What Works:
Reducing Health Disparities in Wisconsin Communities

A Review of Evidence-based Practices to Improve Access to Primary and Preventive Health Services for African American and Latino Communities
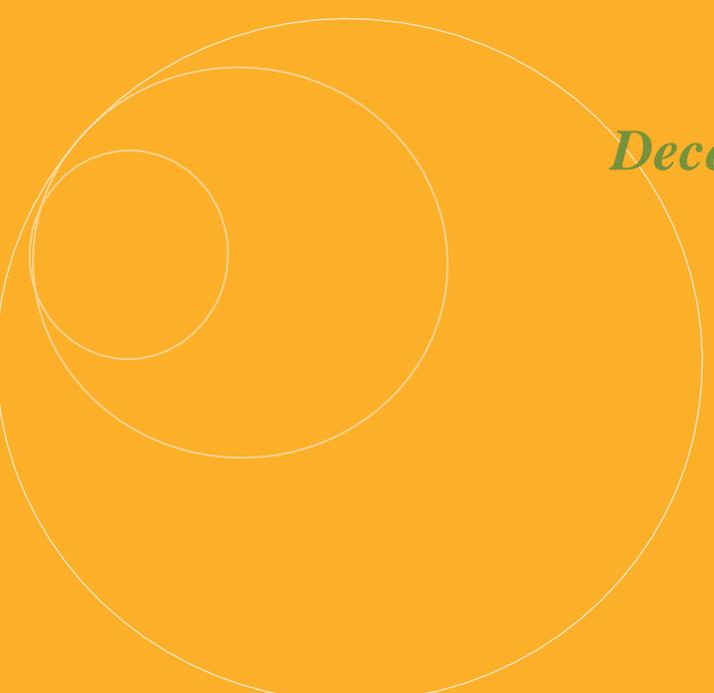
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ABSTRACT

This report contains the results of a review of the published academic literature related to access to primary and preventive health care services, as well as a review of websites of organizations with well-known expertise in the area of access to health care. The initial aim of this project was to identify evidence-based practices related to access to care with demonstrated effectiveness for racial and ethnic minority communities. However, since access to care is a complex issue affected by local, state and federal policies as well as many other individual and community-level factors, it is a difficult area in which to conduct the kinds of tightly-controlled studies that are generally needed to earn the "evidence-based practice" label. While few "true" evidence-based practices were located through this review, the search of the literature did identify several policy changes and interventions related to improving access to care for minority communities that are supported by some scientific research and/or organizations with well-recognized expertise on the topic. Interventions that could be implemented within health care organization or systems include the use of patient reminders for preventive care visits, the availability of professional interpreters for those with limited English proficiency, improving standards and policies for collecting information about patients' race and ethnicity, and interventions that use lay or community health workers to help connect individuals to the health care system. Policy changes that meet the criteria described above include ensuring that everyone has health insurance, that everyone has access to a "medical home," that there is an adequate supply of primary care physicians, increasing the representation of minorities in the health professions, and strengthening and expanding the system of federally-qualified community health centers.

I. Introduction

A. Project background

This report was produced as part of the "What Works: Reducing Health Disparities in Wisconsin Communities" project. What Works is a three-year, collaborative project involving the Wisconsin Division of Public Health and the University of Wisconsin Population Health Institute and is funded by the Wisconsin Partnership Fund for a Healthy Future. The overall goal of the project is to identify and disseminate public health interventions that will help reduce racial and ethnic health disparities in Wisconsin. The activities of the What Works project focus on two of the health priorities identified in the state health plan, Healthiest Wisconsin 2010, (access to primary and preventive health services; and overweight, obesity and lack of physical activity) and on the two largest racial/ethnic minority populations in Wisconsin (African American and Hispanic/Latino).

The project's two key strategies are: (1.) to review the published academic literature related to the two health priority areas in order to identify evidence-based practices that could improve health among these two populations, and (2.) to identify the shared characteristics of programs and projects in Wisconsin communities that show promise in improving health in racial and ethnic minority populations.

This report is focused on our efforts to identify effective public health interventions to address access to primary and preventive health services from the published research literature. Companion reports in this series focused on strategies identified in the research literature to address obesity in racial and ethnic minority communities, and on promising local community-based efforts to address both health priority areas within racial and ethnic minority communities in Wisconsin. The reports on promising local practices are available at:
 http://www.dhs.wisconsin.gov/Health/MinorityHealth/prompractices/index.htm.

