



## **Physicians' Experiences and Opinions Regarding Strategies to Improve Care for Minority Patients**

Jared W. Klein, Northwestern University, Feinberg School of Medicine

Lindsay O. Schubiner, Barnard College

Margaret Gadon, Medicine and Public Health, American Medical Association

Matthew K. Wynia, University of Chicago.

### **Abstract**

**Objective:** To assess the views and experiences of a select group of physicians interested in minority health issues regarding promising strategies to improve minority care. **Methods:** Physicians were asked to respond to a 17-item survey assessing the level of agreement, frequency of implementation of and interest in learning more about 7 promising strategies for alleviating disparities. **Results:** Most physicians (75-95%) agreed that the 7 proposed strategies could be useful to improve the quality of care provided to minority patients, but only 40-66% of physicians had implemented the strategies sometimes or often in their practices. Between 22 and 29% of physicians were interested in learning more about 6 of the 7 strategies, preferably by CME, seminars and newsletters. **Conclusion:** Physicians concerned with minority health issues agree that commonly suggested strategies for eliminating racial and ethnic disparities in health care could be useful, but have difficulty implementing such approaches.

**Key Words:** ethnic group, health care disparities, minority, physicians

## Introduction

The prevalence and pervasiveness of racial and ethnic health care disparities have been confirmed through numerous studies and documented in widely publicized reports (Agency for Healthcare Research and Quality, 2005; Institute of Medicine [IOM], 2003). Although many of these disparities may be attributed to a lack of access to health care and related socioeconomic differences, most studies have determined that even when controlling for these variables, disparities persist. At the system level, non-economic factors such as language barriers and geographic location of health institutions can contribute to health care disparities for racial and ethnic minorities (Hargraves, 2004; Flores, 2006; Chandra & Skinner, 2003). On the individual level, physicians might contribute to disparities through inadvertent discrimination, stereotyping, or bias (Burgess, Fu, & van Ryn, 2004; Schulman et al., 1999; Green et al., 2007).

Although certain causes of disparities are beyond what any single physician can address, physicians can work to reduce disparities by addressing some of their root causes. For example, physicians can use professional interpreter services for their patients with limited English proficiency (Karlner, Perez-Stable, & Gildengorin, 2004; Jacobs, Shepard, Suaya, & Stone, 2004), work with community health workers to reinforce treatment plans and guide patients through the clinical experience (Lewin et al., 2005), and routinely collect patient race and ethnicity data to implement targeted quality improvement within their practices (IOM, 2003; Perot & Youdelman, 2001). Several other strategies to reduce health disparities have been recommended, but little is known regarding how often such strategies are used or the level of support for each strategy among physicians. This paper presents the results of a survey designed to assess the views and experiences of physicians interested in minority health issues regarding a set of seven promising strategies to improve minority care.

## Methods

This survey was conducted as a follow-up to a 2004 survey of U.S. physicians of all specialties from a nationally representative sample of 1700 participants selected from the American Medical Association (AMA) Masterfile, with over-sampling of physicians practicing in areas with high proportions of racial and ethnic minorities (Alexander et al., 2007). From the pool of 866 respondents to the initial survey, 240 physicians indicated a special interest in further discussing their efforts to eliminate health disparities and agreed to be contacted for more information. The Institute for Ethics at the AMA conducted both the initial survey and this follow-up

survey on behalf of the Commission to End Health Care Disparities. This study was reviewed by the Western Institutional Review Board (Olympia, WA) and determined to be exempt.

Most physician contact information was obtained from the aforementioned survey. In cases where contact information was incomplete, illegible or incorrect, we attempted to obtain it from the AMA Masterfile and online resources. All surveys were conducted via telephone, email or mail. Initially, we called all physicians for whom we had a phone number and emailed the survey to all those for whom we had an email address. If the physician did not respond to the initial message, we left up to three phone messages or sent a follow-up email. We faxed the survey if requested by the respondent. After exhausting these methods, we mailed the survey to the physicians who had not responded or could not be reached and sent a reminder mailing several weeks later to those who had still not responded. Two individuals (L.O.S. and J.W.K.) conducted all phone interviews using a script. Before starting the protocol, the interviewers practiced conducting interviews with three physicians who were not in the study sample to maximize the reliability of the interview process and ensure survey comprehensibility.

