"URM Candidates Are Encouraged to Apply": A National Study to Identify Effective Strategies to Enhance Racial and Ethnic Faculty Diversity in Academic Departments of Medicine

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Abstract

Purpose

There is little evidence regarding which factors and strategies are associated with high proportions of underrepresented minority (URM) faculty in academic medicine. The authors conducted a national study of U.S. academic medicine departments to better understand the challenges, successful strategies, and predictive factors for enhancing racial and ethnic diversity among faculty (i.e., physicians with an academic position or rank).

Method

This was a mixed-methods study using quantitative and qualitative methods. The authors conducted a cross-sectional study of eligible departments of medicine in 125 accredited U.S. medical schools, dichotomized into low-URM (bottom 50%) versus high-URM rank (top 50%). They used *t* tests and chi-squared tests to compare departments by geographic region, academic school rank, city type, and composite measures of "diversity best practices." The authors also conducted semistructured in-depth interviews with a subsample from the highest- and lowest-quartile medical schools in terms of URM rank.

Results

Eighty-two medical schools responded (66%). Geographic region and academic rank were statistically associated with URM rank, but not city type or composite measures of diversity best practices. Key themes emerged from interviews regarding successful strategies for URM faculty recruitment and retention, including institutional leadership, the use of human capital and social relationships, and strategic deployment of institutional resources.

Conclusions

Departments of medicine with high proportions of URM faculty employ a number of successful strategies and programs for recruitment and retention. More research is warranted to identify new successful strategies and to determine the impact of specific strategies on establishing and maintaining workforce diversity.

Racial and ethnic minorities in the United States experience greater burdens of morbidity and mortality in comparison with people of European descent for nearly every health indicator. For example, the prevalence of diabetes is 6.6% among non-Hispanic whites in comparison with 8.9% among Hispanics and 11.1% among African Americans.[1] Racial and ethnic minorities have higher rates, and worse control, of dyslipidemia and hypertension,[2,3] and lower rates of preventive health measures such as mammography.[4]

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Introduction

Increasing the number of underrepresented minority (URM) physicians, partic and ularly within medical school faculty, is a key component to reducing health disparities, underscored by the authors of the 2004 American College of Physicians position paper on racial and ethnic disparities in health care.[5] The Association of American Medical Colleges (AAMC) has defined URM physicians as those whose numbers in medicine are disproportionately lower than in the general population, and includes African Americans, Native Americans/American Indians, Mexican Americans, mainland Puerto Ricans, and some Asian subgroups.[6] Thus, some doctors may be racial and ethnic minorities (e.g., Southeast Asian Americans) but not URM physicians. Numerous studies have demonstrated that racial and ethnic minority physicians are more likely to work in underserved communities.[7–9] One study found that minority patients are five times as likely to have a minority physician than nonminority patients.[8] Minorities report higher rates of patient satisfaction and patient-centered care from racially concordant providers, both of which have been linked to improved health outcomes such as diabetes control and lowered blood pressure.[10,11] In addition, the presence of URM physicians in academic medicine can improve minority health and reduce health disparities through a variety of mechanisms, including accelerating medical and public health research (particularly health disparities research),[12] training students and residents to provide culturally competent care,[13] and providing medical and health policy leadership that can improve organizational processes and reduce disparities in health care quality.[14]

Despite increasing numbers of racial and ethnic minorities in the United States, the percentage of URM faculty

in medical schools remains consistently low at 2% to 4%, with the vast majority of faculty being employed at one of three historically black institutions (Howard, Meharry, and Morehouse medical schools) or the three medical schools in Puerto Rico (Universidad Central del Caribe School of Medicine, Ponce School of Medicine, and the University of Puerto Rico School of Medicine).[15–19]

In 2005, the Association of Professors of Medicine (APM) provided recommendations for enhancing racial and ethnic diversity within academic departments of medicine but noted that there was little evidence regarding best practices to increase URM representation.[20] Since then, several studies have reported significant gains in the retention of URM physicians through mentoring and faculty development programs.[21,22] Qualitative studies have demonstrated that an institution's "diversity climate" can impact the work experiences of URM faculty.[23] Despite this recent research, there has been little formal evaluation of broad-based efforts to enhance URM representation within academic medicine.

We conducted a national study of U.S. medical schools, using both qualitative and quantitative methods, to better understand the challenges, successful strategies, and predictive factors for enhancing workforce diversity in academic departments of medicine.

