



School of
Public Health

LITERATURE REVIEW

***DIVERSITY
IN THE
HEALTH PROFESSIONS***

March 2008

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Literature Review

DIVERSITY IN THE HEALTH PROFESSIONS

March 2008

EXECUTIVE SUMMARY

Major Findings

1. The literature review reveals a scarcity of research on diversity and nursing and diversity and the allied health care professions, in particular compared to the amount of research that exists on diversity and medicine. Of the 895 hits made during the literature search, 599 related to medicine, 189 related to nursing and only 107 related to the allied health professions.
2. The range of occupations that make up the allied health professions, which includes more than 200 professions and occupations, made it difficult for the compilers to identify research studies that represented allied health comprehensively.
3. Nevertheless, it is evident from the review that a large untapped source of labor exists in the allied professions and auxiliary workers. This labor pool, particularly in the auxiliary professions, has overrepresented under-represented in medicine (URM) populations. The problem for URMs in this context may not be in gaining entry to health care professions, but in gaining entry to better paid, more advanced occupations.
4. Pipeline programs do work in increasing recruitment of URMs. More research is needed to identify successful educational programs and to replicate them throughout the country.
5. Very little data was found on the cost benefits of a diverse workforce. Additional research would be helpful on the cost benefits of a diverse workforce to health care organizations, employers, physicians and patients.
6. There is a lack of substantive research on the effect of a diverse workforce, specifically a culturally competent diverse workforce, on health outcomes.
7. There is limited research on the effect of discrimination and institutionalized racism on the recruitment and retention of URMs in academic settings and in the health care workforce.

8. There is a lack of formal diversity training for HCO leadership. The limited number of leaders who support diversity or are from diverse backgrounds, both in academic settings and in the workplace, is a huge barrier to the recruitment and retention of URMs in the health care professions.

Summary

Diversity and URM representation in the California health professions have not kept pace with the changing demographics of the state's overall population. The purpose of this literature review was to identify studies that helped describe the benefits of, barriers to, and strategies for increasing diversity in health education and the health care workforce.

Although the literature review was intended to cover all health care professions and not just medicine, the searches revealed a scarcity of data on diversity as it relates to nursing and the allied health professions, which means that the report and its findings about the benefits and barriers to diversity are heavily weighted toward medical education and physicians. Considering the fact that the allied workforce comprises an estimated 60 percent of the 11 million health care workers, this appears to be a serious omission in the literature and one that should be remedied. Although some research on allied professions and the auxiliary workforce started in California with the report from Ruzek et al. in 1999, other states have been slow to follow suit. Throughout the review, it is suggested that more research needs to be carried out on diversity and the other professions apart from medicine that make up the health care world.

The literature reveals several benefits to increasing diversity in health education and in the workforce, from interpersonal and institutional benefits like building cross-cultural relationships and fostering a more comfortable educational climate for URMs, to societal benefits like growing the number of clinicians practicing in underserved areas and reducing health disparities. However, while there are programs and initiatives throughout California and the rest of the country to encourage diversity in health professions education and the health workforce, the literature suggests that URMs still encounter significant barriers in preparing for health professions careers, securing promotions in their careers and receiving equality in medical care.

Some of these barriers to diversity in academic institutions include the prohibitive cost of education, low representation of minorities on admissions committees and as faculty members, lack of access to preparation programs, and certain public policies. In the workforce, barriers to diversity include racism and discrimination, an institutional climate that is discouraging of diversity, poor leadership and lack of mentorship.

The literature review identified several key strategies to increasing diversity in health education. First, increase the number of minorities in the health professions pipeline. Studies showed that this could be accomplished in part by universities adjusting their admissions process to allow for more emphasis to be placed on qualitative criteria and less on traditional criteria such as MCAT scores and GPAs. Second, research supports the inclusion of cultural competence teachings in health professions education curricula, and a commitment to fostering a climate of diversity and acceptance on campuses. Lastly, the

literature suggests that URM faculty at health professions education institutions face significant barriers in promotion and adequate representation, but faculty development programs aimed at ameliorating these problems show promise.

Strategies to improve diversity in the workplace include developing and training a self-aware leadership committed to improving the institutional climate; initiating cultural competence programs; using professional translators to overcome language barriers; developing recruitment policies that attract minority applicants; and creating partnerships with schools, enterprises, and community organizations to improve outreach to URMs. Additionally, providing mentors for minority employees appears to have a positive effect on retention in the workplace by helping URMs to feel more supported in an organization.

As remarked at the beginning of this summary, more research is needed on benefits and barriers to diversity for non-physician professionals such as nurse practitioners, physician assistants, radiologists and technicians. In addition, data on cultural competence training programs should not be limited to physicians, since for many patients it is not their physician who provides the regular source of care, but a physician's assistant or a nurse.

Although shortages in the professions are not the sole focus of this review, addressing those shortages, in particular in the field of nursing where a staffing crisis has been looming for more than a decade, may be critical to meeting the health care needs of all people regardless of race or ethnicity. The shortages underscore the need to expand the potential labor pool, and one way of doing this would be to educate, recruit and retain more URMs. Moreover, many URMs are already working in the health care professions, but need to overcome the various barriers that prevent them from moving into more advanced occupations like nursing or into other allied professions.

More studies should be carried out on the cost benefits of a diverse workforce both to training institutions, employers and the health system. Also, research is needed that shows how health outcomes can improve with a more diverse workforce. Future work might concentrate on evaluating the effectiveness of pipeline and recruitment programs, innovative admissions policies, and cultural competence training to understand how these measures will enhance quality of care for URMs and as a result, benefit society at large.

Note: In writing this literature review, the authors made an extensive search of the available databases using a number of carefully selected keywords. The authors apologize if the search criteria or the inaccessibility of certain articles has resulted in the omission of any important research studies in this field.

Literature Review

DIVERSITY IN THE HEALTH PROFESSIONS

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Introduction

The diversity of California's population is increasing, yet the racial and ethnic diversity of the health professions workforce and related educational programs within the state lag behind this population shift.^{1, 2} Shortages of healthcare professionals in rural and low-income urban areas of California and a dearth of culturally and linguistically competent providers contribute to racial and ethnic disparities in health as well as poor health outcomes.³

Today, racial and ethnic minorities make up 26% of the total population of the United States, yet according to the American Medical Student Association just 6% of practicing physicians are Latino, African American and Native American. Similar disparities hold true across other fields such as dentistry, mental health, nursing, and allied health professions.⁴

For the purposes of this review, our definition of diversity is informed by the concept of "Under-Represented in Medicine", or "URM," as articulated by the Association of American Medical Colleges (AAMC). URM in this context refers to population groups who are underrepresented in health-related institutions or professions relative to the goals and responsibilities of those institutions and professions. While we are in accordance with the broad application of AAMC's definition to include characteristics such as gender, sexual orientation, religion, and socioeconomic status, the primary focus of this inquiry and the most pressing societal imperative is to increase representation in terms of race, ethnicity, and culture. Data from professional and academic sources show that in California and in the nation as a whole, African Americans, Hispanic Americans, and American Indians are underrepresented across the health professions. In addition, certain Asian, Pacific Islander, and other groups are considered underrepresented within specific professions and regions in California. For the purposes of this study the term URM also applies to other health professions where these population groups are underrepresented, including public health, nursing and dentistry.

Several recent evaluations of health professional workforce requirements establish the need for recruitment and retention of URM students and health professionals in order to increase access to high quality, culturally and linguistically competent health care for the state's increasingly diverse population.⁵

This review seeks to summarize the literature documenting the benefits of, barriers to, and strategies for improving diversity within both health professions education and the health professional workforce. It draws on research from the fields of health, education, law, sociology, and psychology.

This document will serve as an overview and synthesis of existing research and a guide that should inform where future efforts should be focused.

Methodology

The present synthesis is based on a comprehensive review of peer-reviewed literature included in the PubMed/MEDLINE, ProQuest, and ERIC databases. PubMed is a database administered by the National Library of Medicine, which contains citations from life science, biomedical/health sciences, and public health journals. ProQuest is a database containing citations from health, humanities, and social science journals. The Educational Resource Information Center (ERIC) database includes citations from education, psychology, political science and social science journals.

Additional web-based publications and reports were identified by searching the publications databases of major health-related organizations, such as the Association of American Medical Colleges, the Institute of Medicine, and the Association of Schools of Public Health, as well as prominent foundations including the California Endowment, The California Wellness Foundation and the Commonwealth Fund.

Refinements were made to the original issue areas as recurrent themes began to emerge from the literature. Additional citations and issue areas were added based upon the recommendations generated by the statewide advisory panel and other expert reviewers.

All citations were later coded and sorted according to topic category and “impact factor” as indicated by the “cited by” index in Google Scholar, a proxy indicator of an article’s importance as assessed by other researchers. The Google Scholar “cited by” index, however, tends to be biased toward older research studies because these studies have been in existence longer and have a higher probability of being cited more often. To counter this bias, the project team reviewed the existing literature searches again and conducted new searches to identify and include more recent notable research and supplement content areas where the research was limited.

Keywords

The following medical subject heading (MeSH) and text words were used alone or in combination: cultural diversity, minority groups, ethnic groups, continental population groups, health occupations or health professions or health manpower, nursing, dentistry, public health, medic, allied health, sonography, pharmacy, respiratory therapy, benefit, cost, workforce shortage, social capital, patient center, leadership, quality, incentive, recruitment, retention, policy, language, hiring, compensation. The following keywords were also used: barriers, cultural competence, linguistic, faculty of color, mentorship, minority, patient satisfaction, pipeline, quality of care, race, racial concordance, students

of color, underrepresented minority, attrition, premed, applicants, admissions, health professions, applicants, student diversity.

Inclusion/Exclusion Criteria

Category	Inclusion criteria	Exclusion criteria
Language/ Geographic Focus	English text (or abstracts), United States	Non-English abstracts, Foreign Countries
Dates	01/01/1992 to 06/06/2007 and controlled studies published 1988-1992	Non-controlled studies published prior to 1992
Topics of Interest	Health education and workforce diversity, health disparities, pipeline programs, medicine, allied health professions, nursing, dentistry, public health, mental health, optometry	Diversity in research subjects/clinical trials, Alternative health workforce (massage therapy, physical therapy, acupuncture, chiropractic, osteopathic and naturopathic medicine)
Study Type	<ul style="list-style-type: none"> • Systematic reviews • Case studies • Controlled evaluations • Meta-analyses • Prospective/retrospective observational studies • Practice guidelines • Narrative (non-systematic) reviews 	<ul style="list-style-type: none"> • Editorials • Media reports • Letters

Organization

This review is organized into two main sections: literature concerning training issues (such as and literature related to workforce issues. These two categories are further subdivided into a background section, which includes a discussion of benefits of and barriers to diversity in each of these areas, and a summary discussion of strategies to address diversity in training programs and the workforce.

Comment [KJ1]: Add a couple words here...such as health education an pipeline programs, maybe? Otherwise traning and workforce might be confused.

I. Training

A. Benefits of Diversity in Health Education

The studies discussed in this section directly address the benefits of racial and ethnic diversity in health professions training programs. Taken together, they suggest that a diverse student body may confer intellectual and interpersonal benefits for students across racial and ethnic backgrounds. In terms of larger societal benefits, several studies indicate that graduates from diverse backgrounds are more likely to practice in underserved areas, thereby addressing the healthcare workforce shortage in these regions.

1. Cognitive and Interpersonal Benefits

In a survey of student's perceptions of the educational benefits of diversity in medical school, Whittle et al. found that exposure to a diverse student body improved students' ability to consider multiple perspectives and work with others from different backgrounds.⁶ Moreover, the experience increased students' concerns about equity within the health care system, access to care for the medically underserved and cultural competency in the treatment of diverse patient populations.

Gurin and colleagues tested the hypothesis that students who interact with diverse students in classrooms and in the broader campus environment will be more motivated and better able to engage in a heterogeneous complex society and participatory democracy.⁷ The controlled study of undergraduate students in a college diversity program found that those with exposure to the diverse learning environment reported more empathy towards other ethnic and racial groups and a greater willingness to consider the perspectives of other racial groups, compared to similar students who did not participate in the program.

Hurtado used longitudinal data from nationwide surveys of undergraduate students and faculty to assess the relationship between students' diversity experiences and their job-related and civic attitudes and experiences.⁸ The findings show that students who reported studying with a classmate from a different racial or ethnic background later reported greater cultural awareness, ability to work cooperatively, and greater tolerance for people of diverse backgrounds.

Moreover, a study of small group interactions by Antonio et al. found that participants who interacted in racially mixed groups and in groups where members had minority opinions said that underrepresented minority (URM) group members brought novel ideas to discussions and improved the recognition and integration of multiple perspectives.⁹

A survey study by Novak et al. found that perception of a dental school environment as diverse is associated with students' perceived competency and ability to work with multicultural and economically disadvantaged populations.¹⁰

2. Benefits to Patient Populations

Beyond the learning environment, several studies suggest that minority graduates of health care professional programs play an essential role in the provision of health care services to low-income communities, communities of color, and the medically underserved.^{11, 12, 13}

One reason for this is minority students' willingness and desire to work with urban, poor patients. Weismann et al. found in their survey of 2,626 medical residents that underrepresented minority residents were significantly more likely than white residents to report a preference for practicing in a poor, inner-city area (52% vs. 21%).¹⁴ A study by Ko and colleagues has similar findings.¹⁵ It found that graduates from the University of California, Los Angeles/Charles Drew University Medical Education Program, which has a student body made up of more than 50% URM, were more likely to report an intention to practice in an underserved community than medical students from the UCLA School of Medicine, which has a much less diverse student body (18%). Specifically, the study showed that 86% of the UCLA/Drew graduates planned to practice in underserved areas, while only 20% of traditional UCLA medical school graduates declared the same intention upon graduation.