The survey asked physicians about seven specific strategies that have been recommended to help reduce racial and ethnic health disparities. The strategies were selected through a literature search and input from a group of national experts (Table 1). Of the identified strategies, only those that relied on specific actions of individual physicians were included. The seven strategies were: providing patient information pamphlets in languages other than English, working with trained medical interpreters when caring for non or limited English speaking patients, working with Community Health Workers, providing cultural awareness or cultural competence training for staff, participating in community outreach programs that reach racial and ethnic minorities, participating in quality improvement projects that look specifically at care for minority patients, and increasing the racial or ethnic diversity of office staff. Standard definitions of key terms (e.g. "Community Health Workers") that were developed prior to fielding the survey were read over the phone if requested and included verbatim in the mail version of the survey.

For each strategy, physicians were asked to rank the frequency of their use as "never," "rarely," "sometimes," or "often." They were then asked whether, in their opinion, they agreed that the strategy in question could help improve care for minority patients. Options were provided on a four-point Likert scale of "strongly agree," "agree," "disagree," or "strongly disagree." Respondents could also choose "not sure." Figure 1 shows the survey in its entirety.

**Table 1 – Strategies and References**

Strategies	References
Provide pamphlets in languages other than English	Baquet. R.; Carter-Pokras, O.; Bengen-Seltzer, B. 2004. Health Disparities and Models for Change. <i>Am J Manag Care</i> 10:SP 5-11.
Work with trained medical interpreters	Karlner, L.S.; Perez-Stable, E.J.; Gildengorin, G. The language divide: The importance of training in the use of interpreters for outpatient practice. <i>J Gen Intern Med</i> 19(2):175-83.
	Institute of Medicine Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. 2003. <i>Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.</i> (pp. 191-193). Washington, DC: National Academy Press.
Work with Community Health Workers	Institute of Medicine Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. 2003. <i>Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.</i> (pp. 193-195). Washington, DC: National Academy Press.
Provide cultural awareness or cultural competence training for staff	Beach, M.C.; Price, E.G.; Gary, T.L.; Robinson, K.A.; Gozu, A.; Palacio, A.; Smarth, C.; Jenckes, M.W.; Feuerstein, C.; Bass, E.B.; Powe, N.R.; Cooper, L.A. 2005. Cultural competence: a systematic review of health care provider educational interventions. <i>Med Care</i> 43(4):356-73.
	Taylor, S.L.; Lurie, N. 2004. The Role of Culturally Competent Communication in Reducing Ethnic and Racial Healthcare Disparities. <i>Am J Manag Care</i> 10:SP1-SP4.
	Baquet. R.; Carter-Pokras, O.; Bengen-Seltzer, B. 2004. Health Disparities and Models for Change. <i>Am J Manag Care</i> 10:SP 5-11.
Participate in community outreach programs	Taylor, S.L.; Lurie, N. 2004. The Role of Culturally Competent Communication in Reducing Ethnic and Racial Healthcare Disparities. <i>Am J Manag Care</i> 10:SP1-SP4.
	Baquet. R.; Carter-Pokras, O.; Bengen-Seltzer, B. 2004. Health Disparities and Models for Change. <i>Am J Manag Care</i> 10:SP 5-11.
Participate in quality improvement projects that look specifically at care for minority patients	Fiscella, K.; Franks, P.; Gold, M.R.; Clancy, C.M. 2000. Inequality in quality: addressing socioeconomic, racial, and ethnic disparities in health care. <i>JAMA</i> 283(19):2579-84.
	Lavizzo-Mourey, R.; Jung, M. 2005. Fighting unequal treatment: the Robert Wood Johnson Foundation and a quality-improvement approach to disparities. <i>Circulation</i> 111(10):1208-9.
Increase the racial or ethnic diversity of office staff	Taylor, S.L.; Lurie, N. 2004. The Role of Culturally Competent Communication in Reducing Ethnic and Racial Healthcare Disparities. <i>Am J Manag Care</i> 10:SP1-SP4.
	Bonow, R.O.; Grant, A.O.; Jacobs, A.K. 2005. The cardiovascular state of the union: confronting healthcare disparities. <i>Circulation</i> 111(10):1205-7.
	Mensah, G.A. 2005. Eliminating Disparities in Cardiovascular Health Six Strategic Imperatives and a Framework for Action. <i>Circulation</i> 111:1332-1336.
	Institute of Medicine Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. 2003. <i>Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.</i> (pp. 239-240). Washington, DC: National Academy Press.