Method

Study design and data sources

We used a mixed-method approach to combine quantitative methods (i.e., survey) and qualitative methods (i.e., in-depth interviews), as detailed below. We obtained 2009 data from the AAMC roster that contains institution-level information about full-time faculty (i.e., physicians with an academic rank or position within the medical school), including the numbers and percentages of URM faculty within the departments of medicine at all 125 accredited U.S. medical schools that existed at that time.[16] We specifically chose departments of medicine because they are the largest departments within academic medicine, and institutional leadership often originates within these departments. Thus, understanding what happens within the department of medicine has broad implications for the rest of the academic health center. Of note, historically black medical schools and the Puerto Rican medical schools were excluded from this study because of the historical mission and mandate to have URM faculty and students as part of these institutions. This study was approved by the University of Chicago's institutional review board. All quantitative and qualitative data were collected in 2009.

Surveys

Participant recruitment. We sent letters to chairs of the departments of medicine from all 125 accredited U.S. medical schools that existed at the time of data collection, describing the purpose of the study and asking them to complete the enclosed survey or forward it to an appropriate administrative leader (e.g., vice chair for diversity). A $30 gift card was used as an incentive to complete the survey.

Study instrument. The survey used the 33-item checklist of APM best practices for enhancing diversity to query departmental activities to enhance workforce diversity (Appendix 1). This checklist covers five areas: medical school recruitment, residency, transition to fellowship, transition to junior faculty, and transition to senior faculty. Response options were dichotomous (yes = 1, no = 0), and for each of the five areas a score was created that is the overall proportion of yes responses (e.g., a score of 0.75 indicates that 75% of the checklist items were in practice at the school). Surveys were self-administered and returned to the research team via a preaddressed stamped envelope, with the exception of the subset of respondents who participated in in-depth interviews (see below). For these study participants, we administered the survey via telephone at the time of the interview.

Data analysis. We dichotomized medical schools into low-URM rank (bottom 50%) versus high-URM rank (top 50%). We then used *t* tests and chi-squared tests of proportions to compare the two groups on the basis of city type (urban, midsize, rural), geographic region (using the four U.S. Census regions: South, Midwest, West, and Northeast),[24] and medical school ranking (using data from the *U.S. News & World Report* ranking of U.S. medical schools).[25] In addition, we conducted *t* tests to compare the two groups (low- versus high-URM schools) on the basis of the scores in the five groups of APM best practice categories. STATA 9.0 software (StataCorp, College Station, Texas) was used for the quantitative analyses, and we define statistical significance as a two-tailed $P < .05$.

In-depth interviews

A subset of medical schools participated in in-depth interviews in addition to survey administration. We selected these schools from the highest and lowest quartiles of medical school ranking, based on proportions of URM medicine faculty, to identify lessons learned from schools that have been both successful and unsuccessful at attaining significant numbers of URM faculty.

Participant recruitment. We divided medical schools into quartiles based on the percentages of URM medicine faculty; schools from the upper and lower quartiles were selected for participation in the in-depth interviews. Invitation letters were sent to department chairs at eligible institutions, which explained our goal to interview at least one key participant at the institution: department chair, primary diversity administrator, and/or chief of general internal medicine (typically the largest section within departments of medicine). We used purposeful sampling to ensure that we included a diverse set of medical schools that reflected factors (i.e., geographic region, school size) that may impact the institution's ability to recruit URM physicians. A $100 American Express gift card was used as an incentive to complete the interview. Enrollment continued until theme saturation was reached; we conducted interviews at 15 medical schools, with 18 total interviews conducted.

Study instrument. We created a standardized interview guide using open-ended questions, with probes for clarification and exploration of topic areas potentially rich in content, such as the institutional diversity climate (which we defined as the "sociopolitical environment surrounding issues of race/ethnicity"). The interview guide was piloted through interviews with external experts in the field who were employed at three academic medical centers who were not selected for participation in the qualitative portion of this study. We began with an overview question: "Can you tell me about any initiatives your department may have undertaken to

enhance the work environment for all faculty?" Follow-up questions focused on initiatives that sought to increase the representation of URM physicians. For each initiative, we asked respondents to describe specific instances of difficulty and of success in implementing change. Questions addressed recruitment and retention efforts, perceived challenges, successful strategies, and the sustainability of such efforts. For all areas of inquiry, respondents were asked to illustrate their experiences with specific examples. Interviews were conducted by telephone by a professional interviewer/moderator (an outside consultant) with experience doing qualitative interviews on health care and administrative topics. Interviews lasted approximately one hour.