There is evidence from the literature that these stated preferences hold up over time. Cantor et al. report that physicians of lower socioeconomic status provide a high share of service to poor, minority and Medicaid patients, indicating that policies to recruit students from disadvantaged backgrounds may help address the need for providers in health manpower shortage areas.¹⁶ Similar results were found in an older study of minority dental school graduates: 60% of graduates surveyed went on to work in critical health manpower shortage areas and 91% saw a greater proportion of minority patients than would be expected if their patients were randomly drawn from the state's population. Similarly, a study of students in a physician assistant program found that upon graduation, minority graduates tended to practice in areas in need of health professionals.¹⁷

This evidence underscores the importance of improving the number of underrepresented minorities who apply to, gain admission to, and matriculate in health professions programs particularly in the face of recent reductions of minority graduates.¹⁸ Three studies also found that diversity in health professions education and training – both in exposure to diverse patients and exposure to diverse colleagues – may enhance students' preparation to work with increasingly diverse patient populations.^{19, 20, 21}

Summary

Overall, there is significant evidence showing that exposure to diversity issues and interaction with URM students leads to more empathy toward diverse groups, heightened ability to work among URM populations, increased awareness of cultural competency issues, and greater focus on issues acutely concerning URM communities such as access to care. Additionally, a review of the literature shows that studies have found that

students from disadvantaged backgrounds are more likely to practice in underserved areas than students from more traditional backgrounds. Overall, the evidence suggests that a curriculum emphasizing cultural competence and exposure to diverse populations, both in terms of patients and classmates can be instrumental in preparing students for service among URM populations.

Gaps/Opportunities

- A significant gap in the research is the lack of data on the continuity of education. While there is evidence that exposure to diverse classmates and patients foster greater cultural awareness and empathy, there is little research to show whether these exposures translate to practicing in an underserved area.
- Very little work has focused on the relationship between student body and faculty diversity and the quality of the educational experience. This is a core and unexplored area for future research.

B. Barriers to Diversity in Health Education

It is clear that several barriers exist which prevent URM students from entering health professions training and ultimately careers. Among the most prominent are financial hurdles, a lack of social support and mentoring, a perception of inadequate academic preparation, and policy and legal barriers such as reversal of affirmative action initiatives.

Six articles outline financial barriers to diversity in health education. A comparative study of applicant and matriculant trends and rising costs of medical education by Elam et al. concluded that costs of a medical education rose between 1993 and 2003, as did the debt burden of medical school graduates.²² Increasing undergraduate debt, consumer debt, and medical school tuition contribute to the burden. At the same time, the number of underrepresented minorities applying to and matriculating to medical schools has dropped. Cooter et al. highlight similar trends in their statistical analysis of the relationship between medical students' family income and student debt among Jefferson Medical College graduates.²³ They note that reductions in funding to the Loans for Disadvantaged Students and Scholarships for Disadvantaged Students programs coupled with the higher levels of educational debt accumulated by lower income students may have larger implications such as dissuading minority applicants from choosing medical careers. Finally Rosenblatt et al. used an exit survey of graduating medical students to assess debt burden and found that 83.5% of students who graduated in 2002 were in debt, while minority students had higher levels of debt.²⁴ Students report that higher levels of debt influenced their future career choices, and there was an inverse relationship between the level of total educational debt and the intention to enter primary care, with the most marked effect noted for students owing more than \$150,000 at graduation.

Similarly, Martin-Holland et al. surveyed deans and directors from RN pre-licensure and vocational nurse education programs, and found respondents identified financial issues as a key barrier to success.²⁵

Composition of medical school admission committees may also serve as a barrier to diversity. Since these committees act as gatekeepers to medical schools, a lack of minority representation may lead to fewer URM student admissions. A survey of U.S. medical schools by Kondo et al. found that while the number of underrepresented minorities on medical admissions committees has increased dramatically over the past 25 years, it remains low – on average, 16% of committee members were from underrepresented minority groups.²⁶

Several studies indicate that an absence of faculty and teacher support or mentorship contributes to the lack of diversity in health education. A multi-center study examining barriers and biases affecting the education of fourth-year medical students found that URM students identified the lack of a same-race mentor (23%) and role model (40%) as key barriers. Additionally, health professional schools are remarkably absent of URM faculty. In nursing schools, for example, minorities represent only 8.7% of faculty and 6.8% of deans.²⁷ In a review of barriers to minority entry in the orthopedic profession Jimenez argues that the dearth of URM faculty and staff members results in a limited support network for URM students.²⁸ In orthopedics, minorities constitute only 2.8% of the faculty, which creates unmet guidance, counseling and mentoring needs.

Language and cultural barriers may also prevent URM students from succeeding in health professions programs. The questionnaire study by Amaro and colleagues found that minority nursing school graduates said the inability to communicate with instructors and peers in their first language posed a challenge.²⁹ This was especially true if students were the only or one of few from their ethnic group in the class. Such cultural or language isolation creates problems when ESL students have difficulty expressing themselves in a classroom setting. Respondents said instructors were impatient or frustrated with their lack of English proficiency. Cultural issues have also been identified as a cause of attrition by African American students attending predominantly white universities. In particular, faculty insensitivity to such issues can exacerbate feelings of alienation for minority students.³⁰

Cultural differences in the approach to learning were identified as obstacles by nursing school students and graduates in the focus group and questionnaire studies by Gardner and Amaro et al.^{31, 32} For example, foreign born students felt that assertive or aggressive styles of communication are inappropriate and indicate a lack of respect for the listener, while the American custom of drinking alcohol as a social activity was anathema to these students. Feelings of otherness vis-à-vis their peers led minority students to feel alienated and isolated.

Evidence suggests that URMs' lack of access to quality academic preparation may be a barrier to entry into – and a barrier to success in – health professions programs. Cohen points out in a review article on the consequences of the abandonment of affirmative action in medical school admissions that MCAT scores and GPAs of typical URM applicants tend to be lower than those of typical white or Asian applicants.³³ In a survey by Kerbeshian, American Indian medical students also identified a lack of academic preparation as a barrier to success.³⁴ Such disadvantages might persist in medical school. Dawson et al. found that URM medical students performed below white and

Asian/Pacific Islander students on the National Board of Medical Examiners examination.³⁵ The inequality of educational opportunities between wealthy and poor communities contributes to this handicap, as do a host of family attributes such as low household income and limited educational attainment of parents.

The literature supports the assumption that underrepresented minorities require and desire academic and social support to succeed in health professions training programs after matriculation. In an analysis of attrition rates among 895 URM and non-URM students at University of Illinois at Chicago College of Medicine (1993-1997), Tekian et al. found that the attrition rates were 16.2% for URM students, and 4.0% for non-URM students.³⁶ Moreover, academic difficulty was the reason for 75% of URM withdrawals. Laudicina et al. conducted a prospective longitudinal study to characterize minority student persistence in clinical laboratory scientist (CLS) and clinical laboratory technician (CLT) education programs.³⁷ They found that student persistence behaviors varied by ethnic group, with African Americans more likely to leave for academic reasons than other groups. A questionnaire to minority nursing graduates by Amaro et al. found that students identified the overwhelming study workload and a lack of support in the form of tutoring or study groups as key barriers to success.³⁸

A study by Thurmond et al. suggests that pipeline program participants may veer away from health professions careers because they feel ill-equipped to succeed in required courses.³⁹ Thurmond and colleagues tracked gifted URM student graduates of a high school pipeline program using a mailed questionnaire. Of the 123 program graduates who responded, only 48% had entered health care careers. However, 98% had stated that intention when they were in high school. Some of the students reported trouble with coursework as a reason for their decision to change career tracks, and many students said that their interests in non-medical careers had been fostered by mentors or by internship opportunities.

Larger policy changes can also create or remove barriers to diversity in health education, according to several studies. Carlisle et al. analyzed U.S. medical school enrollment in the wake of the 1996 decision by the regents of the University of California to ban race- and gender-based preferences in admissions and the 1996 US Supreme Court ruling that eliminated such preferences among public higher educational institutions in Texas, Louisiana and Mississippi.⁴⁰ The findings showed that previous gains in medical school enrollment of underrepresented minorities were eroded and reversed in the aftermath of these legal and policy changes. In a review article, Cohen argues that outlawing the use of affirmative action in the admissions process hinders racial and ethnic diversity from developing in the health professions.⁴¹ Further, an analysis of state university systems that have switched from affirmative action admissions policies to a “percent plan,” or granting admission to the top performing students across the state, found that the new policy did not restore URM student enrollment to levels seen prior to the change.

Summary

Despite pipeline programs and recruiting efforts aimed at URMs, barriers to health education programs remain high. Several studies attempt to illuminate the reasons why

the number of URMs matriculating to and graduating from health education programs is low. Overall, a review of the literature results in the following common barriers in applying to and succeeding in health education programs:

- Financial constraints, including increasing levels of debt, with particular attention to fields other than medicine.
- Low representation of minorities on admissions committees
- Lack of instructors and faculty to attract and mentor URMs
- Lack of access to adequate preparation both for admittance and success in the health education curricula
- Policy changes such as the 1996 University of California Regents decision to deemphasize race as a criterion for admission

Gaps/Opportunities

- The literature on barriers to diversity in health education programs tends to focus on medical schools. More research is needed to elucidate barriers to entry for nursing schools, public health programs, mental health programs, and dentistry education.

C. Strategies to Increase Diversity in Health Education

1. Pipeline Development Programs

In the wake of the expansion and proliferation of pipeline programs, a number of studies have evaluated their impact. This literature summary focuses on articles that assess educational interventions aimed at increasing diversity in the health professions. A more complete picture of the literature on this topic, which includes over 100 studies (most of them descriptive in nature), is available through the accompanying EndNote bibliography.

This summary builds on the critical review conducted by Dr. Kevin Grumbach and colleagues at the UCSF Department of Family and Community Medicine and focuses on studies that meet the following inclusion criteria: (1) evaluated interventions at the high school, college, or post-baccalaureate level, (2) evaluated interventions that included health professions outcomes or outcomes in health professions gateway courses in science and math, (3) included interventions that targeted minority and disadvantaged students, (4) had study methods that included a control group, and (5) analyzed quantitative data on outcomes.⁴²

Twenty-five studies met these inclusion criteria. Studies varied considerably in the outcome measures assessed. These included standardized test scores, high school or college graduation, health professional school application or matriculation, and employment in a health profession. Of these criteria, the latter outcome is perhaps the best indicator of a pipeline program's success. Another nine studies examined standardized test or interview scores, one focused strictly on graduation rates, three used

a combination of these outcome measures, and two focused exclusively on retention rates. Only one study used “employment in a health profession” as the primary outcome measure.

A literature review by Patterson et al. examines how public school–university partnerships can address minority under-representation in the health professions.⁴³ In particular, the authors look at evidence for a variety of strategies, including academic enhancement, science or math instructional enrichment, career awareness and motivation, mentoring, research apprenticeship, reward incentives, and parental involvement. The authors note that academic enhancement and instructional enrichment have the greatest potential for improving minority student outcomes and that providing intensive interventions that target students, teachers, and curricula at appropriate educational stages hold the most promise. However, they argue, given that few programs have evaluated outcomes, follow-up assessment is critical for attracting more resources to such programs. Therefore, extensive and rigorous evaluation of such interventions is sorely needed.

Most of the current literature focuses on programs that prepare students for medical school or science-related careers. Seven studies examined programs focused exclusively on medical school preparation; another six focused on programs aimed at science, engineering and math skills improvement; one article looked at a program focused on building research experience; two assessed general academic preparation; another two looked at nursing school programs; and the remainder examined health related profession training programs.

Twenty of the 25 studies reported a beneficial effect of the intervention examined. Of the five that did not indicate a positive effect, three did not include appropriate statistical tests to determine significance of the findings and the remaining two performed statistical tests but found no effect attributable to the program in question.

An article by Barlow and Villarejo examined the impact of an undergraduate biology scholars program on persistence and performance in lower-division math and science courses, as well as graduation.⁴⁴ After comparing intervention and control students, the study found that program participants were more likely to successfully complete core premedical courses such as chemistry, calculus and biology, and to graduate with a degree in biology.

Nagda et al. evaluated an undergraduate student-faculty research partnership program in terms of its impact on minority student retention.⁴⁵ Drawing on literature showing that a weak student-faculty relationship is a cause of student withdrawal, the investigators tested whether the program improved URM student graduation rates by comparing them with the graduation rates of URM applicants to the program who did not participate. The results indicate the program appeared to improve graduation rates for African Americans, particularly those whose academic performance was below median for their race/ethnic group.

Thomson et al. used a retrospective controlled cohort design to evaluate the effectiveness of an eight-year, college-through-medical-school program designed to increase the

number of physicians practicing in underserved areas of Texas.⁴⁶ The free program includes a tuition scholarship, tutoring, a pre-medical curriculum concentration, enrichment activities, clinical learning activities and a summer program in medical practice and biomedical research. The study compared students who interviewed for the study but who did not matriculate to those who matriculated, 85% of whom were Mexican American. The results showed that the eventual likelihood of medical school matriculation was seven times higher for the students who attended the program than for those who did not.