B. Project terminology

Evidence-based practices. As noted above, a primary strategy of the What Works project involves the identification of relevant evidence-based practices. The notion of evidence-based practice first emerged within the field of clinical medicine and originally referred to a clinician's deliberate use of the best and most current research evidence to inform decision-making about patient care.[1] The concept of appraising the research evidence to inform decision-making has since been embraced by many other fields, including public health.[2]

Within the context of the What Works project, evidence-based practices have been defined as practices whose effectiveness has been confirmed by systematic research or expert consensus. In practice, this often involves looking to the results of systematic and literature review articles published in peer-reviewed, scientific journals, or to well-respected sources such as the Cochrane Database of Systematic Reviews or the Guide to Community Preventive Services. For this literature search and review we also relied on expert consensus in the form of policy briefs and position papers from organizations with well-recognized expertise in the area of access to health care. More information about our search methodology is included in section III.

Health disparities. Definitions of health disparities vary in their frameworks and terminology but generally refer to differences in health outcomes between a specific subpopulation and the overall population. Health disparities can be discussed in terms of differences in health status by race, ethnicity, gender, age, socioeconomic status, sexual orientation, geographic location, occupation, and/or education. Some prefer the term health inequities or inequalities, rather than disparities, to emphasize that these are avoidable differences between groups which are unfair and unjust. Table 1 below presents several definitions of health disparities/inequities. As discussed earlier, this study focused on health disparities based on race and ethnicity, and particularly disparities experienced by African American and Hispanic/Latino populations in the US.

Table 1
Definitions of Health Disparities and Inequities

Source	Definition
Terminology	**Health disparity**
National Institutes of Health (NIH)	Differences in incidence, prevalence, mortality and burden of diseases and other adverse health conditions that exist among specific population groups in the United States.[3]
US Department of Health and Human Services, *Healthy People 2010*	Healthy People 2010's second overarching goal is "to eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location or sexual orientation."[4]
National Cancer Institute (NCI)	"Health disparities are differences in the incidence, prevalence, mortality, and burden of cancer and related adverse health conditions that exist among specific population groups in the United States. The population groups may be characterized by gender, age, education, income, social class, disability, geographic location, or sexual orientation"[5]
Terminology	**Health inequity**
World Health Organization (WHO)	The term inequity has a moral and ethical dimension. It refers to differences which are unnecessary and avoidable but, in addition, are also considered unfair and unjust. So, in order to describe a certain situation as inequitable, the cause has to be examined and judged to be unfair in the context of what is going on in the rest of society.[6]

Within the field of public health, the term health disparities is generally used to refer to differences in health outcomes; however, the term can also be used to refer to differences in access to or quality of health care services. Racial and ethnic health disparities in health care occur when, for example, the amount of time between an abnormal screening mammogram and a follow-up diagnostic test is more than twice as long for African American, Asian American and Hispanic women as for white women.[7] Because this report is concerned with access to health care services, both disparities in access to care and disparities in health outcomes are discussed.

The reader is encouraged to be mindful of which type of disparity is being discussed in each instance.

Access to primary and preventive health services. Primary care has been described by one expert on the topic as care that "responds to patients' common health concerns through preventive, curative, and rehabilitative services in a convenient setting such as an office, health center, school, or home."[8(p7)]   This author distinguishes primary care from secondary and tertiary care in that these involve more specialized, resource-intense, and expensive care for more severe or persistent health issues. Preventive health services are a sub-set of primary care services and include services such as immunizations, screenings for specific conditions, and health promotion activities.

Access to primary and preventive health services is one of eleven health priority areas included in the state health plan, Healthiest Wisconsin 2010, and is described as follows

> Access means that primary and preventive health care services are available and organized in a way that makes sense to individuals and families. Access means that people have the resources, both financial and non-financial, needed to obtain and use available services. Accessible health care includes an infrastructure supporting a range of health services with the capacity to reach diverse people and adapt to the specific access issues that differ in communities.[9]

The conceptual model of access to care used to guide this study is similar to the Healthiest Wisconsin 2010 framework, and includes three sub-categories of access, which we refer to as financial, logistical, and cultural and linguistic access.   For the purposes of this report, financial access generally refers to whether individuals have health insurance coverage, through either a private or public source.   Logistical access refers to issues such as the availability of transportation for medical appointments, appointments times that do not conflict with work schedules, and the ability to speak with a medical provider during off-hours and holidays. Cultural and linguistic access refers to individuals' ability to communicate effectively with health care providers and staff, understand educational and other health-related materials and to be treated in ways that are cognizant and respectful of their cultural identity, beliefs and practices.   Research on cultural and linguistic access examines issues such as workforce diversity, the impact of racial and ethnic concordance between providers and patients, and the role of language interpreters.