Data analysis. We audio-taped, transcribed, and imported each interview into Atlas.ti 4.2 software (Scientific Software Development Company, GmbH. Berlin, Germany) for the coding process. Data analysis was conducted iteratively.[26] That is, we initially met after independently analyzing the first two transcripts to obtain consensus on codes, themes, and concepts; the team continued to meet thereafter to modify the codes, themes, and concepts that arose from new transcripts. All authors reviewed and coded transcripts; each transcript was independently reviewed by two randomly assigned reviewers. Each dyad met to come to consensus regarding coding; we resolved differences of opinion through group discussion. Atlas.ti software was used to facilitate the creation of a larger conceptual framework about the determinants of successful efforts to enhance racial and ethnic diversity within academic medicine.

Results

Survey results

Of the 125 U.S. academic medical schools, 66 were categorized as low-URM schools (bottom 50%), and 59 were categorized as high-URM schools. Eighty-two medical schools (66%) completed the survey; the response rate was 38 (58%) among low-URM schools and 44 (75%) for high-URM schools.

Geographic region and medical school ranking (i.e., "Top 50" school ranking versus rankings not based on *U.S. News & World Report* rankings)[25] were associated with URM rank (i.e., top half versus bottom half), such that medical schools located in the South and those with higher academic rankings had higher percentages of URM faculty. City type (urban versus nonurban) was not associated with URM rank (Table 1).

Table 1

Factors Associated With Underrepresented Minority (URM) Rank at 125 U.S. Medical Schools, 2009*

Factor	Low-URM schools: no. (%)	High-URM schools: no. (%)	*P* value
City type			.286
Urban	32 (48.5)	23 (39.0)	
Nonurban	34 (51.5)	36 (61.0)	
Geographic region			<.001
Midwest	16 (24.2)	8 (13.6)	
Northeast	23 (34.9)	9 (15.2)	
South	11 (16.7)	30 (50.9)	
West	16 (24.2)	12 (20.3)	
Academic ranking†			<.001
1–50	17 (25.8)	32 (54.2)	
>50	49 (74.2)	27 (45.8)	
Association of Professors of Medicine best practices‡	**% of "Yes" responses**	**% of "Yes" responses**	***P* value**
Medical school	50	72	.38
Residency	62	32	.65
Fellowship	53	56	.56
Junior faculty	53	50	.13
Senior faculty	70	78	.15

*In this cross-sectional study of 125 U.S. academic medical schools, 66 were categorized as low-URM schools and 59 were categorized as high-URM schools. Schools were compared on the basis of geographic region, academic rank, city type, and composite measures of diversity best practices in order to understand the predictive factors that enhance workforce diversity in academic medicine.

†Based on the rank listing in *U.S. News & World Report.*[25]

‡Based on responses to survey items about best practices to increase URM faculty by targeting activities for persons at various stages of the faculty pipeline (e.g., residency training). Scores reflect the overall proportion of "yes" responses to survey items within a given category.

None of the composite measures of the APM best practices, in the area of medical school, residency, fellowship, junior faculty, or senior faculty, were statistically associated with URM rank of medical schools.

In-depth interview results

Successful strategies to recruit/retain URM faculty. Whereas respondents from high-URM medical schools were able to describe a range of strategies and programs to recruit and retain URM faculty, few respondents from low-URM schools were able to do so. Several respondents from low-URM schools admitted that there were no programs or policies in place to recruit or retain URM faculty. One respondent noted, "We have a regular nondiscrimination policy, but there are no formal positive programs that I am aware of to recruit more underrepresented minorities." (See Appendix 2 for illustrative quotes from the in-depth interviews.)

Several key themes emerged as the most commonly cited successful strategies to recruit and retain URM faculty. These can be grouped into two overarching categories: utilization of human capital and social relationships, and institutional support through resources. Utilization of human capital and social relationships includes social networks, mentoring/role models, and "growing your own" faculty from the pool of eligible trainees as described below. Institutional support through resources includes recruitment/retention packages, career advancement, and other demonstrations of institutional support. These strategies are described below.