A retrospective controlled cohort study by Campbell et al. compared participants in a high school math and science enrichment and after-school tutoring program to a cohort of non-participants.⁴⁷ The findings revealed that participants had higher high school graduation rates, a higher rate of completion of academic high school courses in science and mathematics, and higher Scholastic Aptitude Test (SAT) performance.

A retrospective cohort study by Grumbach et al. evaluated the success of five University of California (UC) post-baccalaureate programs in increasing medical school matriculation rates for program participants, 68% of whom were URMs and 50% of whom were from households where neither parent attended college. The study compared 265 participants in the postbaccalaureate programs in the 1999 through 2002 academic years to a control group of 396 college graduates who applied to the programs but did not participate.⁴⁸ After adjusting for baseline characteristics, students who participated in post-baccalaureate programs had a higher probability of matriculating into medical school even after controlling for grade point average, demographic characteristics, and MCAT score.

A descriptive study by Winkleby outlines the success of the Stanford Medical Youth Science Program (SMYSP), which is one of very few programs targeted to underrepresented minority groups that track graduated participants over the long term (in this case 18 years).⁴⁹ The five-week biomedical summer program for low income high school students offers academic enrichment in the medical sciences, mentoring, college admissions support, and long-term career guidance. In addition to classroom instruction, students participate in anatomy practicums, hospital field placements, and research projects. Since its inception in 1988, 405 students have completed the program. Of these 100% have graduated from high school, and 99% have been admitted to college. Of those admitted to college (and not currently college students), 81% have earned a four-year college degree, the majority majoring in biological and physical sciences (57.1%). In addition, 52% of college graduates are attending or have graduated from medical or graduate school. Many of the four-year college graduates (44.4%) are becoming or have become health professionals.

Case Studies

In a case study Blakely et al. describe the structure, experiences, and results of the University of California, Davis, School of Medicine's Postbaccalaureate Reapplicant Program, which has been in place since 1991 and has achieved a post-program acceptance rate of more than 80%, meaning this proportion of its graduates have matriculated in a medical and/or health professional program.⁵⁰ The program

concentrates on reapplicant students who are likely to return to designated medically underserved communities and/or who are educationally or financially disadvantaged. While the program tends to graduate URM students, it does not use race in its admissions criteria. Participants engage in ten weeks of intensive summer study, testing-skills preparation, extensive guidance, and counseling on how to build a competitive academic record.

Bumgarner et al. outline a summer health careers program for high school juniors and seniors interested in pursuing healthcare professions.⁵¹ The program began as a recruitment initiative to encourage underrepresented minority and disadvantaged students to enter health careers in a rural North Carolina county and previous Health Professions Shortage Area (HPSA). A long-term collaborative partnership between the Area Health Education Center (AHEC), a local community hospital, and the county school system contributed to the success of the program. A key aspect of the program is the clinical rotation which allows participants to view health care professionals (particularly nurses) at work in a hospital setting. Seventy percent of the 160 students who have participated in the program are pursuing or practicing a health profession, and of these, 50% chose to pursue a nursing career.

A case study by Flores and Dominguez highlights the success of the University of California, San Francisco (UCSF) School of Medicine Fresno Latino Center for Medical Education and Research (LaCMER).⁵² The program was established to address the persistent gaps in access to health care among the underserved residents in the Central San Joaquin Valley of California. Specifically, it aims to help create a health care workforce that reflects the characteristics of the local population in this region. In partnership with local schools the program recruits up to 120 students each year who come from backgrounds that mirror those of the general community, which is predominantly low-income and Latino. Students learn math, science, and English skills and receive tutoring, mentoring, and counseling in addition to fieldtrips and hands on experience. From the first two cohorts of high school graduates, the program has achieved a 100% graduation rate and 100% acceptance into four-year academic institutions. These results have occurred in an environment where the high school dropout rate for Fresno County is 50% and the acceptance rate into four-year University of California schools and California State University schools is only 12%.

Summary

Considering the recent proliferation of pipeline programs at the high school, undergraduate, post-baccalaureate and medical school levels, there are a number of studies researching the utility of such programs. The majority of research focuses on pipelines strategies for medical careers. While pipeline programs exist within high schools and throughout medical school, the most rigorous research is focused on college and post-baccalaureate programs. The literature suggests that pipeline programs do improve rates of success in recruiting and retaining URM students in the health professions pipeline. These pipeline programs are usually aimed at equipping students, from high school through medical school, with appropriate science and math proficiency,

study skills, and exposure to medical careers. Some benefits of pipeline programs include:

- Increased likelihood for URM students to complete core pre-medical courses
- Increased likelihood for URM students to graduate with a degree in biology
- Higher SAT scores
- Higher graduation rates (high school and college) and medical school matriculation

Gaps/Opportunities

- The literature currently focuses on pipeline programs aimed at preparing students for medical school. Studies on pipeline programs that prepare students for careers in allied health, dentistry, mental health, and nursing would be valuable.
- Few studies have examined the link between pipeline programs and eventual attainment of a health career and many look at several interventions at once, complicating the determination of which intervention is most effective.
- More rigorous research is needed on individual strategies and approaches.

2. Admissions, Recruitment, and Retention Strategies

In the last decade, admissions policies, particularly affirmative action, that seek to recruit URM students have come under fire. The 1996 decision by the regents of the University of California to ban race- and gender-based preferences in admission ignited a heated discussion about the importance, or lack thereof, of admissions strategies to improve URM enrollment in health professions education. The literature with regard to admission strategies concentrates on three general themes: predictors of success; admissions criteria and process; and outreach and recruitment.

Predictors of success

Several studies have noted that Medical College Admission Test (MCAT) scores and grade point average (GPA) scores are good predictors of medical school success. However, URM students tend to have lower GPA and MCAT scores than do majority applicants.^{53, 54, 55}

Several articles note that admissions criteria should be tied to predictors of success, but the definition of success is often disputed. In a literature review article, Reede concludes that GPA and MCAT scores should not be the only criteria considered in the admissions process because they are poor predictors of success in postgraduate training and as a practicing physician.⁵⁶ Reede notes that the literature indicates that other nonacademic predictors, such as high “maturity” ratings during the interview process, are stronger predictors of receipt of an outstanding internship recommendation, for example.

Likewise, Hall et al. found that among students entering Dartmouth Medical School, admission interview scores were better predictors of success than were total MCAT scores or science GPA, as measured by the dean's letter rating four years later.⁵⁷

Amos and Massagli extracted data from the files of 205 former residents trained in a physical medicine and rehabilitation program to determine if medical school achievement is related to or predictive of residency performance, board examinations scores, and entry into academic practice.⁵⁸ Results showed that clinical residency performance was predicted by clerkship honors grades leading the authors to conclude that medical school achievements can be used as partial predictors of success.

Silver et al. conducted a retrospective study of demographic characteristics, undergraduate GPAs, MCAT scores, National Board of Medical Examiners Part I (NBME I) scores, and core clerkship grades for the classes of 1990-1993 at University of California, Riverside (UCR).⁵⁹ Results showed that while undergraduate GPAs and MCAT scores are good indicators of NBME I performance, they are still not useful in predicting clinical performance.

These studies suggest that standardized test scores and GPA may not accurately predict training and career success. Given that URM students, on average, perform poorly relative to whites and Asian Americans on standardized admissions tests, alternative criteria should be considered to ensure that URM applicants are represented in health professions schools.

Some have argued that employing alternative criteria to admit URM students may dilute the quality of health professions students and undermine a meritocracy. But a 20-year retrospective matched cohort study by Davidson and Lewis showed that graduation rates were the same for students admitted through affirmative action and other special consideration students as for those admitted via more traditional criteria.⁶⁰

Admissions criteria and processes

One way to admit more URM students into health professions programs is to place more weight on nonacademic factors in the admissions process. Using the admissions criteria employed to screen and admit applicants to Texas A&M University College of Medicine in 1996, Edwards et al. found that giving more weight to admissions interview scores (70%) over academic scores (30%) would increase the number of URM applicants that would have been accepted.⁶¹

Agho et al. investigated the relative priorities placed on cognitive and non-cognitive factors in the admission practices of allied health programs. The authors found that cognitive factors were a much higher priority in the admissions process, but conclude that such a system places applicants from ethnic/racial minority backgrounds at a disadvantage.⁶²

In a descriptive commentary, Rosseter reports that the University of North Florida added an interview component to the nursing school's admission process rather than relying

strictly on GPA to screen applicants. Since implementing the strategy, minority representation rose from 2% to 20%.⁶³

Several studies suggest that admission committees should consider alternative criteria, such as applicants' commitment to eventually work in underserved and rural areas, in order to address workforce and patient needs. Compos-Oucalt et al. show that medical schools that were successful in increasing the number of graduates choosing family medicine—a shortage specialty—tended to have a higher proportion of students who entered medical school with that specialty preference.⁶⁴ Senf et al. conducted a similar analysis and found that interest in primary care at matriculation was a predictor of specialty choice.⁶⁵ Rabinowitz et al. examined the practice patterns of graduates of a rural medicine training program and found that a large proportion of graduates went on to practice in workforce shortage areas in rural settings.⁶⁶ Importantly, applicants to the program were chosen primarily for their background and commitment to rural family medicine and had not been accepted to any other medical school.

However, successful implementation of admissions strategies, which take into account qualitative measures of competence, will require time, financial resources and effort on the part of admission committee members. Smedley et al. argue that admissions committee training programs should focus on how to interpret standardized test performance of URM students in light of poor prior academic training and other barriers and how to assess nonacademic achievements of URM students.⁶⁷

Recruitment and Outreach

The literature search produced 23 studies on recruitment and outreach strategies to attract URM students to health professions schools. However, many of these are small survey studies and few strategies have been rigorously tested.

A survey of 198 dental students in 22 states by Lopez et al. found that recruitment should focus on outreach with URM alumni and that marketing efforts should emphasize a school's reputation.⁶⁸ Both of these factors were rated by URM students as important factors in their school selection decision, whereas financial aid was less important.

Morssink et al. used a content analysis of printed recruitment materials to gauge their reception by prospective minority epidemiology students.⁶⁹ Most minority-related text referred to affirmative action or financial aid and was at the school level rather than specific to the epidemiology programs. Few minority-related epidemiology course titles or research interests were identified. The authors recommend including more information about epidemiology and its relevance to minority health in mainstream recruitment materials as one possible strategy for increasing the number of minority applicants.

A case study by McWhirter et al. outlines a successful URM nursing student recruitment and mentoring effort developed by a historic African American college and large university in southern Florida.⁷⁰ The schools hired a faculty liaison to identify candidates for the nursing program, to contact them by mail and phone, and to publicize the program through local media. The liaison worked with each prospective student to assist them with the application process, including writing a statement, and taking the GRE.

Mentoring continued after matriculation. Since the program's inception in 1997, minority student enrollment has increased by 3%. In a survey of allied health programs that have been successful in increasing URM enrollment, Blash and colleagues highlight several efforts that have adopted similar approaches to the Florida strategy.⁷¹ For example, a full-time outreach specialist for allied health programs at Foothill College increased enrollment of underrepresented minorities by 40%. The specialist conducts an extensive program of high school, community, and on-campus outreach recruiting and offers individual counseling for prospective applicants.

One program, the Respiratory Care Program at Crafton Hills College, combines community outreach and student support services to attract and retain a minority student population.⁷² Program staff publicizes the program at local high schools, churches and community groups to let people know about the job opportunities and the requirements of the Crafton Hills program. The Respiratory Care School is able to achieve a student population that ranges between 35-50% URM. According to the authors, recruitment efforts that support students beyond matriculation also help. As an example, those efforts that made case management and stipends available to minority students had improved retention.

Retention

Recruitment and retention strategies go hand in hand - indeed without retention strategies, recruitment efforts may be wasted. In a literature review of diversity in the radiologic technology profession, Carwile concludes that a multi-pronged approach that includes financial aid, mentoring, and multi-cultural training will enhance the retention of URM students in the radiologic technology field.⁷³ In addition, changes to the profession that improve its reputation may also help to attract and keep URM candidates. For example, radiologic technology is often perceived as female dominated, lower paid and lower prestige. In addition, few opportunities for advancement within the profession can deter students from choosing to pursue or continuing to pursue a career in this field. The creation of career ladders within professions that produce opportunities for advancement may address this issue, notes Carwile.

In a survey of allied health programs, Blash et al. highlight the outreach team approach of a San Bernadino county-based (California) community college (Chaffey College) which used a strong orientation program and support services to achieve a nearly 100% retention rate in its radiologic technology program.⁷⁴

A focus group study of dental students by Veal et al. found that the nature of the training experience contributes to retention. For example, minority participants reported that the dental school experience was difficult and isolating. Many minority students, particularly African American dental students, said that lack of access to faculty support and subtle forms of discrimination contributed to these feelings. The authors conclude that improving the institutional climate for diversity at dental schools can improve both the training experience and retention.⁷⁵

Summary

The literature tells us that while metrics such as MCAT and GPAs are reliable predictors for performance in medical school and on board exams, they are not optimal predictors for success in a clinical setting. Also, URM students do not traditionally perform as well as non-URM students on these exams for a variety of reasons. In order to promote more diverse classes within health education, the literature suggests that more quantitative criteria, e.g., admission interview scores, as well as qualitative criteria ought to be used for admission decisions. The literature shows that more URM students are admitted to health professions education programs when nontraditional criteria, such as interview scores and stated commitment to work in rural or underserved areas, are emphasized in the admissions process. Moreover, many of the URM students go on to practice in underserved communities after they have completed their training.