II. Access to primary and preventive health services in Wisconsin

Healthiest Wisconsin 2010 includes specific objectives for each of its eleven health priority areas, and those related to access to primary and preventive health services focus on:
- Increasing the percent of the population with health insurance for all of the year;
- Increasing screening for chronic diseases and other health risks;
- Reducing the proportion of the population that reports difficulties, delays, or the inability to receive ongoing and preventive health care; and
- Increasing the proportion of Wisconsin residents who have received oral health services in the past year.[9]

Data used to track progress on each of these objectives shows that, overall, most Wisconsinites have relatively good access to primary and preventive health services; however, racial and ethnic minority groups lag behind whites on several measures.

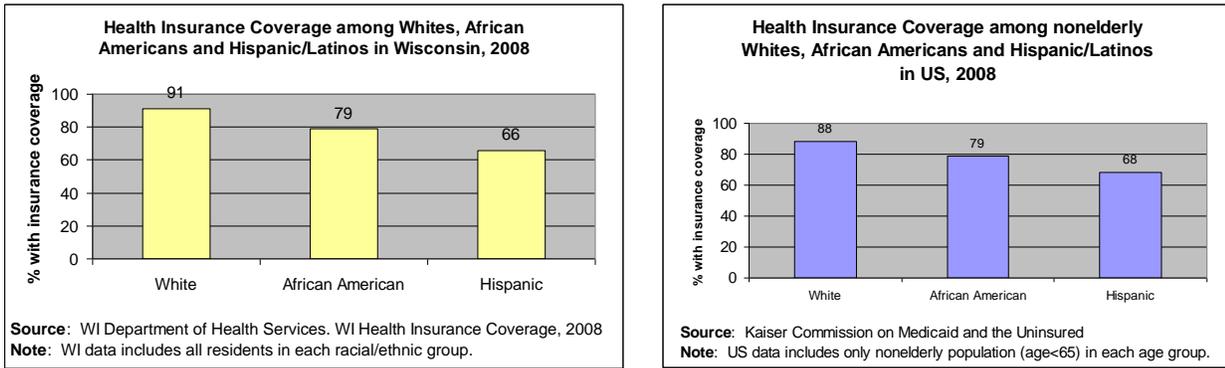***Health insurance coverage.*** In 2008, 89% of Wisconsin household residents had health insurance coverage over the previous year.[10] While short of the federal Healthy People 2010 objective of 100% health insurance coverage, Wisconsin fares quite well compared to the rest of the country. Recent national- and state-level data on health insurance coverage among non-elderly individuals (aged <65) published by the Kaiser Family Foundation show Wisconsin having the fourth lowest uninsured rate in the country, and a far lower uninsured rate than the US as a whole.[11] Figure 1 below shows the percent uninsured from 2007 to 2008 for the US, the three states with the lowest uninsured rates, as well as rates for Wisconsin and several other mid-western states.

Figure 1.

Lack of Health Insurance Coverage among the Nonelderly, 2007-08, US and selected states