Utilization of human capital and social relationships. Many institutional leaders cited the use of social networks (e.g., informal lists of potential candidates generated from URM faculty, diversity committees, and/or other "connected" faculty) and interpersonal connections to identify potential candidates. One institution's diversity committee was explicitly charged with this function. Several respondents noted that national conferences were used as a venue for identifying and making personal contacts with promising junior URM faculty candidates. Personal contacts were seen as venues to express the commitment to faculty diversity and the success of URM faculty within their institution. Many respondents commented that merely noting "URM candidates are encouraged to apply" in job postings was an ineffective strategy. In fact, it was most commonly noted as "the single most ineffective strategy." Respondents also described the importance of having section chiefs and department chairs "go the extra mile" to make interpersonal connections with candidates.

The presence of URM role models and the availability of established, experienced mentors (both URM and non-URM mentors) to junior URM faculty was described as an important tool in both the recruitment and retention of URM faculty.

Several institutions described the recent adoption of a "grow your own" strategy, which seeks to cultivate and mentor URM medical students, residents, and fellows, with the goal of transitioning them to junior faculty members. Respondents were generally optimistic about the potential of this strategy for future success.

Institutional support through resources. The strength of a medical school's recruitment package was universally noted in the interviews as a primary factor in the successful recruitment of URM faculty. Most respondents referred to salaries and development funds when describing such packages, but others noted areas such as supportive environments, prospects for growth and success, flexible work hours, and diverse work experiences to fit the range of candidates' skills and needs. Whereas one institution did not offer retention packages (out of concern that it would encourage manipulative false claims on the part of faculty), other respondents noted that their institutions used retention packages as an effective tool to maintain faculty, including URM faculty, within their departments.

Several respondents noted that faculty of all types, including URM faculty, are more likely to stay at their institutions if they are successful and have continuing opportunities for institutional leadership and career advancement. As such, creating such opportunities for URM faculty was viewed as an important retention strategy.

Institutional support to help URM junior faculty, particularly clinician investigators, in career development was described as a key strategy for the success (and subsequent retention) of URM faculty. Such support was manifested through establishing internal faculty development programs, institutional minority faculty development awards, and salary support/protected time during the transition from career development awards to independent funding.

Factors influencing the recruitment and/or retention of URM faculty. The importance and salience of having administrative leaders be visionaries with an explicit commitment to workforce diversity was a prominent theme in the interviews. Respondents from high-URM medical schools talked about the importance of such leadership in shaping the general work climate and expectations around URM faculty recruitment and retention. Conversely, many administrative leaders from low-URM institutions not only admitted that workforce diversity was not a departmental priority but also had difficulty articulating their departments' programs and policies to enhance diversity and were often uncertain about the larger institutional efforts to increase the presence of URM faculty. Administrative leadership was described as enhancing URM recruitment and retention through proactive recruitment, mentoring and active communication, a culture that promotes faculty diversity, and resource allocation.

A key theme among respondents was a willingness to aggressively and spontaneously recruit and hire competitive candidates, even if the department was not engaged in an official search. Having the resources and making a commitment to hire URM candidates when the candidates are available (as opposed to when the department is looking) were seen as critical differences in the success or failure of overall recruitment strategies. Respondents noted that such resources/commitment came from the department's leadership. The term "aggressive" was used often to describe the approaches necessary to be successful, and it was defined as a proactive stance that used active social networks, strong recruitment packages, and spontaneous hiring, all of which require leadership commitment and support.

Several respondents at schools with high proportions of URM faculty noted that part of their jobs as administrative leaders was to mentor faculty, especially URM faculty, and to have regular "check-ins" to make sure that faculty are satisfied with their job, work environment, and career trajectory. One administrator noted that "it is much easier to retain faculty than to recruit them," and, consequently, many programs and resources were proactively put in place to help retain URM faculty within the institution. Maintaining open lines of communication with URM faculty was viewed as an important venue for departmental leaders to retain such faculty members.

Most respondents noted that a work culture that acknowledges the importance of a diverse faculty is critical to the recruitment and retention of URM faculty. Department leaders were viewed as being responsible for establishing and maintaining such a culture.

Without the support of departmental leadership, respondents noted that there would be few financial resources or staff assigned to support efforts to enhance workforce diversity.