Several analyses show that metrics such as maturity and interview scores were better predictors of success as measured by internship recommendations, than were more quantitative metrics.

While research on recruitment and outreach programs is limited, what does exist suggests that URM faculty outreach significantly influences decisions to attend health professions schools. Moreover, given the high rate of attrition in certain training programs, retention strategies are a crucial component of any effort to increase graduation rates.

Gaps/Opportunities

- The literature focuses on admissions committees in medical schools. Analyses on the impact of qualitative criteria in the admissions process of other health programs, such as dental, mental and allied health, and nursing, would be valuable.
- Very little research has focused on how recruitment and outreach programs influence URM students' decisions to pursue education leading to a health career.
- High quality evaluative studies are needed to determine the best strategies for improving recruitment and retention across all health professions.

3. Curriculum Strategies

Accreditation standards for health professions educational institutions increasingly reflect the well-recognized need for culturally competent graduates, and the most recent standards from the Liaison Committee on Medical Education, for example, require schools to inculcate an understanding of patient diversity and the role of culture and belief systems in health care delivery.

The literature focuses on cross cultural curriculum strategies, which may help prepare students for work with diverse patients, rather than curricular strategies aimed at improving campus climate or URM student retention. Moreover, the literature in this area focuses overwhelmingly on medical school.

Nora and colleagues tested the efficacy of a “Spanish Language and Cultural Competence Curriculum” in improving knowledge of Hispanic health and cultural issues among an experimental group of students.⁷⁶ Using multiple-choice questions they found that the participants had greater knowledge of disease prevalence, cultural perceptions of illness, and traditional health practices than the control group.

In a descriptive article, Chavez et al. advocate a teaching approach known as “collegiality” – a community-based participatory model in which students and teachers collaborate as colleagues.⁷⁷ This approach, which the authors describe in the context of a Masters of Public Health program, involves teaching principles of community organizing, building community and valuing diversity, engaging the senses, and writing across the curriculum. Rather than simply impart information to students, this style of curriculum aims to equip students with the skills and knowledge they need to be active participants in shaping policies and programs – particularly with regard to health disparities. The authors did not examine the efficacy of this approach in improving cultural competency or in increasing URM participation in public health careers.

Similarly, Betancourt agrees that equipping practitioners - in this case physicians - with the skills and experience they need to approach and better understand the underlying issues at play in regard to health disparities and cultural differences is more important than teaching facts or specific knowledge.⁷⁸ The author notes that, “physicians need a practical set of tools and skills that will enable them to provide quality care to patients everywhere, from anywhere, with whatever differences in background that may exist, in what is likely to be a brief clinical encounter.” To ascertain how social, cultural, or economic factors influence health values, beliefs, and behaviors, physicians in training need a framework to guide that type of inquiry with their individual patients. Rather than learning about individual cultures and their characteristics, this approach focuses on the issues that arise most commonly due to cultural differences, and how they may affect health care.

In a survey of dental students, Novak et al. examined the hypothesis that exposure to racial and ethnic diversity in the student body, faculty, staff, and patient population and a curriculum that includes presentations on diversity issues contributes to cultural competency.⁷⁹ The 376 fourth-year dental students who responded (response rate 60%) indicated that both the perception of diversity in the school environment and the presentation of diversity-specific content in the curriculum had moderately positive and significant correlations with the students’ perception of their competency or ability to serve and work with diverse populations. The results indicate that both hands-on experiences with diverse populations as well as classroom approaches affect preparation to work in a multi-cultural environment.

Assemi et al. assess the impact on pharmacy students of a cultural competency training course.⁸⁰ The course was successful in raising the students’ awareness of diversity and

provided basic knowledge about cross-cultural communication. Shaya et al. recommend developing or expanding courses that address cultural competency in the curricula of every college and school of pharmacy.⁸¹ Some of the considerations for making cultural competence a part of the curricula include gaining institutional and leadership support from chancellors, deans, department chairs and curriculum committees; identifying current faculty members willing to develop and teach content; finding course coordinators willing to integrate training content within existing curriculum and procuring resources and training tools.⁸²

Tervalon draws attention to the fact that few medical schools have achieved full integration of cultural competency training into four-year curricula, and argues for such training at the undergraduate pre-med level.⁸³ Tervalon contends that such an approach would lay the groundwork for future clinical training by teaching concepts like “culture basics,” the nature of health disparities in the United States, tools and skills for productive cross-cultural clinical encounters; characteristics and origins of attitudes and behaviors of providers; community participation including the use of expert teachers, community-school partnerships, and the community as a learning environment; and the nature of institutional culture and policies. Armed with such knowledge and skills, the medical school experience may be viewed through the lens of this early cultural competency training.

Winn and Riehl conducted a literature review to determine the best approach to transcultural training for allied health education.⁸⁴ They espouse including an introductory transcultural care course that focuses on reflection of one’s own culture, the culture of patients in the school’s geographic region, and the relationship between culture and health. This is followed by cultural training elements that are embedded throughout other curricula and especially during clinical rotations. Finally, they argue a multifaceted evaluation of these components to track effectiveness and curricular improvement efforts is needed.

Culhane-Pera et al. evaluated a three-year curriculum designed to increase residents’ knowledge and skills in multicultural medicine at Regions Hospital in Minnesota.⁸⁵ The goals of the program were to increase residents’ self-awareness about cultural influences on physicians and patients and improve multicultural communication in clinical settings. A before-and-after self-assessment and faculty evaluation showed that participants’ cultural knowledge, cross-cultural communication skills, and level of cultural competence increased after the participation in the program.

A second study by Crosson et al. examined the impact of two undergraduate clinical medicine courses that used problem-solving learning and a history-taking mnemonic to teach students to assess patients’ perspectives.⁸⁶ Students were evaluated with the Health Beliefs Attitudes Survey before and after the courses. Results showed that the student attitudes on the importance of assessing patient opinions and determining health beliefs significantly improved after course completion.

However, as Betancourt notes, measuring changes in attitudes or perceptions is inherently difficult because of a “social desirability” bias that influences survey responses.⁸⁷ On

self-assessments, respondents are more likely to choose the socially acceptable choices rather than their true beliefs. For this reasons, self-assessments may be of limited value.

A study by Beagan assessed the impact of a social and cultural issues course on third-year medical students' awareness and understanding of the importance of such issues in the patient-physician interaction.⁸⁸ A questionnaire was administered to students before the introduction of the course and after its implementation. Although the new curriculum was introduced with the intent of producing more socially and culturally responsive physicians, results showed that students did not demonstrate increased awareness of such issues after taking the course and many did not feel that the course made a difference in their clinical rotation experience. The author concludes that a disjuncture between the course material and clinical rotation experience may contribute to the course's limited impact, suggesting that curricular strategies should be integrated with practical, experiential learning.

Several studies have examined the role that a community-based residency can play in exposing medical students to diverse patients and in fostering appreciation of cultural competency. Sidelinger et al. describe a method for teaching residents about the delivery of culturally effective care by relying on local community partners to act as teachers and experts of their own cultures.⁸⁹ Such community-academic partnerships empower communities by allowing them to become teachers, and local communities to serve as classrooms, note the authors.

The article by Betancourt offers a summary of conceptual approaches to cross-cultural education and notes that an assessment framework can and should be developed despite the absence of an extensive literature on cross-cultural curriculum evaluation. To that end, the author offers a model framework that can be adopted by other institutions.⁹⁰

The fact that very little research has focused on the efficacy of different curricular approaches may serve as an impediment to implementation and adoption. To address this issue, Pena Dolhun et al. developed an assessment tool to evaluate medical schools' cross-cultural education curricula.⁹¹ An evaluation of 19 medical schools found that there was considerable variation in teaching approaches and content between settings, suggesting that a more standardized teaching method may be needed.

Summary

While the need for inclusion of cultural competence teachings in health professions curricula is well known, the literature tells us that there is no consensus on best practices in this area. There is not a significant body of literature describing curricula that address teaching culturally effective care, understanding its effect on health outcomes, and evaluating the effects on quality of care for different types of training programs. Research shows that cultural competency courses, from the undergraduate to the medical residency level, can increase knowledge of disease prevalence in ethnic populations and may heighten cultural awareness. However, recorded changes in perceptions and attitudes may be skewed due to self-reporting. Also, research shows that knowledge gained in a cross-cultural curriculum or class does not necessarily translate to the clinical experience.

Gaps/Opportunities

- Currently, there is very little research on the various curricular approaches. Rigorous studies comparing the utility and outcomes of different approaches could shed light on exemplary practices in this area.
- The bulk of the research concerns implementing cultural competency courses in medical or premedical curricula. Future research should focus on these courses in other health education programs, such as dentistry, allied health, mental health, and nursing.

Comment [KJ2]: Possibly add an opportunity: it would be helpful to know whether these courses are best aimed at minorities, or at non-URM students, teaching them how to work with underserved populations.

4. Campus Climate and Learning Environment Strategies

Campus climate is a multifaceted, sometimes intangible, concept that is influenced by relationships between people, as well as institutional policies and practices. According to Smedley et al. campus climate specifically relates to how URM individuals view and experience an institution.⁹² Additionally, campus climate can be affected by a host of factors including recruitment and retention of minority students, financial aid to URM students, classroom interactions, and an institution's history and past policies.

According to a literature review by Hurtado et al. two sets of issues determine a campus racial climate.⁹³ First is how the campus looks in terms of the makeup of its students and faculty, and the second is how the institution's operations demonstrate and reflect a commitment to diversity. The authors argue that campus environment is influenced by a historical legacy of inclusion or exclusion of groups and by current policies and populations involved.

Structural elements, namely the composition of an institution's student body, logically influence the campus climate. Educational settings that include more URM students create an environment where minority students feel more comfortable and less alienated. Results from a survey of first-year medical students by Elam et al. indicate that perceptions of campus diversity are influenced by the demographic makeup of medical schools, and the more diverse the student body, the more comfortable students were with diversity and its contribution to their medical education.⁹⁴ The same holds for the composition of faculty – the more diverse the faculty, the greater comfort with the campus environment faculty and students are likely to feel. Strategies for achieving higher URM representation on campuses – financial aid, admissions criteria, recruitment, retention, and pipeline programs for example – are discussed in other sections of this review.

Curricula and classroom environments also shape the overall campus climate. Hurtado et al. examined this element in a longitudinal survey of 370 Latino students on nine four-year university campuses.⁹⁵ Students in this cohort were more likely than white students to report being singled out in class because of their backgrounds (9%) and to hear faculty express stereotypes about racial/ethnic groups in class (18%).

The literature includes mixed evidence for diversity training. The study noted above by Hurtado et al. found that taking a diversity course appeared to have only an indirect effect on campus climate by facilitating positive interactions with diverse peers. Such interactions are, in fact, predictive of a favorable campus climate. As the authors note, “Latinos who reported positive interactions with diverse peers during college and participation in academic support programs tended to score higher on the sense of belonging index, indicating there are both informal and college-facilitated activities that create a feeling of inclusiveness in college.”

Evidence suggests that solely altering the makeup of students does not foster a hospitable environment for URM students. In fact, in some cases increased diversity can result in more conflict and divisiveness.⁹⁶ However, evidence culled in a literature by Hurtado et al. indicates that campuses that go a step further and encourage interactions between racial and ethnic groups support positive associations with diversity and improve the overall climate for URM students.⁹⁷ In addition, campuses that adopted clearly stated policies and procedures to address harassment and discrimination issues and which have created an ombudsman office to mediate disputes can improve inclusiveness and the overall climate for diversity.⁹⁸

Formal mentoring programs might also improve the campus climate for URM students. In a survey of diverse undergraduate and graduate students, Reid and Radhakrishnan found that academic climate – mentoring, instructors’ attitudes toward students and perceptions of social and intellectual respect – better predicted students’ perception of the general campus climate than racial experience.⁹⁹ This held true for both graduate and undergraduate students and all racial groups suggesting that race explained less about the students’ campus experience than academic interactions. Therefore, strategies that address mentoring and instructor-student interactions may improve the general campus climate.

Institutional policies and processes that reflect a commitment to diversity - such as the appointment of senior staff dedicated to diversity, formalized rules around discrimination, creation of a diversity taskforce, and policies that promote inclusiveness – can help improve campus climate as well. But according to a large survey study of medical students by Hung et al., policies and programs alone may not effectively affect change.¹⁰⁰ Most respondents agreed that their university had succeeded in achieving these accomplishments. However, many, especially URM students, reported that the university could do more to recruit and retain students such as provide more social and financial support. This suggests, note the authors, that, “students gauge cultural climate not only by “structural” elements (programs and policies) but also by “processes” (recruitment efforts and social support) and “outcomes” of that commitment (actual campus diversity).”