We then asked respondents to choose which of these strategies, if any, they would be interested in learning more about. Physicians were also asked what method they would most prefer to utilize when learning about these strategies. Options included continuing medical education (CME) programs, seminars, web-based education, newsletters, journal articles, and DVD/CD-ROMs. For both of these “learning more” questions, respondents were prompted to select multiple responses, if appropriate. Finally, the survey included an open-ended question in which we asked physicians what they thought the AMA, state or specialty medical societies could do to help them better care for minority patients.

When we received completed surveys, one person entered the data and another verified that the data were entered correctly. Demographic data had been acquired for the initial survey and were integrated into the data for this survey.

For our analyses, we grouped “strongly agree” with “agree” and “strongly disagree” with “disagree.” For the frequency of use questions, we grouped “often” with “sometimes” and “rarely” with “never.” Descriptive statistics are reported as both counts and percentages of those responding to a given question. We used the Student’s T-test to compare responses by method of acquisition (phone versus mail). All statistical analyses were carried out using Microsoft Excel.

## Results

Our sample was composed of 211 of the 240 physicians who provided their contact information on the prior national survey. Of the other 29 physicians, 14 were not included because they were included in a separate study involving an in-depth qualitative interview on the same topic (Phongsak, Wynia, Gadon, & Alexander, 2007). The remaining 15 were retired, unreachable, or their contact information was illegible. We received 129 responses from the 211 physicians in our sample, for a response rate of 61%. We conducted 38 surveys over the phone (30%), received 84 by mail (65%), 4 by email (3%), and 3 by fax (2%). There were two statistically significant differences in the responses received via phone versus mail. Phone respondents were more likely than mail respondents to have provided cultural awareness training for staff (65% versus 40%,  $p < 0.05$ ) and to participate in community outreach programs (55% versus 36%,  $p < 0.05$ ).

Table 2 shows the demographic characteristics of survey respondents. On average, physician respondents treated a patient panel that included 59% racial or ethnic minorities (median 60%). The self-reported racial and

ethnic composition of the physicians who completed the survey was 40% white, 29% Asian, 13% Latino or Hispanic, 6% African-American or Black and 1% Native American or Alaska Native. Although a plurality of the physicians who completed the survey were white, the respondent population included a larger percentage of minority physicians than the general physician population (8.3% Asian, 3.2% Hispanic, 2.3% Black and 0.06% American Native/Alaska Native) (AMA, 2006). Most respondents were male (74%) and approximately half were specialists (54%). Many practiced in either solo (41%) or single-specialty (25%) settings.

**Table 2 – Physician Respondent Characteristics (N=129)**

Race/Ethnicity		Specialty	
White or Caucasian	40%	Primary Care	46%
Black or African-American	6%	Specialty Care	54%
Hispanic or Latino	13%		
Asian	29%		
Native American or Alaska Native	1%	Practice Setting *	
Other	8%		
No Response	2%	Solo Practice	41%
		Single Specialty Practice	25%
		Multi-Specialty Practice	15%
		Community Health Clinic	5%
Gender		Group/staff model HMO	7%
		Private Hospital	9%
Male	74%	Academic Medical Practice	8%
Female	26%	Public Hospital	6%

\* Total does not add to 100% because respondents could choose more than one response option.

The majority of the physicians in our sample (75% to 95%) reported that each of the seven strategies could serve as an effective tool to improve the quality of care for minority patients (Table 3). The strategies that received the most support were “providing patient information pamphlets in languages other than English” and “working with trained medical interpreters when caring for non or limited English speaking patients.” Of the physicians in our sample, about 95% and 93% of respondents, respectively, strongly agreed or agreed that these strategies could help to improve healthcare for minority patients. Eighty-six percent of physicians supported working with Community Health Workers and participating in community outreach programs. Although increasing the racial or ethnic diversity of office staff, providing cultural awareness training for staff, and participating in quality improvement projects received less support than the other four strategies, they nevertheless were favored by a large majority of physicians: 79%, 78%, and 75%, respectively.