Pipeline issues. Several respondents from low-URM schools noted that the relatively small pool of URM candidates made it challenging to identify faculty for recruitment and to establish a critical mass of URM faculty to both recruit and retain such faculty members.

Diversity climate. Although few respondents were able to articulate

details about their department's diversity climate, several at low-URM institutions noted that it may be "bad" or less than ideal for racial and ethnic minority faculty members. Despite a general lack of awareness about their own diversity climates, many respondents believed that this atmosphere was a potential facilitator (among high-URM schools) or inhibitor (among low-URM schools) of URM faculty retention.

Geography and external community. The local and regional environments of the medical schools were often cited by both low- and high-URM institutions as factors influencing URM faculty recruitment and retention. The racial and ethnic composition and political climate of the external community were thought to be key factors in helping faculty members, particularly ones with young children, make decisions about where to seek employment.

The "black tax" or "brown tax." Many respondents described how junior URM faculty were often disproportionately asked to participate in committees, volunteer in community settings, and mentor students or residents. Such requests often fulfilled an institutional desire to have more diverse representation on communities and provide adequate URM role models for trainees, but these requests often came at the expense of junior faculty's career development (e.g., number of published peer-reviewed papers). This "tax" was thought to affect all URM faculty and had the potential to undermine URM faculty success and retention.

Competing priorities. Many respondents from low-URM schools noted that limited resources (e.g., infrastructure, funding) and competing priorities for those resources left them without the capacity to adequately address issues of URM recruitment and retention. The allocation of such scarce resources ultimately depended in large part on the priorities of existing administrative leadership.

Personal issues. Several respondents reported that financial issues were a barrier to recruitment of URM faculty into academic medicine career paths. Racial and ethnic minority physicians are less likely to have the familial wealth and resources of their white counterparts,[27,28] which may make the lower salaries in academic medicine less viable options than private practice. Other personal issues that reportedly affect URM recruitment and retention included spousal and familial issues, particularly when spouses were also in academic medicine.

Discussion

Our survey results indicate that both geographic region and medical school ranking, but not city type (urban versus not), were statistically associated with the percentage of URM faculty at the medical school. None of the recommended best practices of the APM in any of the five categories (using a composite measure for each), including medical school, residency, fellowship, junior faculty, and senior faculty, were associated with the URM ranking of the medical school.

From in-depth interviews with academic leaders at both high-URM and low-URM ranking medical schools, we found that several key strategies and influencing factors were recurrent themes. Most notable was the powerful impact of the institutional leadership in creating a climate where diversity is high among priorities, in allocating resources to implement policies and practices regarding diversity. Key strategies included the use of resources (e.g., strong recruitment/retention packages, opportunities for career advancement) as well as the use of social capital and personal interactions (e.g., social networks to identify promising candidates, role models/mentoring, maintaining open lines of communication with URM faculty once at an institution) by physician leaders.

Geography was commonly reported as an influencing factor in the recruitment and retention of URM faculty, particularly as related to the racial and ethnic composition of the surrounding community. This finding corresponds to our survey data, which indicated that geographic region (although not city type) was related to URM rank of medical schools.

The successful strategies noted in our in-depth interviews were described by both low-URM and high-URM schools: Low-URM schools noted that the lack of institutional leadership was a barrier to workforce diversity, whereas high-URM schools described the presence of institutional leadership as a contributor to their successful recruitment/retention of URM faculty, reflecting the APM-recommended best practices regarding the importance of leadership in developing and executing URM recruitment/retention strategies. Interestingly, such practices were not statistically associated with URM rank in our survey data. The reasons for this are not clear. It may be that other factors, such as diversity climate and the "black tax" or "brown tax," which are not addressed in the APM best practices, are stronger predictors of URM faculty retention and recruitment within U.S. medical schools. Although issues of the diversity climate were discussed in the interviews, respondents did not view it as a primary driving force in URM recruitment and retention. This finding among respondents of the survey differs from published research about URM faculty themselves, which suggests that such climates have a significant impact on URM faculty members' work experiences and their decisions to leave their institutions or academic medicine altogether.[29,30]

Our study corroborates findings from a recent study by Page and colleagues[31] about diversity programs at U.S. medical schools, which reported that states with high proportions of racial and ethnic minorities were associated with URM faculty representation but not with various measures of diversity initiatives. Page and colleagues[31] also found that the proportion of minority students 10 years prior was associated with minority faculty representation, suggesting that enhancing the pipeline of URM students may be an effective long-term strategy. In our study, we did not find an association between efforts to recruit minority medical students and minority faculty representation, but this may underscore the importance of the temporal relationship between the two variables. That is, current efforts to recruit URM medical students may not increase URM faculty representation until later in time, when those students have matriculated through the educational pipeline. This "grow your own" strategy was reported by several of our study's respondents as a promising tool for URM faculty recruitment.