The evidence that ethnic student organizations improve URM perceptions of the general campus climate is mixed. A five-wave panel study by Sidanius et al. of the effect of membership in ethnic organizations and fraternities and sororities on inter-group attitudes found that for all ethnic groups, membership was associated with an increased sense of ethnic victimization and a decreased sense of common identity and social inclusiveness.¹⁰¹ However, other research shows that such organizations provide support to students of color.¹⁰²

Columbia University School of Dentistry provides an instructive example for how to improve campus climate through a comprehensive set of interventions.¹⁰³ In 1981 the school's admissions committee broadened its criteria to give more weight to non-cognitive attributes such as letters of recommendation, the personal interview, extracurricular accomplishments, and a background of financial hardship or struggle. In addition, the school created a Subcommittee on Minority Enrollment to assist the Admissions Committee with this expanded process. The school subsequently adopted other programs to address the issues of minority faculty representation, the small pool of minority applicants, and financial barriers to matriculation. The school worked with the residency program at Harlem Hospital to create a Postdoctoral Minority Admissions Program, which was designed to help increase the pool of minority faculty candidates. Columbia also partnered with New York's Science and Technology Entry Program (STEP) for middle and high school students to attract more minority students early to the field of dentistry and to foster mentor-mentee relationships between faculty and the community at large. Finally, Columbia leveraged federal funds to create the "Zero" Tuition Minority Dental Assistant Training Program, which seeks to improve the local economy of the school's neighboring community by offering free career training. The program recruits local high school graduates or those on welfare from the neighboring communities and graduates dental assistants with support from the Robert Wood Johnson Foundation. These programs, taken together, have dramatically improved the URM representation at the dental school. Today, the Columbia School of Dentistry and Oral Surgery has the second largest number of African American faculty members and the highest percentage of such faculty of any U.S. dental school (excluding Meharry and Howard, two of the historically black colleges and universities). Moreover, a study conducted by the school's Multicultural Affairs Committee found that students of diverse backgrounds perceived an improvement in their reception in the dental school.

Summary

Campus climate seems to distinctly impact URM students' impressions and experiences in their academic institutions. The climate itself is affected by many factors. A case study of one dental school indicates that a multi-level approach that takes into account student body, faculty, pipeline, and institutional issues is necessary to positively address campus climate. Many studies found a positive relationship between number of URM students on campus and comfort level among minorities. However, the literature suggests that solely altering the racial and ethnic makeup of a student body is not enough to foster positive URM experiences; universities that are successful in improving campus climate often encourage interactions among groups or provide URM mentoring programs on campus. However, there is conflicting literature on whether ethnic organizations on campus improve campus climate.

Gaps/Opportunities

- To determine the utility of ethnic student organizations in creating a more accepting and diverse campus climate, more research must be conducted.

- Most of the literature focuses on broad educational institutions rather than specifically on students pursuing careers in the health professions. While some of the literature concerns medical students, very little is documented on the perceptions and experiences of nursing, dental, and allied health students regarding a diverse campus climate.

5. Faculty Recruitment and Retention Strategies

Minority faculty members serve as mentors and role models, and bring new perspectives and types of scholarship to health professions educational institutions. Yet, according to the Association of American Medical Colleges, under-represented minority (URM) faculty account for only about 4% of U.S. medical school faculty members, and approximately 20% of URM faculty is located at six schools – Howard University, Meharry Medical College, Morehouse School of Medicine, and the three Puerto Rican medical schools.¹⁰⁴

Institutions with diverse faculty create a climate that attracts and retains URM students. As McNeal points out in her study of African American nurse faculty at predominantly white and historically black colleges, the diversity environment impacts faculty satisfaction and scholarly productivity.¹⁰⁵ Using a six-point attitudinal self assessment McNeal found that African American faculty at predominantly white schools tended to be less satisfied than those at historically black ones, even though faculty at predominantly white institutions tended to have higher levels of authorship, reported larger salaries, and held more tenured positions.

Numerous studies have outlined the paucity of minority faculty in higher education institutions. A plenary paper by Trower and Chait (2004) summarizes U.S. Department of Education statistics on faculty characteristics and shows that between 1972 and 1997, the proportion of full-time URM faculty teaching in colleges increased only slightly: 4.4% to 5% for African American faculty and 1.4% to 2.8% for Hispanic faculty. An Institute of Medicine report highlights similarly discouraging numbers.¹⁰⁶ Minorities constitute 8% of medical faculty; among dental school faculty, only 5% are African American and 3% are Hispanic; and among psychology graduate education faculty, 5.1% of tenure-track professors are African American, 4.6% are Hispanic, and just 0.9% are American Indian. Palepu and colleagues also found that minority faculty was less likely than white faculty to hold senior academic rank, even after adjusting for years on the job and productivity.¹⁰⁷

Huntley and Minneman conducted a survey of ethnicity and academic preparation of full- and part-time faculty at accredited U.S. dental hygiene programs in November 1991.¹⁰⁸ Most dental hygiene program director respondents (66%) reported no minority faculty in their programs and only 32% of the programs reported one or more ethnic minorities among the full- or part-time faculty. However, no significant differences in educational preparation were found between ethnic minority and white dental hygiene faculty.

The reason for the dearth of URM faculty in health professions institutions has its roots in a variety of causes including the lack of URM students in the academic pipeline. In addition, a study by Fang et al. suggests that minority medical school faculty members are at a disadvantage for promotion opportunities compared with white faculty.¹⁰⁹ Their analysis of data from the Association of American Medical Colleges' Faculty Roster System showed that after adjusting for cohort, sex, tenure status, degree, department, medical school type, and receipt of NIH awards, URM faculty remained less likely to be promoted compared with white faculty.

Price et al. surveyed faculty members from four ethnic groups at Johns Hopkins School of Medicine to assess their perceptions and attitudes to the diversity climate within that institution.¹¹⁰ The participants cited an unwelcoming environment and a lack of mentorship as barriers to the success of minority health care professionals. Minority and foreign-born faculty also reported ethnicity-based disparities and subtle manifestations of bias in the promotion process.

Few evaluative studies of programs targeted at increasing URM representation in health professions educational institutions exist. However, several studies provide encouraging guidance in this area. Rust et al. found that faculty development programs are a potentially effective strategy for increasing diversity in academic primary care. They theorize that scholarly productivity and career trajectory play an important role in the retention of URM faculty.¹¹¹

The faculty development program at Morehouse School of Medicine, a historically black institution, began in 1992 and is aimed at increasing the number and academic skills of underrepresented minority faculty in medical schools.¹¹² A total of 113 participants completed the program from 1992-2003, 92.0% of whom were ethnically African American, Afro-Caribbean, or African. Self-reported before-after competencies in specific academic skills such as teaching, writing, research, and grant writing rose from 2.7 to 4.1 on a 5.0 scale, suggesting an improvement in critical skills needed for success in academia. Since the program was implemented, full time URM faculty at Morehouse rose from 33% to 81% and nationally the number of African American full-time family physician faculty tripled.

Johnson et al. describe a minority faculty development program at the University of Pennsylvania School of Medicine, acknowledging the importance of extending the academic pipeline into the training years.¹¹³ Advanced trainees (residents, fellows, and postdoctoral trainees) and faculty were provided with training in research methods, mentoring, teaching skills, and scientific writing skills. Since implementation, the University of Pennsylvania School of Medicine has increased the number of underrepresented minority faculty by 32%.

A program to increase faculty diversity established by the University of California, San Diego (UCSD) School of Medicine's National Center for Leadership in Academic Medicine and the UCSD Hispanic Center of Excellence is described by Daley et al.¹¹⁴ The program provided junior faculty with counseling in career and research objectives, assistance with academic file preparation, an understanding of the institutional culture, workshops on pedagogy and grant writing, and mentoring by senior faculty. Since the

implementation of the program, the retention rate of URM junior faculty in medical school increased from 58% to 80%, and retention in academic medicine increased from 75% to 90%. A longitudinal follow-up of program participants is being conducted to determine the promotion rates of URM and non-URM junior faculty.

In a report by Pearcey et al. a survey was taken among nursing units in 16 states and the District of Columbia about the racial/ethnic composition of nursing students and faculty as well as the strategies each has adopted to increase faculty recruitment and retention.¹¹⁵ The retention strategies listed primarily included opportunities for professional development and further study such as support for doctoral study, scholarship support and release time for doctoral study. Many respondents emphasized the importance of mentoring by the nursing education administrator and senior faculty members. The report suggests that recruitment of faculty of diverse racial or ethnic groups must begin with recruitment of more racial and ethnic minorities into baccalaureate programs, which is the first step toward producing more qualified candidates to be nurse educators. Several respondents stressed the need for increased funds to support activities to recruit both faculty and students.

In a case study Gates et al. examine the shortage of URM faculty in dental education in relation to the shortage of URM in postgraduate programs, which develop future faculty.¹¹⁶ The authors outline several pipeline programs for minority faculty development that have demonstrated success through a variety of approaches. The authors note that the critical factors that contribute to the success of these programs are environment, selection criteria, mentoring, networking, and financial support. One such program is the partnership between Harlem Hospital and Columbia University School of Dentistry and Oral Surgery in which the school dedicates one position in its postgraduate training programs to an individual participating in the Harlem Hospital General Practice Residency program. The partnership between the National Dental Association Foundation and Colgate-Palmolive Company, which provides scholarships for advanced dental education study, has also helped train URM dental school faculty as has the Bronx Lebanon Hospital Center Department of Dentistry, which enrolls URM in its new Pediatric Dentistry Residency Program. However, there have been no studies on the outcomes of these programs and more research in this area is required to determine which approaches are most effective.

Summary

Most of the literature concerning URM faculty in health professions institutions focuses on the need for and lack of faculty diversity. The literature shows that while URM faculty representation in health professions educational institutions is increasing, the increase is only slight over the last three decades. Additionally, studies show that minorities are less likely to hold a senior academic rank than their white counterparts. The literature suggests that the low numbers of URM faculty are due to two major factors: a small pool of URM students in the health professions pipeline, and the disadvantage of URM faculty for consideration in promotion opportunities. Even after taking criteria like sex, tenure, and medical school into account, URM are less likely to be promoted to higher academic

positions. Encouragingly, studies of faculty development programs show positive results in retention of URM faculty.

Gaps/Opportunities

- Few studies have rigorously examined specific strategies for URM faculty recruitment and retention. This is clearly an area where future research is needed to elucidate the most effective strategies for increasing faculty diversity at health professions educational institutions.

Comment [KJ3]: I wonder if a summary of the overall training section here would be helpful. Maybe it is redundant to have a "summary of summaries" but in order to delineate it from the Workforce section better, it could be helpful to add a few short paragraphs of findings.

II. Workforce

Introduction

It is estimated that between 2000 and 2020, the percentage of total patient care hours that physicians spend with minority patients will increase from approximately 31% to 40%.¹¹⁷ Barriers that prevent minorities from entering training for the health care professions will impede them from following careers in those fields. Without a steady supply of solid applicants from diverse populations to recruit, institutions will never be able to achieve their goals for diversity. And without a higher number of URMs in health professions training programs, health care organizations will not achieve minority representation proportionate to the U.S. population's demographics. As demand for health care services by minority patients increases, the need to address both training and workforce requirements is critical.

The benefits and barriers of a diverse workforce as well as strategies to overcome the obstacles are outlined in this section. Not surprisingly, many of the issues encountered by minority populations in the academic environment are also evident in the workplace, and many of the proposed strategies to increase the number of minorities in academic institutions or create a more diverse climate may also succeed in a clinical setting such as developing partnerships, initiating cultural competency training, understanding organizational climate, and promoting diversity through strong leadership. Additionally, the literature overwhelmingly reveals the benefits of mentorship programs both in educational institutions and in the work setting.

A. *Benefits of Workforce Diversity*

The benefits of diversity in the health workforce have been extensively documented in the literature. A number of studies show increased diversity will improve patient satisfaction, quality of care, access to care, and reduce workplace shortages.

1. Patient Satisfaction and Culturally and Linguistically Appropriate Care

Several studies have found minority patients are more satisfied with the care they receive if it comes from a physician belonging to their own racial group. In Cooper-Patrick et al., African American patients favored African American physicians' style of decision-making because it tended to involve them more in the process.¹¹⁸ Saha et al. found that African American patients with African American physicians were more likely than those with non-African American physicians to rate their doctor as excellent and to report receiving preventive and necessary care. In the same study, similar results were revealed for the Hispanic population.¹¹⁹ The following year, Saha et al. found that African and Hispanic Americans sought care from physicians of their own race because of personal preference and language.¹²⁰

In 2003, Cooper and colleagues again found African American patients with race-concordant physicians more satisfied with the communication style of their physician than those patients with non-race concordant physicians.¹²¹ In addition, their visits lasted

over two minutes longer than patients whose physician did not belong to the same racial or ethnic group. LaVeist et al. examined patient satisfaction among a wider national sample that included African Americans, whites, Hispanics, and Asian Americans. Each racial and ethnic group reported that given the choice, they would choose a race-concordant physician.¹²² A more recent study by Bender and colleagues found Hispanic females were particularly likely to favor a dentist with racial and gender concordance.¹²³

Improving patient satisfaction can lead to a greater likelihood of adherence to treatment. A study that examined the relationship of Asian client-therapist ethnicity, language and gender found that an ethnic match significantly increased the number of client sessions the patient had with the therapist.¹²⁴ Jerrell revealed similar results in a study of adolescents and children with access to an ethnically matched therapist.¹²⁵

Although the evidence shows a preference for minority groups to be treated by physicians from their own racial group, most studies agree that culturally appropriate and competent care should be the goal of all physicians. A literature review by Betancourt proposes a framework that allows physicians to provide appropriate care for any patient regardless of a patient's race, ethnicity, or cultural background.¹²⁶

Another benefit of a diverse workforce is greater availability of culturally and linguistically competent care.

Several studies have shown disparities in health outcomes for various racial and ethnic minorities compared to whites. For instance, black and Hispanic people with HIV infection have higher mortality rates than whites in the United States according to Sohler et al.¹²⁷ Noonan et al. outline disparities in oral health status between minorities and whites.¹²⁸ The study shows that African American and Hispanic children aged two to nine have a higher percentage of untreated decay in their primary teeth than other children. Ferguson et al. found consistent evidence in a literature review that matching race, ethnicity, and language positively influence the quality of the doctor-patient relationship.¹²⁹ Most of the reviewed studies reported disparity in care between minority and non-minority patients and increased patient satisfaction with ethnically or language concordant physicians.