Considering the very high levels of support for these strategies among physicians in our sample, the rates of implementation were remarkably lower (Table 3). Only between 40% and 66% of physicians surveyed reported using the strategies in their practice sometimes or often. Providing translated pamphlets was the strategy that was most often implemented; it was employed by 66% of the surveyed physicians. Of the 58% of respondents that had quality improvement programs in their practice setting, 59% (or 34% of the entire sample) stated that they sometimes or often broke down the data to look specifically at care for minority patients. Fifty-four percent of physicians used trained interpreters when treating non or limited English speaking patients. Less than half of the respondents used the remaining four strategies sometimes or often. Forty-eight percent of physicians had provided cultural awareness training for their staff, 42% had participated in community outreach programs, 41% had worked with community health workers and 40% had taken steps to increase the racial and ethnic diversity of their office staff.

Respondents showed a range of interest in learning more about the strategies mentioned in the survey (Table 4). Twenty-nine percent of physicians wanted to learn more about community outreach, while only 9% of physicians showed interest in learning more about increasing the racial and ethnic diversity of their office staff. Physicians were interested in all the remaining strategies at rates of 22 to 25%. Continuing medical education programs were the most popular way to learn about these strategies, with support from 39% of respondents, followed by seminars (27%) and newsletters (25%). Web-based education, journal articles and DVD/CD-ROMs were preferred by 17%, 12% and 10% of respondents, respectively.

Physician responses to the open-ended question about the role of medical societies in helping them address care disparities varied considerably. Relatively few respondents recommended training programs for physicians. On the other hand, many recommended that medical societies create culturally tailored patient handouts, and advocate nationally for universal healthcare coverage and increased funding for community outreach. A few noted that it would be valuable for these organizations to educate the public about medical care and minority health issues.

**Table 3 – Results**

Strategy	N	Think the strategy improves care:			Utilize the strategy:	
		Strongly Agree or Agree (%)	Disagree or Strongly Disagree (%)	Not Sure (%)	Never or Rarely (%)	Sometimes or Often (%)
Translated Pamphlets	129	95%	4%	2%	34%	66%
Interpretation	128	93%	5%	2%	46%	54%
Community Health Workers	129	86%	3%	11%	59%	41%
Cultural Awareness	129	78%	9%	12%	52%	48%
Community Outreach	129	86%	5%	9%	58%	42%
Quality Improvement †	123	75%	10%	15%	41%	59%
Office Staff Diversity ‡	126	79%	12%	10%	60%	40%

† 42% of respondents noted that they did not utilize any quality improvement at their practice, thus they did not answer how often they utilized this strategy. ‡ Response options for utilization of this strategy were many steps, some steps, a few steps or no specific steps. These correspond with often, sometimes, rarely or never and were grouped accordingly.



**Table 4. What Strategies Physicians Would Like to Learn More About and How**

Strategies physicians would most like to learn more about	N	%*
Interpretation and Translation	29	22%
Community Health Workers	32	25%
Cultural Awareness	30	23%
Community Outreach	37	29%
Quality Improvement	28	22%
Office Staff Diversity	12	9%
Preferred Learning Methods	N	%*
CME	50	39%
Seminars	35	27%
Web-based education	22	17%
Newsletters	32	25%
Journal Articles	16	12%
DVD/CD-ROMs	13	10%

\* Total does not add to 100% because respondents could choose more than one response option.

## Discussion

The physician-patient interaction is an important dimension of health care and has been identified as a potential contributor to racial and ethnic health care disparities (IOM, 2003). We conducted this study to ascertain whether physicians who self-identified as having “improved the quality of care [they] provide to [their] minority patients in a unique or innovative way” were aware of, and utilized, a set of seven frequently recommended strategies to reduce disparities (Alexander et al., 2007). We hypothesized that these physicians, with their strong interest in improving quality of care for minority patients, would be more qualified than a randomly selected group of physicians to evaluate the relative utility and practicality of various recommended interventions. Therefore, we were not surprised to find that 75-95% of respondents agreed that implementation of each of these strategies could improve care for their minority patients.

Although most physicians stated that the strategies included in our survey could be useful for improving the care of their minority patients, we were surprised that relatively few of them used the strategies routinely. For instance, the strategy “providing translated patient information pamphlets,” which was endorsed by 95% of respondents, was used by only 66% of them. Similarly, “trained medical interpreters,” endorsed by 93%, were only used by 54% of respondents. Interestingly, 58% of physician respondents worked in practices with a formal quality improvement (QI) program. This is a higher percentage than that reported in a recent study on quality of medical care in independent practices (Mehrotra, Epstein, & Rosenthal, 2006). Among those respondents with QI programs, 59% had specifically looked at data on minority patient care in order to target QI interventions. The fact that more than half of these physicians appear to be collecting and using data on patient race and ethnicity to target QI interventions suggests that this strategy holds promise, despite concerns about how best to collect these data (Hasnain-Wynia & Baker, 2006). The other four strategies were used by less than half of the respondents “sometimes” or “often,” despite being endorsed by over 75% of physicians.