Starred states: States with the lowest (*), 2nd lowest (**), and 3rd lowest (***) percent uninsured.
Source: Kaiser Commission on Medicaid and the Uninsured and the Urban Institute analysis of the 2008 and 2009 ASEC Supplements to the Current Population Survey. State data=2007-08. US data=2008
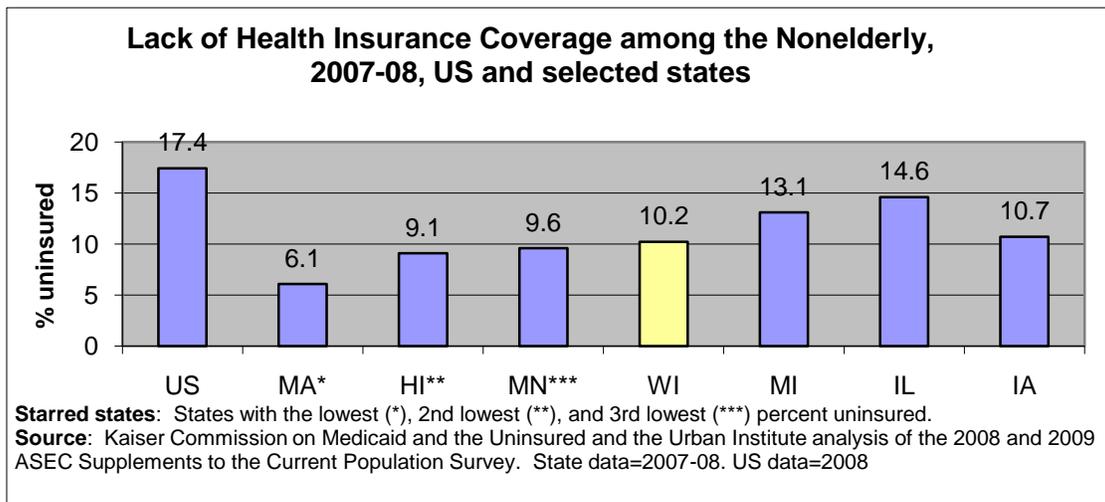
Looking only at state-level data, however, masks much lower rates of health insurance coverage among African Americans and Hispanic/Latinos in Wisconsin. In 2008, 91% of whites in the state had health insurance coverage during the previous year, while only 79% of African Americans and 66% of Hispanics reported having health insurance.[10] A report on health care disparities among women published by the Kaiser Family Foundation tells a similar story. Among women aged 18 to 64 in Wisconsin from 2003 to 2005, 9% of white women were uninsured, while 18% of African American and nearly a third (29%) of Hispanic women were uninsured.[12] As shown in Figure 2, the disparities in health insurance coverage for African Americans and Hispanic/Latinos in Wisconsin roughly mirror those at the national level.

Figure 2.

Health Insurance Coverage among Whites, African Americans and Hispanic/Latinos in Wisconsin, 2008

Source: WI Department of Health Services. WI Health Insurance Coverage, 2008
Note: WI data includes all residents in each racial/ethnic group.

Health Insurance Coverage among nonelderly Whites, African Americans and Hispanic/Latinos in US, 2008

Source: Kaiser Commission on Medicaid and the Uninsured
Note: US data includes only nonelderly population (age<65) in each age group.

Screening for chronic diseases and other health risks. Healthiest Wisconsin 2010 tracks screenings for four types of chronic diseases and health risks related to the access to primary and preventive services health priority: screening for breast, cervical and colorectal cancer and screening for high cholesterol. State-level data is available for all of these conditions for whites and African Americans, but due to small sample sizes, data is unavailable for Hispanic/Latinos for breast and colorectal cancer screenings. Figure 3 below shows that whites and African Americans in Wisconsin report similar screening rates for these four conditions, but that Latinos in Wisconsin lag behind both whites and African Americans in terms of cervical cancer and cholesterol screening rates.

Figure 3.

Screening rates for selected Chronic Diseases and Health Risks among Whites, African Americans and Hispanic/Latinos in Wisconsin

Source: WI Department of Health Services. WI Behavioral Risk Factor Survey
Notes: Data for breast and colorectal cancer screenings among Hispanic/Latinos not available.
Cervical cancer: Pap smear in past 3 years, women aged 18+, combined data for 2004,06,08.
Breast cancer: Mammogram in past 2 years, women aged 40+, combined data for 2004,06,08.
Colorectal cancer: Colonoscopy or sigmoidoscopy ever, adults aged 50+, combined data for 2006,08.
High cholesterol: Screened in past 5 years, adults aged 18+, combined data for 2005,07.