There are several limitations worth noting. First, this study may have been affected by selection bias; respondents with particularly strong views about workforce diversity may have been more likely to participate. Second, we used composite scores as measures of the APM best practice recommendations. It is possible that individual components within these composite scores are associated with proportions of URM faculty. Third, the qualitative experiences of institutional leaders in this study may not generalize to experiences of leaders at other high-URM or low-URM institutions or with experiences within academic departments other than medicine. However, given the size and influence of medicine departments within the academic medicine culture, we believe that our study has important implications for the rest of the academic medical enterprise.

Our study has several important strengths. First, this is one of the first national studies to evaluate the potential impact of diversity practices on URM faculty recruitment and retention. Second, because we used both quantitative and qualitative methods, our findings provide a complementary dataset from which to draw conclusions. Moreover, the respondents represent a range of academic leadership—versus diversity administrators only—which provides a more comprehensive assessment of academic medical institutions. Last, the variables measuring institutional strategies to recruit/retain URM faculty are comprehensive—They reflect a broad array of activities that target people at all levels of training.

In summary, our study suggests that institutional leadership, geographic region (and the racial and ethnic composition within that region), and academic medical school ranking may be key factors in determining the successful recruitment and retention of URM faculty within academic departments of medicine. High-URM medical schools employ a number of successful strategies and programs to recruit and retain URM faculty related to the use of human capital and social relationships, and institutional support through resources. More research is warranted to identify new successful strategies and to determine the impact of specific strategies on establishing and maintaining such workforce diversity.

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References

1 Mokdad AH, Bowman BA, Ford ES, Vinicor F, Marks JS, Koplan JP. The continuing epidemics of obesity and diabetes in the United States. JAMA. 2001;286:1195–1200.
2 Centers for Disease Control. Racial/ethnic and socioeconomic disparities in multiple risk factors for heart disease and stroke—United States, 2003. MMWR Morb Mortal Wkly Rep. 2005;54:113–117.
3 Sundquist J, Winkleby MA, Pudaric S. Cardiovascular disease risk factors among older black, Mexican-American, and white women and men: An analysis of NHANES III, 1988–1994. Third National Health and Nutrition Examination Survey. J Am Geriatr Soc. 2001;49:109–116.
4 Peek ME, Han JH. Disparities in screening mammography. Current status, interventions and implications. J Gen Intern Med. 2004;19:184–194.
5 Groman R, Ginsburg J; American College of Physicians. Racial and ethnic disparities in health care: A position paper of the American College of Physicians. Ann Intern Med. 2004;141:226–232.
6 Association of American Medical Colleges. Underrepresented in medicine definition. https://www.aamc.org/download/54278/data/statusofnewdefinition.pdf. Accessed November 15, 2012.
7 Kington R, Tisnado D, Carlisle DM. Increasing racial and ethnic diversity among physicians: An intervention to address health disparities? In: Smedley BD, Stith AY, Colburn L, Evans CH, eds. The Right Thing to Do, the Smart Thing to Do: Enhancing Diversity in the Health Professions. Washington, DC: National Academy Press; 2001:57–90.
8 Davidson RC, Montoya R. The distribution of services to the underserved. A comparison of minority and majority medical graduates in California. West J Med. 1987;146:114–117.
9 Moy E, Bartman BA, Weir MR. Access to hypertensive care. Effects of income, insurance, and source of care. Arch Intern Med. 1995;155:1497–1502.
10 Acosta D, Olsen P. Meeting the needs of regional minority groups: The University of Washington's programs to increase the American Indian and Alaskan native physician workforce. Acad Med. 2006;81:863–870.
11 Cooper LA, Roter DL, Johnson RL, Ford DE, Steinwachs DM, Powe NR. Patient-centered communication, ratings of care, and concordance of patient and physician race. Ann Intern Med. 2003;139:907–915.
12 Cohen JJ. The consequences of premature abandonment of affirmative action in medical school admissions. JAMA. 2003;289:1143–1149.
13 King TE Jr, Dickinson TA, DuBose TD Jr, et al. The case for diversity in academic internal medicine. Am J Med. 2004;116:284–289.
14 Cohen JJ, Gabriel BA, Terrell C. The case for diversity in the health care workforce. Health Aff (Millwood). 2002;21:90–102.
15 Report of the AAMC Task Force to the Inter-Association Committee on Expanding Educational Opportunities in Medicine for Blacks and Other Minority Students. Washington DC: Association of Medical College; 1970.
16 Association of American Medical Colleges. U.S. Medical School Faculty Roster page. https://www.aamc.org/data/facultyroster/reports/69036/usmsf_09.html. Accessed November 15, 2012.
17 Sullivan LW. Missing Persons: Minorities in the Health Professions. A Report of the Sullivan Commission on Diversity in the Healthcare Workforce. Durham, NC: Sullivan Commission; 2004.
18 Fang D, Moy E, Colburn L, Hurley J. Racial and ethnic disparities in faculty promotion in academic medicine. JAMA. 2000;284:1085–1092.
19 Cross T. Reviewing progress of black faculty at U.S. medical schools. J Blacks Higher Educ. 1999;24:74–75.
20 Wesson DE, King TE Jr, Todd RF, et al. Achieving diversity in academic internal medicine: Recommendations for leaders. Am J Med. 2006;119:76–81.
21 Daley S, Wingard DL, Reznik V. Improving the retention of underrepresented minority faculty in academic medicine. J Natl Med Assoc. 2006;98:1435–1440.
22 Kosoko-Lasaki O, Sonnino RE, Voytko ML. Mentoring for women and underrepresented minority faculty and students: Experience at two institutions of higher education. J Natl Med Assoc. 2006;98:1449–1459.
23 Nunez-Smith M, Curry LA, Bigby J, Berg D, Krumholz HM, Bradley EH. Impact of race on the professional lives of physicians of African descent. Ann Intern Med. 2007;146:45–51.