The discrepancy between physicians’ beliefs regarding the effectiveness of these interventions and their rates of use suggests that physicians are experiencing significant barriers to the implementation of promising strategies to eliminate racial and ethnic disparities in health care. This is especially concerning because our survey population was composed of physicians who are interested in minority health issues. Unfortunately, we have few data on which potential barriers to implementation are most important, as our survey did not explore the reasons behind the lack of implementation of each proposed intervention. Other studies have demonstrated that potential barriers include the high cost of implementing strategies for individual physicians, an inadequate data collection infrastructure and scant availability of high quality patient education materials in languages other than English (Hasnain-Wynia & Baker, 2006; *Hablamos Juntos*, 2004)

Our survey results further suggest that many physicians are open to learning more about promising strategies to reduce health care disparities. In an effort to inform the development of future educational programming, we queried the physicians about their preferred methods for receiving training (Fox, Mazmanian, & Putnam, 1989). The highest proportion of physicians wanted to learn more about the strategies through CME curricula. Seminars, a form of learning that often comes with CME, also received substantial support. However, there is some evidence that such didactic learning methods may be ineffective at changing physician behavior or improving health care outcomes (Davis et al., 1999).

Our survey is subject to several limitations. First, the sample surveyed for this study was composed entirely of physicians who expressed a special interest in minority health. It is likely that our findings are not representative of all physicians' experiences with or opinions about these strategies. On the other hand, these physicians' opinions are especially pertinent because these physicians are more likely to be aware of, or to have tried, specific strategies to improve the quality of care for their minority patients. Second, it is possible that respondents attempted to inflate their level of agreement or implementation, as a form of socially acceptable response bias. However, we tried to limit this form of bias in framing the questions: by asking each respondent to answer honestly, mentioning that some of the strategies have had more success than others, and asking about level of use before asking about whether using the strategy can be effective (Figure 1). Also, each level of agreement question had a "not sure" option that allowed the respondent to opt out of answering. We feel that these methods were successful because of the wide distribution of responses for the implementation questions, which should have been most susceptible to socially acceptable responses (i.e. a respondent who reports the intervention is useful should be more likely to report using it). If anything, this type of bias would lead to an underestimation of our main finding regarding the gap between reported utility and actual implementation rates. Third, the survey was completed both over the phone and by mail, fax and email. We hypothesized that responses may have differed according to response method. We found two statistically significant differences between responses received in the mail versus those conducted over the phone. Phone respondents were more likely than mail respondents to provide cultural awareness training and participate in community outreach programs. This may be because physicians in smaller practices, who might be more accessible via phone, have fewer administrative or bureaucratic obstacles to implement training programs and are more connected with the surrounding community. In fact, 53% of phone respondents were in solo practice versus only 37% of mail respondents, although this difference was not statistically significant ( $p=0.10$ ).

Finally, recent research has shown that physicians' unconscious biases may contribute to the perpetuation of health disparities (Green et al., 2007). This research also suggests that making physicians aware of their unconscious biases might improve the quality of care for minority patients. Although we did not assess this particular strategy, it would be interesting to know the views and experiences of the physicians in our sample on the subject of unconscious biases. This is a promising new area for intervention in addressing health disparities and deserves further investigation.

**Figure 1 – Survey**

Interviewer script: "I am going to ask you about six different strategies that have been suggested for physicians to use to help address health care disparities. Some of these strategies have received more support than others. Please answer honestly about your personal experiences with each