Difficulty, delays or the inability to obtain ongoing or preventive health care. Healthiest Wisconsin 2010 tracks progress in this area based on responses to a question on the Wisconsin Behavioral Risk Factor Survey (WBRFS) which asks whether, during the previous 12 months, respondents or a member of their household needed medical care or surgery but were unable to get it. In 2007, the percent of whites, African Americans and Hispanics in Wisconsin who reported being unable to obtain medical care was quite low, ranging from 2 to 4%;[10] however, this does not reflect individuals who experienced delays or difficulties in obtaining needed care. The report on women's health disparities mentioned above does show differences by race for those who have not had a doctor visit in the past year due to cost. Between 2004 and 2006, ten percent of white women reported not having seen a doctor in the past year because of cost, compared to 24% of African American women and 26% of Hispanic/Latino women in Wisconsin.[12]
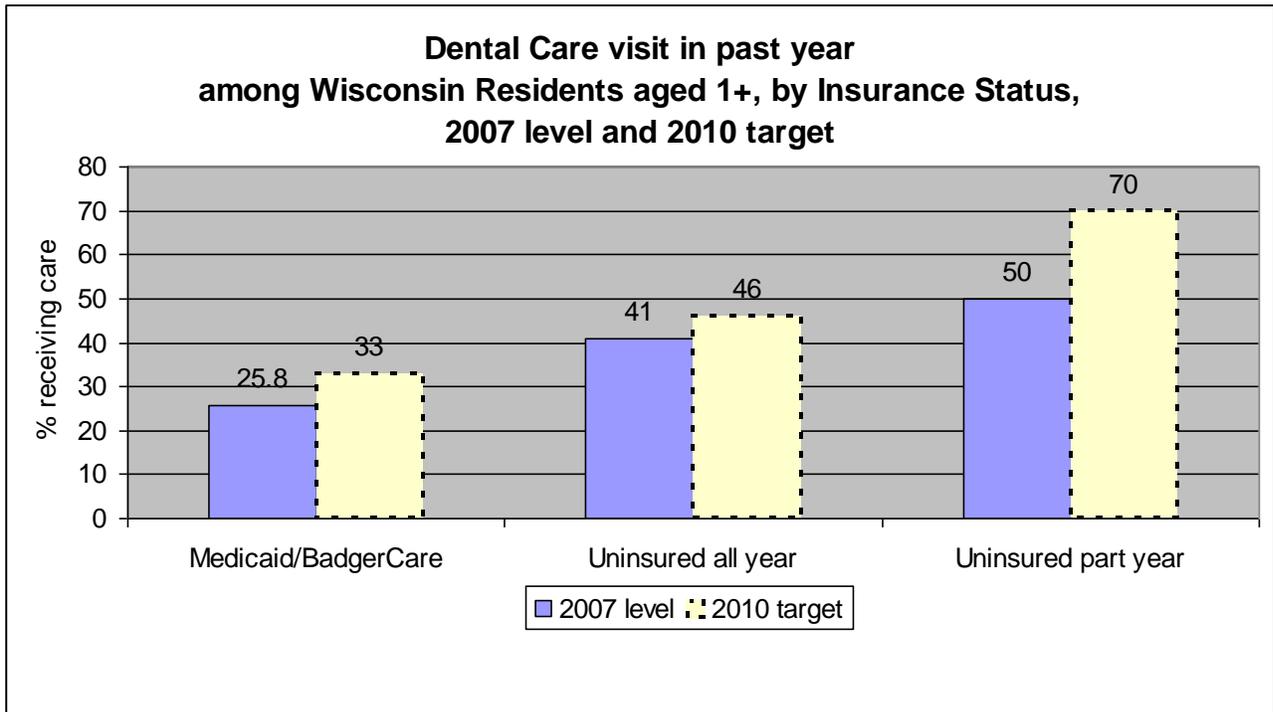
These somewhat discrepant numbers regarding self-reported unmet medical needs reflect the current state of the research in this area. The authors of a recent study on the topic report that some studies of perceived unmet health needs have suggested that whites report more unmet

medical needs than members of minority groups, while other studies have not found this relationship. They point out that the issue of perceived versus objective, clinical measures of unmet health care needs, and any relationship with race and ethnicity, is a complicated topic stating, "Complex and poorly studied factors influence the link between true medical needs and perceived medical needs, especially among members of racial/ethnic minority groups."[13(p1659)] The results of this study suggest that other issues, such as educational attainment levels, may also need to be considered.

