No results
28	South	M, CD	Unknown	To offer mentoring and professional development workshops	URM faculty	University	No results
29	West	M	Unknown	To provide a mentoring committee	URM faculty	University	No results
30	West	M, CD	Unknown	To offer mentoring and professional development workshops	URM junior faculty	HRSA	General evaluations
31	West	M, FP	1993	To offer mentoring and salary support	URM faculty	HRSA	General evaluations
32	West	SC, FP	Unknown	To provide networking and social events and pilot grants to new investigators	URM faculty	University	General evaluations
33	West	M, FP	2004	To provide mentoring and salary support	URM junior faculty	Grant	General evaluations
34	West	CD, SC, FP	Unknown	To offer professional development workshops, networking events, and salary support	URM faculty	HRSA, grants	General evaluations
35	West	SC, FP	2010	To offer networking and social events, and salary support	URM faculty	University	No results
36	West	M, CD	Unknown	To offer mentoring and professional development workshops	URM junior faculty	HRSA	No results

*M indicates mentoring program; CD, career development program; SC, social climate program; FP, financial support program; HRSA, Health Resources and Service Administration.