**POTENTIAL INTERVENTIONS**

1. How often, if ever, do you provide patient information pamphlets in different languages?      • Never      • Rarely      • Sometimes      • Often
2. Do you think providing patient information pamphlets in different languages can help improve care for minority patients?  
     • Strongly Agree    • Agree    • Disagree    • Strongly Disagree    • Not Sure
3. How often, if ever, do you work with trained medical interpreters when you care for non or limited English speaking patients?  
     • Never      • Rarely      • Sometimes      • Often
4. Do you think working with trained medical interpreters can help improve care for minority patients?  
     • Strongly Agree    • Agree    • Disagree    • Strongly Disagree    • Not Sure
5. How often, if ever, do you work with Community Health Workers when caring for minority patients? [CHWs are people who are trained to create a bridge between health providers and underserved populations by providing basic health education and assistance in navigating the health and social services system. For example, some communities have developed patient navigator programs with trained volunteers who help patients get to their appointments, remember to take their medications, and so on.]  
     • Never      • Rarely      • Sometimes      • Often
6. Do you think working with community health workers can help improve care for minority patients?  
     • Strongly Agree    • Agree    • Disagree    • Strongly Disagree    • Not Sure
7. How often, if ever, do you provide cultural awareness or cultural competence training for your staff? [Cultural competence training is training that specifically aims to help health-care professionals provide better care to patients from other cultures.]  
     • Never      • Rarely      • Sometimes      • Often
8. Do you think providing cultural awareness or cultural competence training for your staff can help improve care for minority patients?  
     • Strongly Agree    • Agree    • Disagree    • Strongly Disagree    • Not Sure
9. How often, if ever, do you participate in community outreach programs that reach racial and ethnic minorities? [This might include activities such as: giving talks to senior centers, volunteering in free clinics, working in food pantries, visiting schools, or participating in health fairs.]  
     • Never      • Rarely      • Sometimes      • Often

10. Do you think local doctors participating in community outreach programs can help improve care for minority patients in that community?  
 • Strongly Agree • Agree • Disagree • Strongly Disagree • Not Sure
11. Do you have a formal structure for doing quality improvement projects in your practice?  
 • Yes • No
12. If YES: How often, if ever, do you break down your quality data to look specifically at care for minority patients? [Quality improvement projects aim to enhance clinical performance by measuring whether or how often a process of care or outcome of care occurs. Ex: proportion of diabetes patients who receive a foot exam. QI projects might include chart reviews, patient satisfaction surveys, etc.]  
 • Never • Rarely • Sometimes • Often
13. Do you think targeted quality improvement programs can help improve care for minority patients?  
 • Strongly Agree • Agree • Disagree • Strongly Disagree • Not Sure
14. Have you taken any specific steps to increase the racial or ethnic diversity of your office staff, such as advertising positions in minority-targeted media or working with job placement centers for immigrants?  
 • Many steps • Some steps • A few steps • No specific steps
15. Do you think increasing the racial or ethnic diversity of office staff can help improve care for minority patients?  
 • Strongly Agree • Agree • Disagree • Strongly Disagree • Not Sure

**LEARNING MORE**

16. Which of the six strategies that were mentioned would you most like to learn more about?  
 • Community health workers • Community outreach  
 • Cultural awareness and competence training • Quality improvement  
 • Interpretation and translation • Workforce diversity
17. Which of the following would be the best way for you to learn more about the above strategies?  
 • CME programs • Newsletters  
 • Seminars • Journal articles  
 • Web-based education • DVD/CD-ROMs  
 • Other methods (please specify) \_\_\_\_\_

**YOUR OPINIONS**

From an organizational perspective, what can the AMA, state, specialty, or other medical societies do to help you better care for your minority patients?

## Conclusion

Most physicians who express interest in improving care for minority patients are aware of seven commonly recommended strategies to reduce racial and ethnic health care disparities and believe these strategies can be effective. However, many of those who believe the strategies are useful do not regularly use them in their practices. Further research is needed to better understand the barriers physicians experience in attempting to implement these strategies, so that health care professionals can set an agenda for addressing these barriers.