Corbie-Smith et al. found that Hispanic women are less likely to receive breast examinations and blood pressure and cholesterol screening than white women.¹³⁰ However, when taking other factors into account like having a regular service provider, Hispanics are as likely as whites to receive preventive services. Langer suggests culturally competent providers are more likely to develop a therapeutic alliance between patient and provider leading to improved quality of care and compliance with medical advice.¹³¹

Addressing the issue of cultural competence in end of life care, a study by Giger et al. emphasizes the importance of assessing each patient's beliefs and value.¹³² The authors contend that the Patient Self-Determination Act, implemented in the United States in 1991, contains assumptions of values related to end-of-life care involving patient autonomy, informed decision making, truth telling and control over the dying process that are not necessarily shared by URMs. They consider specific cultural beliefs in relation to

the Act that may pose a conflict for the caregiver in the delivery of culturally competent care. The Giger and Davidhizar Transcultural Assessment Model is recommended as a way to assess the patient and the family and provide culturally appropriate care that recognizes the uniqueness of each individual at the end of life.

2. Reduce Workforce Shortages/Improve Access to Care

Numerous studies reveal that URM health care professionals are more likely to end up caring for minority patients and underserved patients. Thus, increasing diversity is presumed to improve access to care for those populations and, in some instances, reduce workforce shortages.

Komaromy et al., Moy et al., Xu et al., Corbie-Smith et al., Fryer et al., and Thurmond et al. consistently support the hypothesis that minority physicians provide a disproportionately greater share of health care to minority and underserved groups.^{133, 134, 135, 136, 137, 138}

Komaromy et al. found that African American physicians practice in areas where the percentage of African American residents is almost five times higher than in areas where other physicians practiced. Corbie-Smith et al. studied a sample of female physicians and found African American and Hispanic providers were more likely to practice as primary care providers in urban areas and participate in clinical work without compensation. Rabinowitz et al. identified a small number of factors that are predictors of a generalist physician providing care to the underserved, one of which is being a member of an underserved minority.¹³⁹

Cantor et al. found that minority and women physicians are much more likely to serve minority, poor, and Medicaid populations. These service patterns were sustained over time and were generally consistent with physicians' stated career preferences.¹⁴⁰

Mitchell et al. describe the same trend in the dental profession. African American patients are significantly more likely to receive their care from African American dentists (who treat almost 62% of African Americans) than from white dentists (who treat 10.5% of these patients).¹⁴¹ In addition, surveys of dental practices have revealed that URM dentists are more likely to treat urban and lower income patients than their non-URM peers.

Fryer et al. compared practice characteristics of Hispanic doctors with their white counterparts.¹⁴² They discovered that physicians of Hispanic descent spent more hours each week in direct patient care, were more likely to practice in primary care, and were less often specialty board certified. In addition, they were more likely to establish their practices in areas with populations below poverty level. In Brotherton et al., minority pediatricians also reported caring for significantly more low income and uninsured patients.¹⁴³

Addressing the specific problems of health care shortages in rural regions, Sherrill et al. describe a thriving program in Walhalla, South Carolina designed to improve care for uninsured Hispanics.¹⁴⁴ Funded by the Health Resources and Services Administration of DHHS, the program offers culturally appropriate, sensitive, accessible, affordable and

compassionate care in a mobile clinic setting. In this interdisciplinary initiative, nurse practitioners, health educators, bilingual interpreters, medical residents and Clemson University students and professors all played key roles. Women in the community also serve as lay health advisors. The program offers important information on the challenges and opportunities for rural healthcare initiatives targeting minority groups.

Adams et al. describe some of the benefits of a diverse workforce to the nursing profession such as improved health care and increased access for minorities; bridging language and cultural gaps; improving cross-cultural training for all students; and creating a sense of community.¹⁴⁵ The authors argue for more inclusive admissions programs, mentoring, innovative recruitment strategies, and increased financial support for URM students. The article specifically focuses on the under-representation of minorities in the North Carolina nursing workforce.

3. Costs

Eliminating disparities in health and health care and enhancing diversity can result in considerable cost savings through preventing unnecessary use of health care services, hospital stays and emergency room visits.¹⁴⁶ For example, in response to a request from members of the National Health Plan Collaborative, staff from the Center for Health Care Strategies and RAND Corporation used existing data to produce a rough assessment of the fiscal implications of racial disparities in diabetes care. This preliminary analysis suggested that the cost to the U.S. health care system of disparities in diabetes care could be as much as \$4 billion per year. With escalating health care costs impacting federal, state, and employer budgets, the financial and economic consequences of disparities could be a key driver to improving the quality of care for minority populations.

A report by the National Business Group on Health focuses on the impact of racial and ethnic disparities in health and health care on large employers.¹⁴⁷ The authors describe how much health disparities cost employers. In 2002, large employers spent over \$325 billion (nearly \$200 billion in direct costs) on health expenditures for coronary heart disease among their workforces. Reducing disparities in preventive care, diagnostic and treatment for cardiac patients might help reduce the incidence of coronary heart disease among minority employees and in turn reduce the total expenditures assumed by large employers. Eradicating disparities would also ensure a healthier workforce with less absenteeism and more productivity. By the end of the next decade, racial and ethnic minorities will account for 41.5% of the workforce, according to United States Bureau of Labor Statistics. Therefore, the expense to employers is only going to increase over time.

Summary

A number of studies show that improving diversity in the health care workforce can have a positive effect not only on the quality of health care, but also patient satisfaction, health outcomes, access to care, and in some cases costs both to employers and to the health care system. Studies have shown that health professionals treat URMs in ways that undermine their health status. In accordance with this disparity in treatment, the literature shows that URMs are less likely to receive adequate care and therapy, appropriate

surgeries, complete information, and timely follow-up for a range of medical conditions. With an increasing number of minorities among the patient population in the United States the benefits of expanding the number of URM health care professionals and providing culturally competent care will become more evident as a growing and aging minority population seek health services and equality in treatment and outcome.

Gaps/Opportunities

- More rigorous research is required on how an ethnically matched health professional or a health professional trained in cultural competence might improve quality of care for URM patients.
- Additional research would also be helpful on the cost benefits of a diverse workforce to health care organizations, employers, physicians, and patients.
- Employers are likely to benefit from increased diversity in the health care professions because such diversity will result in a healthier workforce that is more productive and profitable. Therefore, an opportunity exists to enlist their support in driving change.

B. Barriers to Diversity in the Health Workforce

Despite efforts to improve diversity in the workforce and the number of studies that confirm the related benefits to patients, faculty members, and society at large, barriers to diversity continue to exist.

1. Lack of Institutional Support and Professional Buy-in

The Institute of Medicine report *In the Nations Compelling Interest: Ensuring Diversity in the Healthcare Workforce* defines an institutional climate for diversity as “the perceptions, attitudes, and expectations that define the institution, particularly as seen from the perspectives of individuals of different racial or ethnic backgrounds.”¹⁴⁸

In order to get professional or institutional support for a diverse workforce, physicians and students have to become more aware of the disparities that exist in quality of health care for minorities. Individuals from minority groups might be aware of climate characteristics, such as interpersonal dynamics and unspoken assumptions, which are virtually invisible to the majority group, according to Crowley et al.¹⁴⁹ In Lurie et al. a group of more than 300 cardiologists was surveyed to determine their awareness of racial and ethnic disparities in health care.¹⁵⁰ Only 34% of participants perceived that patients receive different care on the basis of their racial and ethnic status. However, physicians who were African American or had large numbers of minority patients in their practices were more likely to admit disparities. Only 5% of all respondents reported disparities in the care of their own patients.

In Wilson et al., a survey of medical students' perceptions about health care disparities confirmed that minority students and physicians are more likely than whites to perceive greater levels of unfairness.¹⁵¹

The importance of mentorship and institutional support for minorities is noted in an article by Phillips, an African American physician, who relates the challenges of becoming an orthopedic surgeon.¹⁵² A more general study of physicians of African American descent by Nunez-Smith et al. concludes that race remains a pervasive influence in the working lives of black health professionals.¹⁵³

2. Cultural and Linguistic Barriers

Delivering appropriate and quality health care to a diverse community requires health care professionals to acquire new skills that will help them care for minority patients. Not doing so creates a barrier to providing effective health care and services. A number of studies have considered the issue of cultural and linguistic training as well as the effectiveness of certain programs.

In Weissman et al., a survey sent to 3,435 resident physicians assessed their readiness to deliver quality care to a diverse population.¹⁵⁴ Although nearly all of the residents recognized the importance of cross-cultural training, only 8% felt equipped to deal with diverse cultures. In addition, a third to one half of the respondents reported receiving little or no instruction in specific areas of cross-cultural care.

Shapiro et al. held a series of focus groups to explore attitudes and beliefs of patients, residents, and faculty members about effective patient-physician communication and perceived obstacles to achieving it.¹⁵⁵ The three groups tended to blame each other for creating barriers to effective communication, though possessing basic communication skills was considered essential by all three to improve patient-physician encounters.

In Abbe et al., a sample of pediatric oncologists, interpreters, and patients were surveyed on the topic of language barriers in health care.¹⁵⁶ All participants expressed concern over the process of communicating across a language barrier. Even with an interpreter, there was often difficulty in comprehending. This is also reported in Elderkin-Thompson et al. in which researchers filmed a series of medical encounters that used an interpreter.¹⁵⁷ Fifty percent showed serious miscommunication problems that affected the physician's understanding of the symptoms or the credibility of the patient's concerns.

Wilson et al. also explored the issue of language and communication. They carried out a telephone survey of 1,200 patients conducted in 11 languages, to explore the effect of physician language concordance with comprehension.¹⁵⁸ Not surprisingly, those individuals with limited English proficiency reported problems understanding a medical situation, had trouble reading labels on drug prescriptions, and were more likely to have adverse medical reactions to treatment.

A cross-sectional analysis of Medicare records by Bach and colleagues found that over 80% of the visits with African American patients were conducted by just 22% of the physicians.¹⁵⁹ In addition, physicians who treated the African American patients were less likely to be board certified (77.4%) than were the physicians visited by the white patients. The authors conclude that African American patients and white patients are, to a large extent, treated by different physicians and that those treating African American patients may be less well trained clinically and may have less access to important clinical resources than physicians treating white patients.

Coberley et al. describe the inferior quality of care and health outcomes experienced by minorities with diabetes.¹⁶⁰ For example URM patients are less likely to receive appropriate process measures, including eye examinations and clinical testing for glucose, lipids and blood pressure. This leads to worse intermediate health outcomes than non-minorities such as poor glycemic and lipid control. In this study, a disease management program is shown to significantly improve the health outcomes of minority patients with diabetes, thus helping to close the gap in quality of care.

In Barr et al., focus groups containing African American, Latino, Native American and Pacific Islander patients expressed overall satisfaction with the service they received from their physicians, but also a concern that health care providers lacked cultural sensitivity to the broader life challenges facing the various groups.¹⁶¹ Interestingly, many perceived non-physician staff to be ruder, more unhelpful, and a greater barrier to access than physicians.

Implementing cultural competency training programs can be time-consuming and expensive. In Kairys et al., family practitioners identified competing demands on their time as a barrier in meeting the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care.¹⁶² They mentioned organizational pressures and specifically lack of resources.

3. Racism and Discrimination

Racism and discrimination still continue to plague the health care professions. Both “visible” and “invisible” forms of discrimination present barriers to achieving diversity in the workforce, whether unequal treatment occurs in the recruitment of appropriate applicants, in the promotion of URM patients to leadership positions, in access to services for minority patient and provider, or between physician and patient in a medical encounter.

The American College of Healthcare Executives Report in 1993 found huge disparities between the career attainments of African American and white health administrators.¹⁶³ 61% of African American executives agreed that their careers were affected by racial discrimination while less than 5% of white managers felt racial discrimination had an effect on their careers. Furthermore, 70% of surveyed African Americans agreed with the statement that they needed to be more qualified than whites to get ahead. In addition, minority staff members are reported to be more aware of racial and ethnic discrimination than non-minority staff, according to Jessamy.¹⁶⁴ Jessamy argues that strategies for improving organizational climate need to take into account the viewpoint of white

managers who often do not perceive that there is a problem. (See Lack of Institutional Support and Professional Buy-in.)

An article by Andrews highlights the importance of understanding past discriminatory practices as a way to improving current circumstances.¹⁶⁵ A report by Dower et al. concluded that there are currently health care workers, many of whom are members of a minority group, who might be attracted to nursing as a profession but face significant barriers in the workplace and in education.¹⁶⁶ In the workplace, these barriers include lack of sufficient financial incentive to make the commitment to higher or advanced education, incompatible work and school schedules, poor mentoring, and lack of support from employers.

In Laurencin, an African American physician gives a personal perspective on racism and discrimination in the field of orthopedic surgery underscoring the fact that more efforts are needed to level the playing field.¹⁶⁷ Briscoe et al. found that African American physicians were 4.52 times more likely to practice in HMOs than white physicians.¹⁶⁸ After controlling for human capital stratification, racial concordance and financial constraints, African American physicians remained 2.48 times more likely to practice in HMOs than white physicians. In addition, 19.2% of African American physicians in HMOs reported being turned down for another job, far more than any other racial or ethnic group in the HMO setting and any racial or ethnic group, including African American physicians, in a non-HMO setting. Five years later, the same African American physicians from HMOs were seven-and-a-half times more likely to have left their position than non-HMO African American physicians.