24 United States Census Bureau. 2010 Census Data. http://2010.census.gov/2010census/data. Accessed November 15, 2012.

25 U.S. News and World Report. U.S. Medical School Rankings. http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-medical-schools. Accessed November 15, 2012.

26 Patton M. Qualitative Evaluation and Research Methods. 2nd ed. Thousand Oaks, Calif: Sage; 1990.

27 Odom KL, Roberts LM, Johnson RL, Cooper LA. Exploring obstacles to and opportunities for professional success among ethnic minority medical students. Acad Med. 2007;82:146–153.

28 Welch S, Gruhl J. Affirmative Action and Minority Enrollments in Medical and Law Schools. Ann Arbor, Mich: University of Michigan Press; 1998.

29 Price EG, Gozu A, Kern DE, et al. The role of cultural diversity climate in recruitment, promotion, and retention of faculty in academic medicine. J Gen Intern Med. 2005;20:565–571.

30 Pololi L, Cooper LA, Carr P. Race, disadvantage and faculty experiences in academic medicine. J Gen Intern Med. 2010;25:1363–1369.

31 Page KR, Castillo-Page L, Wright SM. Faculty diversity programs in U.S. medical schools and characteristics associated with higher faculty diversity. Acad Med. 2011;86:1221–1228.

Appendix 1

Checklist for Association of Professors of Medicine (APM) Best Practices for Enhancing Faculty Diversity*

Respondents answer yes or no to the following questions:

Medical student recruitment

- Does your medical school work with local high schools and/or colleges to maximize recruitment and retention of high-potential students? If no, is your department working to create such linkages?
- Does your medical school have a preentry program (i.e., medical education development program)? If no, is your department working with the medical school to create such a program?
- Has your department worked to increase underrepresented minority (URM) representation on the medical school admissions committees?
- Does your medical school admissions committee train all members to play a vital role in URM recruitment (i.e., awareness of character qualities [compassion, altruism, respect, integrity] in the admissions selection process)? If not, has your department discussed these issues with the director of the admissions committee?