## References

- Agency for Healthcare Research and Quality. (2005). National healthcare disparities report. Rockville, MD: Agency for Healthcare Research and Quality. Available at <http://www.ahrq.gov/qual/nhqr05/nhqr05.htm>.
- Alexander, G.C., Lin, S., Sayla, M., & Wynia, M.K. (2007). Development of a measure of physician engagement in addressing racial and ethnic health care disparities. *Health Services Research (Online Early Articles)*. September 10, 2007.
- American Medical Association. (2006). Physician characteristics and distribution in the U.S. Chicago, IL: American Medical Association.
- Burgess, D.J., Fu, S.S., & van Ryn, M. (2004). Why do providers contribute to disparities and what can be done about it? *Journal of General Internal Medicine*, 19:1154-1159.
- Chandra, A. & Skinner, J. (2003). Geography and Racial Health Disparities: NBER Working Paper No. 9513. Cambridge, MA: National Bureau of Economic Research. Available at <http://www.nber.org/papers/w9513>.
- Davis, D.A., O'Brien, M.A.T., Freemantle, N., Wolf, F.M., Mazmanian, P., & Taylor-Vaisey, A. (1999). Impact of formal continuing medical education: Do conferences, workshops, rounds, and other traditional continuing education activities change physician behavior or health care outcomes? *Journal of the American Medical Association*, 282:867-874.
- Flores, G. Language barriers to health care in the United States. (2006). *New England Journal of Medicine*, 355:229-31.
- Fox, R.D., Mazmanian, P.E., & Putnam, W.E., Eds. (1989). *Changing and learning in the lives of physicians*. New York, NY: Praeger.

- Green, A.R., Carney, D.R., Pallin, D.J. et al. (2007). Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. *Journal of General Internal Medicine*, 22:1231-1238.
- Hablamos Juntos. (2004). *Physician Perspectives on Communication Barriers: Insights from Focus Groups with Physicians Who Treat Non-English Proficient and Limited English Proficient Patients*. Princeton, NJ: Robert Wood Johnson Foundation.
- Hargraves, J.L. (2004). Trends in health insurance coverage and access among black, Latino and white Americans, 2001-2003. Center for Studying Health System Change Tracking Report No. 11. Washington, DC: Center for Studying Health System Change. Available at <http://www.hschange.org/CONTENT/713/>.
- Hasnain-Wynia, R. & Baker, D.W. (2006). Obtaining data on patient race, ethnicity, and primary language in health care organizations: current challenges and proposed solutions. *Health Services Research*, 41:1501-18.
- Institute of Medicine Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. (2003). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, DC: National Academy Press.
- Jacobs, E.A., Shepard, D.S., Suaya, J.A., & Stone, E.L. (2004). Overcoming language barriers in health care: Costs and benefits of interpreter services. *American Journal of Public Health*, 94:866-869.
- Karliner, L.S., Perez-Stable E.J., & Gildengorin, G. (2004). The language divide: The importance of training in the use of interpreters for outpatient practice. *Journal of General Internal Medicine*, 19:175-83.
- Lewin, S.A., Dick, J., Pond, P., Zwarenstein, M., Aja, G., van Wyk, B., Bosch-Capblanch, X., & Patrick, M. (2005). Lay health workers in primary and community health care. *Cochrane Database of Systematic Reviews*, Jan 25:(1).
- Mehrotra, A., Epstein, A.M., & Rosenthal, M.B. (2006). Do integrated medical groups provide higher quality medical care than individual practice associations? *Annals of Internal Medicine*, 145:826-833.
- Perot, R.T. & Youdelman, M. (2001). Racial, ethnic, and primary language data collection in the health care system: An assessment of federal policies and practices. New York: The Commonwealth Fund. Available at [http://www.cmf.org/Publications/publications\\_show.htm?doc\\_id=221295](http://www.cmf.org/Publications/publications_show.htm?doc_id=221295).
- Phongsak, S.K., Wynia, M.K., Gadon, M., & Alexander, G.C. (2007). A qualitative study of physicians' engagement in reducing health care disparities. *Journal of the National Medical Association*. In press (December 2007).

Schulman, K.A., Berlin, J.A., Harlass, W., et al. (1999). The effect of race and sex on physicians' recommendations for cardiac catheterization. *New England Journal of Medicine*, 340: 618-626. Erratum in: *New England Journal of Medicine* 340:1130.

## Acknowledgments

The authors would like to gratefully acknowledge the assistance of Jennifer Matiasek, MA, Arthur Elster, MD, Jeanne Uehling and the Commission to End Health Care Disparities.

**Jared W. Klein, BA**, Northwestern University, Feinberg School of Medicine,

**Lindsay O. Schubiner, BA**, Barnard College

**Margaret Gadon, MD, MPH**, Division of Medicine and Public Health,  
American Medical Association

**Matthew K. Wynia, MD, MPH**, Institute for Ethics, American Medical Association, Chicago, IL; Section of Infectious Disease, Department of Medicine, University of Chicago; MacLean Center for Clinical Medical Ethics, University of Chicago.