Understanding how race influences the work experiences of minority physicians is fundamental to developing effective strategies to recruit and retain a diverse physician workforce. In Nunez-Smith et al. the authors interviewed 25 physicians, of African American descent, who all described race as pervading their identity and experience in the health workplace.¹⁶⁹ None of the participants described a positive experience of race in the workplace. However, some reported positive interactions with individual colleagues and minority patients. Most reported the health care workplace to be silent on issues of race and racism, which further intensifies their most negative experiences. The researchers developed a term—*racial fatigue*—to describe the stress associated with issues of race in the workplace for minority physicians.

Mackenzie et al. examined whether minority physicians experience more barriers in acquiring managed care contracts than white physicians and whether the physician's perceived ability to provide care to patients varied according to ethnicity.¹⁷⁰ The study did not find overwhelming evidence of discrimination against ethnic minority physicians, though the researchers noted differences in number of contract terminations, types of practices, and board certification. Asian American physicians were more likely to report limitations on providing care than white physicians, particularly in their ability to refer patients to a culturally sensitive or culturally appropriate physician.

Another study that sought to determine differences in access to care for minority physicians, Hargraves et al. found African American physicians more likely to report problems obtaining hospital admissions for their patients and Hispanic physicians more

likely to report difficulties in referring patients to specialists.¹⁷¹

4. Financial and Educational Barriers

The part cost plays in achieving a diverse workforce is discussed further in the literature on training. Training for diversity can be expensive both for the individual and for institutions. For individuals of lower socio-economic groups cost of education can be prohibitive despite the efforts of educational establishments to provide financial support to students from low socio-economic groups. There is little research to date that has explored the issue of cost of diversity in the workplace.

Workers in the allied and auxiliary professions are particularly challenged by workplace and educational barriers. In the workplace, they lack sufficient financial incentives to make a commitment to higher education and are hampered by incompatible work and school schedules, lack of mentoring and minimal support from their employers.¹⁷²

Brotherton et al. examine the issue of debt, race and gender with the choice of continued subspecialty.¹⁷³ They found that men and whites were more likely to train in subspecialty pediatrics, which suggests cultural and societal factors might mask financial considerations affecting the career choices of URMs.

Coffman et al. found that the under-representation of African Americans in nursing in California is due to their lower overall educational attainment.¹⁷⁴ Similarly, under-representation of Latinos is due to lower overall educational attainment and to a lesser extent, a lower percentage of college-educated Latinos pursuing careers in nursing. The findings suggest that improving educational qualifications of minorities is critical to increasing the number of URMs in nursing.

5. Staff shortages

A number of studies are concerned with understaffing in hospitals and health care facilities, particularly in the nursing profession, although shortages do exist in some of the allied professions as well.¹⁷⁵ Staiger et al. explore the various factors that have led to only half as many women today selecting nursing as a career compared to 25 years ago.¹⁷⁶ These factors include the dramatic expansion of career opportunities for women into professions like medicine, law and business and the aging nursing population. Aiken et al. cite burnout and job dissatisfaction as another contributing factor in the reduced numbers of professionals choosing nursing as a career.¹⁷⁷

The shortages have been and are projected to be significant. Brush et al. report US Department of Health and Human Services statistics showing that the United States was weathering a shortfall of 110,000 full-time equivalent RNs in 2000; it is projected that figure will grow to 275,000 by 2010.¹⁷⁸ Although national nurse vacancy rates experienced a drop to 8.5 % in late 2005 according to Buerhaus et al. many health care organizations continue to face shortages, and physicians in hospitals cite inadequate nurse staffing as a major impediment to the provision of high-quality care.^{179, 180}

One strategy that health care facilities have adopted to overcome the crisis is to recruit foreign nurses. Beurhaus et al. report that despite decreases in the numbers of foreign nurses around 2005 possibly due to visa expirations, they account for nearly one-third (30.5 %) of the total growth of RN employment over the past four years.¹⁸¹ In the context of diversity, there exists a question mark around the quality of care offered by foreign nurses, many of whom may be very capable of performing specific tasks, but may not be so adept at communicating effectively with patients and other professionals or at providing culturally appropriate care.

Although the nursing shortage is not the focus of this literature review *per se*, the issue needs to be addressed as a priority because an inadequate supply of nurses may be directly related to a non-diverse workforce. Expanding the pool of potential candidates by reaching out to more URMs may reduce the need to rely on offshore nurses to cope with the shortfall.

Summary

The barriers to workplace diversity are complex. Racial and ethnic bias can be subtle to the extent that health professionals and institutions are not always aware of its existence in their own organizations or their own contribution to the problem. Cultural and language barriers cause communication problems between physicians and patient that affect quality of care and can only be resolved with adequate and effective training or hiring professionals with adequate cultural competency skills. In addition, the numbers of minorities entering the health care professions do not correspond to the population demographics. While the nursing profession is experiencing a crisis in recruitment, this will only exacerbate the issues around diversity. More needs to be done at the educational level to ensure adequate numbers of URMs are (1) joining the workforce (see Training section), and (2) being accepted into leadership positions where they can promote change. (See section on Recruitment and Retention.)

Gaps/Opportunities

- More research is required to understand how URMs experience stress in the workplace and to show how organizations and individuals may contribute to racial and ethnic bias through their own behaviors.
- Research on the cost effectiveness of diversity programs (including cultural competence training) in the workplace is also necessary to persuade leadership of HCOs of the financial benefits that such initiatives may bring.

C. Strategies for Workforce Diversity

The benefits of diversity in the workplace to patients are evident from the literature. Strategies to improve the situation include training health professionals in cultural competence so that providers of all ethnic and racial backgrounds might have a better understanding of how to improve health outcomes and increase patient satisfaction. Sometimes achieving cultural competence might include language training or learning how to use the skills of an interpreter. Sometimes it involves understanding the values and customs of a racial or ethnic group. Leadership plays an important role in creating a diverse workforce, both in developing recruitment policies that will attract URMs and then motivating minority staff members once they are hired into an organization. Mentoring programs have been shown to have a positive effect on URMs experience in the workplace. In addition, partnerships between schools, health care organizations, and other community organizations have been successful in addressing the barriers to culturally competent care as well as to a diverse workforce. Developing strategies to encourage the allied and auxiliary workforce to move into other health care professions is also a way to increase diversity and address workforce shortages, for example, in nursing.

1. Cultural and Linguistic Competency Strategies

Cross et al. define cultural competence as "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or amongst professionals and enables that system, agency or those professionals to work effectively in cross-cultural situations."¹⁸² In 2000, the United States Department of Health and Human Services (DHHS) Office of Minority Health (OMH) released national standards for culturally and linguistically appropriate services (CLAS) as a way of addressing the inequities that exist in the provision of health care to diverse racial and ethnic groups.

Development of Culturally and Linguistically Competent Skills

The literature consistently shows that cultural competence training improves the attitudes, skills, and knowledge of health professionals and enhances patient satisfaction. Beach et al. conducted a review of 34 studies and came to this conclusion.¹⁸³ The review revealed little evidence, however, on whether cultural competency training affects patient adherence to treatment regimes or patient health outcomes.

As a result of the CLAS standards, a number of curricula and models of training have emerged that attempt to improve communication in medical encounters involving URMs. Carrillo et al. explore a patient-centered cross-cultural program designed for residents and medical students that provides a framework for analyzing a patient's social context and cultural health beliefs.¹⁸⁴ Similarly, Culhane-Pera et al. describe a curriculum for family physicians shown to significantly increase self-reported levels of cultural competence.¹⁸⁵

More training models in cultural competency are described in Davidhizar et al., Davila, and Rust et al.^{186, 187, 188} In Kagawa-Singer et al., the authors offer an anthropological

perspective of the relationship between physician and patient and warn against accepting the Western biomedical view of health care as the norm.¹⁸⁹

Cultural Competence and Health Outcomes

There has been little research done on how cultural competence or lack thereof affects health outcomes. Flores et al. however, analyzes three case studies that show the significant effect of poor cultural competency on the outcome for three pediatric patients.¹⁹⁰ No interpreter was available for the parents of a three-year-old brought to the emergency ward because of abdominal pain; she was discharged twice but returned with acute abdominal pain and was eventually hospitalized for ruptured appendix and peritonitis. A two-year-old with a fractured clavicle was placed in the care of social services because of a pediatrician's misinterpretation of the facts. And parents of a ventilator-dependent two-week-old baby with encephalopathy, seizures, and renal failure were unaware of the infant's poor prognosis despite the fact an interpreter was present during the physician-patient encounter.

To better understand the challenges faced by minorities in medical encounters, Rosenberg et al. videotaped 24 psychologically distressed patients visiting their family physician.¹⁹¹ The authors conclude that providing physicians with formal training in intercultural communication and offering patient empowerment training would improve the quality of care. Simon et al. considered the effect of minority status on the consent process for pediatric cancer clinical trials. They found the content and quality of informed consent to be linked to parental ethnicity or the clinician's attitude toward parental ethnicity.¹⁹²

Bray and Edwards describe an outreach approach to Hispanic prenatal women and infants in which a program of home visits included bilingual care.¹⁹³ The nurses report this program has resulted in more people receiving services and positive changes in the families' health behaviors.

Evaluations and Effectiveness

To assess the cultural and linguistic competence of an outpatient department, Medrano et al. carried out a review involving interviews, surveys and site visits.¹⁹⁴ They recommended that the University Health System continue to promote its respect for diversity by focusing on attitudes, beliefs, behaviors, practices, and patterns of communication. O'Brien et al. conducted a similar assessment on Creighton University Medical Center and noted the challenges, in particular, of communicating through an interpreter.¹⁹⁵

Hobgood et al. identified through a literature review several different models designed to teach cultural competency in emergency medicine.¹⁹⁶ They also considered appropriate assessment methods to measure the acquisition of culturally competent knowledge, skills, and attitudes. Some of the evaluation tools from ACGME's Toolbox of Assessment Methods include case logs, simulations and models, standardized patient examinations, multiple choice written exam, and checklists.

Measuring the effectiveness of certain strategies to promote cultural competence is the focus of several key studies. However, Kumas-Tan et al. identified the most frequently used cultural competence measures and found many of them flawed, in that they often make erroneous assumptions about the definition of cultural competence. The authors recommend including gender, age, income, religion, education, and other factors in the definition.¹⁹⁷

In Eggenberger et al., a study of Mexican women revealed the importance of family and religion in their beliefs about health.¹⁹⁸ Culturally competent care for Mexican Americans might therefore include a focus on the significance of a patient's family and extended family. Specifically, a culturally competent nurse might elicit family support for the patient in health care decision-making. In addition, a nurse working with a client who indicates a strong belief that God's will determines her health might seek the support of the woman's church community in promoting a healthy lifestyle.

Oderkirk discusses reasons why nurses might want to learn Spanish, the most commonly encountered foreign language in the United States.¹⁹⁹ These reasons include enriching nurses' relationships with patients, enhancing self-esteem and advancing employment opportunities. In a mental health setting, Manoleas et al. explore the practices of experienced Latino therapists in an attempt to clarify certain elements of cultural competence.²⁰⁰ The researchers found that some of the clinical interventions used by the therapists were closely associated with being Latino, while others were based on more universal principles. The Latinos identify various traits of a culturally competent therapist including commitment and compassion, the ability to listen to stories without diagnosis, cultural knowledge, and familiarity with racism and the immigration process. Schitai describes a computer-based training program for navigating the challenges of working with Hispanic patients.²⁰¹

Interpreters can play a pivotal role in medical encounters with minority patients. In Nailon, a study is made of nursing care of Latinos in the emergency department.²⁰² Use of trained interpreters was found to be important in providing effective care to patients. Similarly, Ngo-Metzger et al. surveyed the health care perspectives of 122 Chinese and Vietnamese Americans from four community health centers.²⁰³ These patients also considered the quality of interpreter services to be very important. They preferred the services of professional interpreters rather than family members and favored gender-concordant translators. The group also expressed an interest in discussing the use of non-Western medical practices with their health care provider, but encountered barriers to doing so.

Role of Management

Managers and leaders of health care organizations (HCOs) can play an important role in creating a diverse and culturally competent workforce. Weech-Maldonado et al. recommend that HCOs develop diversity management practices to successfully deal with a diverse workforce and to provide culturally appropriate care to patients.²⁰⁴ Foley et al. purport that the chief nurse executive has a responsibility to encourage staff to pay closer

attention to cultural factors that will impact staff, patients, and hospital outcomes.²⁰⁵ Innovations in management philosophy are necessary to change diverse workforce characteristics, according to Muller et al.²⁰⁶ The authors offer a framework for managers to develop organizational policies that support cultural competence.

Byrne studies the use of instructional materials provided to staff, patients, and family members in a medical setting and explores six forms of bias.²⁰⁷ Bias is identified by determining whose interest is being portrayed and whose interest is being excluded. The six forms of bias described in this article are invisibility or omission; stereotyping; imbalance and selectivity; unreality; fragmentation and isolation; and linguistic bias. Byrne recommends nursing scholars examine their own prejudice and bias or ethnocentric assumptions as one step in the ongoing process of becoming culturally competent.