Transition to residency

- Does your residency recruitment committee have URM faculty members?
- Does the department train the recruitment committee to play a vital role in URM recruitment?
- Does your department ask URM faculty to review (and potentially reverse) each offer to refuse an interview to an URM candidate?
- Has your department appointed a committee member to separately review URM applications and advocate for them at final committee meetings?
- Has your department begun a dialogue between URM residents and department leadership regarding how "URM-friendly" the program is?
- Does your department send representatives to national meetings of minority students (e.g., Student National Medical Association, Latino Medical Student Association)?
- Has your department created (and widely advertised) elective rotations for URM medical students?
- Do URM residents call each URM candidate to help establish personal contact, dispel misperceptions, and offer personal advice?
- Are there opportunities for URM residents to meet as a group and discuss the program?

Transition to fellowship

- Does your department require section/division chiefs and fellowship directors to prominently mention the department's increasing commitment to URM representation?
- Does your department link legitimate diversity enhancement efforts to annual evaluations/financial incentives within the sections?
- Does your department require program directors and search committees to examine (at least annually) the fairness of the selection process and results in achieving diversity?
- Is information about funding opportunities available to URM fellows (and junior faculty) widely disseminated?
- Does your department sponsor an annual social affair with key URM and non-URM faculty, department leaders, and URM residents/fellows?
- Does your department use visiting professorships to showcase research accomplishments of nationally known URM physician–scientists?

(*Appendix continues*)

Appendix 1, continued

Transition to junior faculty

- Does your department train faculty (URM and non-URM) to become better mentors to junior URM faculty?
- Does your department offer additional training on grant writing for junior URM faculty?
- Is your departmental leadership familiar with NIH/other funding opportunities to assist with URM faculty development?

Transition to senior faculty

- Does your department have a standing committee on URM faculty (a "diversity committee") or participate in medical-school-based committees?
- Does your department remind division/section chiefs of need to identify/recruit outstanding junior/senior URM faculty before a faculty search begins?
- Does your department attempt to enhance search committee effectiveness in attracting URM candidates (i.e., assessing the process of how qualifications are defined/evaluated)?
- Does your department maintain channels of communication between leadership and URM faculty?
- Does your department regularly benchmark URM representation against averages published by the Association of American Medical Colleges?
- Does your department collect equity data and survey faculty morale annually? If yes, is this information included in a disseminated report?
- Does your department annually review salary/resource distribution for URM/gender equity?
- Does your department seek URMs for influential department positions (division/section chiefs, key committee chairs)?
- Does your department replace administrators who knowingly discriminate?
- Does your department end inequitable treatment of URM faculty and make appropriate corrections for inequities?
- Does the departmental leadership watch for and prevent the isolation/gradual marginalization of URM faculty?
- Does the department identify institutional practices that might favor white, male faculty over URM and/or women faculty (i.e., defining academic success as unrestricted availability to work)?

*Developed by the APM in 2005 for enhancing racial and ethnic diversity within academic departments of medicine and used in this study as the basis for a survey to determine the URM rank of U.S. medical schools in 2009.

Appendix 2

Illustrative Quotes From Institutional Leaders in Academic Medicine Regarding Underrepresented Minority (URM) Faculty Recruitment/Retention Strategies, From a Study of Strategies to Enhance Faculty Diversity at U.S. Medical Schools, 2009

Successful strategies for URM faculty recruitment and retention	Interview responses
Social networks and making interpersonal connections	• The most successful recruiting is going out and networking and then calling people proactively. That is the strategy that we have relied on the most. • I am currently recruiting for two faculty members and no candidates responded to the ad in the journal. They have all been "somebody sent me the name of somebody who knew somebody." • I flew down there and spent the day with him and persuaded him to move here. It's about making personal contacts, making people feel confident that there is a good match between them and the institution, and that they are going to be supported, respected and successful. • Just having an ad that says "URM are welcome to apply"—I mean that is sort of the least useful [strategy].
Mentoring/role models	• The other big area which has been an initiative has been to provide mentorship to the junior faculty. There have been some challenges … but we have developed formal programs. These have been particularly helpful for junior URM faculty. • I had a very good person who wanted to have a mentor who was both of the same race and also highly accomplished, and this faculty member found such a mentor. But later the mentor moved to another medical school and we lost this person, who went elsewhere. • Having those role models is a tremendous retention factor and a recruitment factor. Now, if we didn't have those role models, I think my whole program would start to unravel. • [URM faculty] may not see the role models that make them feel confident that they will be able to succeed.