Summary

Developing a culturally competent health care workforce leading to improved quality of care for URMs has proven to be a complex task. However, the evidence is overwhelming that cultural competence training of any kind improves a health professional's knowledge and patient satisfaction. Many organizations have initiated training programs and models that other institutions can adopt. Interpreters, while pivotal in certain medical encounters, do not always aid communication if they have not been professionally trained. Finally, adopting a culturally sensitive attitude to patients is important for all physicians, but little research has been carried out on which competency programs are most effective in improving the health outcomes of minority patients.

Gaps/Opportunities

- More research is required on how to measure the effectiveness of cultural competence training programs and activities, in particular their impact on quality of care for URM patients.
- The opportunity exists for organizations to follow the lead of others cited in the literature that have successfully implemented cultural competence training and developed models for a culturally competent workforce.

2. Workforce Recruitment and Retention Strategies

Racism and discrimination, institutional climate, and leadership support are all factors that can contribute to creating either a diverse or a non-diverse workplace. Recruitment and retention practices that support diversity are as widespread as the leadership and institutional policies that exist to initiate them. In addition, if more minorities are not accepted into leadership positions, then programs to recruit and retain minority staff will not receive the attention they deserve. It is well documented that physicians who are not from a minority ethnic group do not always perceive the diversity problems in the

workplace that are evident to URMs. (See section on Barriers.) A number of studies examine how to improve diversity in the health care workforce through recruitment and retention.

Leadership

“The leadership roles of minority physicians must be expanded in the areas of research, education, public health policy, and with these expanded roles, it becomes mandatory that minority physicians receive training for advancement to leadership positions.”²⁰⁸

Invited testimony to The Sullivan Commission on Diversity in the Healthcare Workforce

The under-representation of minorities in the health care workforce has created a leadership that is also non-diverse. Organizations have adopted various programs to encourage diversity in leadership and leadership training that supports a multicultural workplace. Keltner et al. explore the role of leadership in changing the forces that lead to health disparities.²⁰⁹ The authors describe the challenges of public health nursing in a small Native American community, one of them being to recruit and retain American Indian nurses. The authors recommend involving nurses in the planning, implementation and evaluation of their services as a way of attracting applicants to work with tribal organizations.

Smith et al. explore a number of organizational mentoring programs seen to be particularly important to the advancement of URMs.²¹⁰ Their study of the literature shows that mentees are more likely to stay in a position, be more productive and exhibit greater job satisfaction than non-mentees. In addition, many mentors perceive mentoring as career enhancing, stimulating and inspiring. Leaders of the National Black Nurses Association have written that mentoring is one way to improve recruitment and retention of minority nurses.

Matus argues for a *movement* for diversity in the health care workforce and calls upon leaders to not just focus on complying with legislative mandates, but to embrace meaningful visions in their organizations.²¹¹ He urges CEOs to look at their own practices with ethical and moral goals in mind. According to Matus, CEOs should be satisfied only when a true sense of valuing diversity is fostered throughout an organization. Church, in an Open Forum letter, recommends diversity training and leadership programs, promotion of minority personnel, and empowerment training for minority students in radiology schools to combat racism and to help recruit and retain the URM students.²¹²

In Giardino et al. the authors explored methods of recruiting and retaining minority house staff in 78 US training programs.²¹³ Minority recruitment was reported as a priority by only 40% of pediatric chief residents, and 71% reported no explicitly defined recruitment goals regarding minority staff showing that leadership support for diversity in pediatrics is weak at best.

Reiss urged nurses to be proactive in embracing a more diverse workforce.²¹⁴

Schmieding cited under-representation of minorities in leadership positions as having serious implications for equality in health care and culturally competent nursing.²¹⁵ Cohen asked nursing leaders to share their personal and professional expectations with their staff members.²¹⁶ Villarruel studied the leadership pathways of 22 Hispanic nurse leaders to determine both the challenges and opportunities they experienced.²¹⁷

Dreachslin et al. find in a literature review that diversity tests leadership skills at a deeper and more personal level than homogeneity.²¹⁸ They outline the seven demands of leadership identified by the Gallup Organization, based on studies of more than 50,000 leaders: visioning, maximizing values, challenging experiences, mentoring, building a constituency, making sense of an experience and knowing oneself.

Several federal programs have been vital to increasing the number of minority physician leaders. For instance, The Minority Investigator Research Supplements, supported by the National Institutes of Health and the Agency for Health Care Quality and Research, have provided much-needed support to enable investigators to pursue research careers focused on underserved populations. In addition, the United States Health Services and Research Administration supports programs that enhance workforce diversity. Some examples include: The Health Careers Opportunity Program (HCOP), which provides low-income students with opportunities to develop the skills necessary to enter the health professions; The Centers of Excellence, which enable health profession training programs to enlarge their minority applicant pool; and The Minority Faculty Fellowship Program which assists training programs in increasing the number of URM serving on their faculties.²¹⁹

Motivation and Recruitment/Retention

Understanding the motivations of minority health professionals in entering the health care workforce can help HCOs to create policies that improve recruitment and retention. For example, a study by Butters et al. considered barriers to recruitment and retention of African Americans in the dental profession.²²⁰ The researchers found the motivation of African American dentists to enter the profession was different from that of their white colleagues. African American dentists were motivated by a desire to serve the public, work in urban areas, work part-time and to specialize, whereas their white counterparts were motivated by family commitments.

A study by Singer et al. examined physician retention in community health centers in both urban and rural areas.²²¹ The National Health Service Corps (NHSC), a federal program, provides comprehensive team-based health care that is designed to bridge geographic, financial, cultural, and language barriers. Among other activities, it supports a student and loan repayment program. By the end of five years, approximately 36% of physicians who started without a National Health Service Corps obligation were still working in a community health center compared with only approximately 17% of those with a National Health Service Corps obligation. Minority physicians who take part in NHSC are often directed to work in rural areas to help with the physician shortages in those areas, even when they express a preference to work in urban areas. This might have something to do with the low retention rate and is an issue that policy makers should be aware of. In Pathman et al. minorities among rural NHSC physicians were less interested

in rural practice and were found to be more dissatisfied with their work and personal lives.²²²

Dreachslin et al. explore a group of managers' perspectives on career opportunities for racially and ethnically diverse populations.²²³ The managers identified four strategies for improvement: (1) diverse industry leadership; (2) health administration education; (3) health management research on recruiting and retaining minorities; and (4) studying other organizations who have been successful in achieving a diverse workforce. Swanson advocates that health care organizations create an environment of inclusiveness for minority staff and stresses the need for leaders to be aware of their own reactions and behavior around URMs.²²⁴

Valcarcel et al. consider the training and retraining of URM physicians, in particular those of Hispanic descent.²²⁵ The authors attribute the undersupply of Hispanic neonatologists to limited research funding, lack of employment opportunities as well as the large debt burden of US medical graduates. Greenwald et al. studied the under-representation of minorities among registered dietitians, which education program directors attributed to educational disadvantages, particularly in science subjects, and registered dietitians and dietetic technicians attributed to the field's lack of visibility and the under-representation of men compared to women.²²⁶ The authors recommended outreach to K-12 schools and lower-division college students, tutoring and mentoring programs, increased internship opportunities in the workplace, and advertising through national channels capable of reaching minorities.

Schoonveld et al. carried out a study of diversity in the genetic counseling profession by interviewing 15 URMs to see how they each entered the field.²²⁷ The sample consisted of five female and three male genetic counseling students, and seven female practicing genetic counselors. Their ethnic backgrounds included Asian, African American, white, Hispanic, and other. The study found that more than half the students were introduced to genetic counseling in college, while the remainder learned about the field through working in a setting that employed a genetic counselor, from taking a science course, or from a family friend or advisor. Suggestions for increasing diversity included improving awareness about the field in schools, expanding genetic counseling services to underserved areas, developing recruitment materials targeted at minorities, providing mentors to students and increasing positive media attention.

Dower et al. in their report on diversifying the Nursing Workforce discuss *Ladders in Nursing Careers*. This was an initiative begun in 1998 in New York that allowed participants to enroll in a work-study program in which they received full-time pay and benefits while working part-time and maintaining full enrollment in a nursing education program. Nearly 40 % of participants were from URMs (24 % African American, 5 % Hispanic, 4 % Native American, 4 % Asian, and 1 % Mexican). The project was considered a success. At the close of the program, there were 365 graduates, 328 of whom were in nursing and 37 of whom were in the allied health professions.²²⁸

Becker describes a pipeline program that did have some success instigated through a partnership between United Medical Center in Cheyenne, Wyoming and a technical college in Aurora, Colorado.²²⁹ The hospital bused the students 240 miles each day from

Cheyenne to the college. They paid book and tuition fees as well as provided an hourly wage in return for a two-year commitment from the students to work at the hospital after they had graduated. The program allowed some of the workers in the allied health professions to get paid while they changed track. To date, more than 50 students have graduated from the program and the hospital is now setting up a teleconferencing center so that the students can take all of their classes remotely.

Summary

There is general consensus in the literature that diverse leadership in HCOs is essential in terms of recruiting and retaining minority staff and that mentoring programs are an important way to make URMs feel supported. One of the ways to recruit and retain URMs is to better understand their motivation for entering the health care professions. Providing financial incentives and educational programs for employees already in health care but wanting to change track, can be a positive way to recruit and retain staff, many of whom may be from diverse populations. Another way to attract more minorities into the labor pool is to advertise through channels that target URMs specifically. In addition, addressing barriers to promotion and adopting an inclusive environment helps URMs to have a more positive experience in the workplace. Lastly, the literature reports that staff members who identify themselves as URMs are often burdened with the extra pressures of being perceived as diversity experts. Leaders of all ethnic and racial groups must become more aware of the additional stresses of being a minority health care professional.

Gaps/Opportunities

- More rigorous research is required on how to implement effective corporate level strategies aimed at recruiting, promoting and retaining minority health care professionals.
- Additional data should be collected on minority hiring, performance and promotion opportunities within different health care organizations.
- There is an opportunity to initiate more formal diversity training programs for leaders of health care organizations.
- More research on the values, goals and motivations of people currently engaged in the allied and auxiliary health professions and structuring the education and employment systems to better fit their needs will be required in order to recruit and retain a more diverse workforce.
- An opportunity exists to replicate the *Ladders in Nursing Careers* program that proved successful in recruiting an increased number of URMs into nursing and the allied health professions.

3. Developing an Inclusive Work Environment

An inclusive work environment makes the best use of the talents and contributions of all employees to enhance organizational effectiveness. In moving to more equitable opportunities for minorities, institutions must create an open climate that considers an individual's beliefs, values, and background, as well as the corporate culture. In much of the literature on this topic, authors have attempted to explain how to understand the challenges in creating an inclusive work environment, as well as exploring what a successful diverse workplace might look like.

Leaders can help drive the development of a more inclusive work setting by valuing differences and understanding the business imperatives for change. Swanson urges leaders and organizations to become aware of their reactions to minorities; to expand their perspectives allowing them to appreciate others as well as understand them; and to be open to exploring options and alternatives in trying to meet the needs of all employees.²³⁰ Gardenswartz et al. advise organizations to focus on individuals' attitudes and beliefs that affect interactions; to evaluate the diversity skills of their leadership; and to consider the values, norms, and policies of the organization itself to see if they reflect management's vision for diversity.²³¹ Foley et al. stress the need for nurse leaders to be open to a variety of cultures embedded in the hospital environment including those of patients, staff and physicians.²³²

Drechslein et al. recommend a five-part process for health organizations to reposition themselves through diversity leadership—discovery, assessment, exploration, transformation, and revitalization.²³³ The authors also provide a tool for organizations to measure their performance against diversity leadership indicators.

Crowley and colleagues focus on helping organizations to improve the social climate and to understand how climate experience of a minority group might be very different from climate experience of a majority group.²³⁴ For example, a minority group might be aware of interpersonal dynamics and organizational assumptions that are not experienced by a majority group. Crowley makes recommendations to improve the organizational climate in a laboratory setting. They include working more often in groups to bring individuals together; encouraging community decision-making; using external consultants; providing opportunities for staff members to share family histories and interests; assigning mentors; and enforcing a policy for respectful working relationships.

Sometimes the concept of an inclusive workplace stretches further than the bounds of one organization. Mor Barak introduces a model organization that is accepting not only of its own workforce, but is also active in the community, participates in state and federal programs, and collaborates across national borders.²³⁵

Several articles explore the notion of transcultural nursing administration. This perspective is defined by Leininger as education and clinical services that "take into account the cultural caring values, beliefs, symbols, references, and lifeways of people of diverse and similar cultures for beneficial or satisfying outcomes."²³⁶ Mikkelsen argues for transcultural nurses who have a positive attitude toward differences and a genuine interest in learning from others about their culture.²³⁷ Andrews purports that a

transcultural approach is essential for achieving goals in a diverse workforce situation. She introduces a tool for cultural change that evaluates strengths, community, resources, and readiness for change.²³⁸

Summary

Developing an inclusive work environment requires the cooperation of health care organizations at many levels. The literature suggests organizations must find ways to evaluate their success or lack of it in creating diversity. In addition, leaders must understand the complexities of a culture that incorporates an individual's values, beliefs and background as well as an organization's willingness to embrace change and its openness to exploring new ways to meet the needs of staff, patients, and physicians.

Gaps/Opportunities

- More research is required to show how health care organizations might evaluate and thereby improve their institutional climate for diversity.

Note: In writing this literature review, the authors made an extensive search of the available databases using a number of carefully selected keywords. The authors apologize if the search criteria or the inaccessibility of certain articles has resulted in the omission of any important research studies in this field.

Notes

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