Another study on the topic sought to determine whether general measures of perceived unmet needs (such as the question included in the WBRFS) produce similar approximations of the number of people with unmet needs when compared to more detailed, symptom-specific questions that are intended to be more objective measures of medical need. They also hoped to determine whether disparities in access to care based on insurance status and race/ethnicity reflect actual differences in access or differences in expectations and beliefs about how much care is needed. They found that uninsured individuals were consistently more likely to have unmet medical needs as compared to those with insurance, regardless of how the questions are asked. In terms of racial and ethnic disparities, they found disparities when the symptom-specific questions were used, but not when the general question about unmet medical needs was used. Similar to the study discussed above, they concluded that these are complex issues and that general questions about unmet medical needs may not accurately reflect any existing disparities, particularly those based on race or ethnicity.[14]
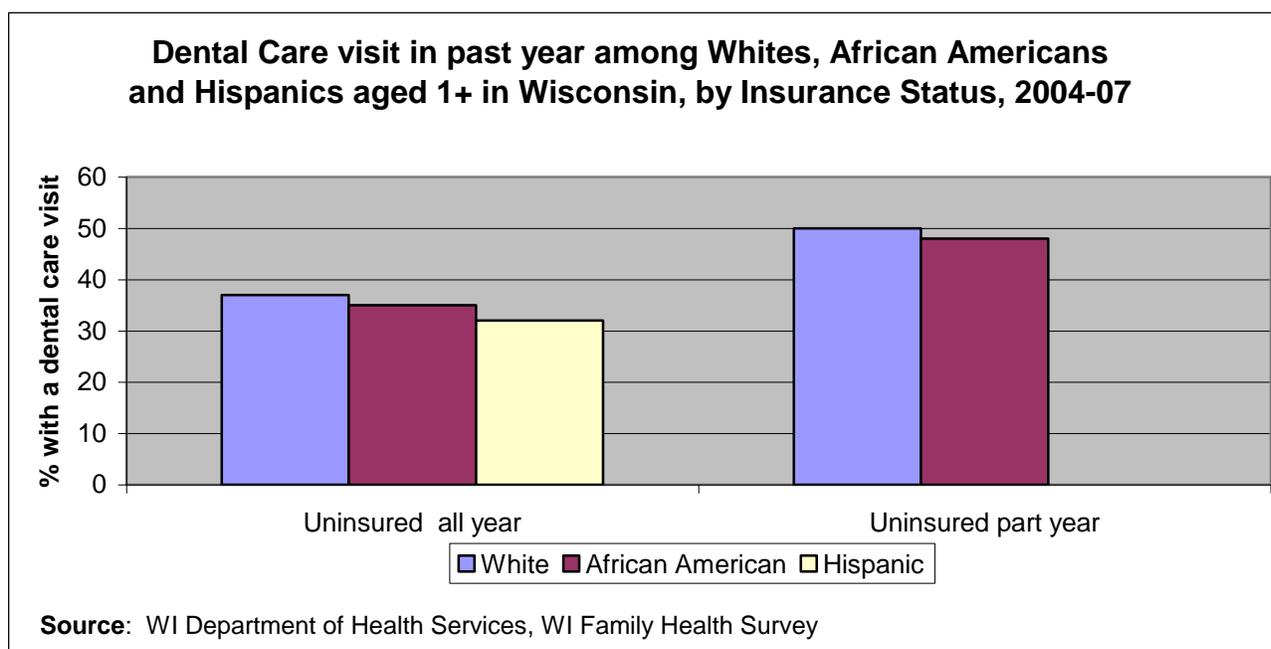
Oral health care services. The ability to receive oral health care services is another key aspect of access to primary and preventive health services. Healthiest Wisconsin 2010 tracks access to oral health care services for three separate groups in Wisconsin: those enrolled in Medicaid or BadgerCare, those who were uninsured for all of the previous year, and those were uninsured for part of the previous year. The state health plan also sets specific targets for each group to achieve by the year 2010. Figure 4 below shows the percent in each group that reported having had a dental care visit in the past year, as well as the 2010 target for reach group.

Figure 4.

**Dental Care visit in past year
among Wisconsin Residents aged 1+, by Insurance Status,
2007 level and 2010 target**

% receiving care

Category	2007 level	2010 target
Medicaid/BadgerCare	25.8	33
Uninsured all year	41	46
Uninsured part year	50	70

■ 2007 level ⊡ 2010 target

As shown in Figure 5 below, there were only small differences in access to dental care by race/ethnicity for those without insurance for all or part of the previous year. Uninsured Whites, African Americans and Latinos reported uniformly low access to care. Whites and African Americans in Wisconsin who had insurance for part of the year reported somewhat better dental care access than those with no insurance for the year, though in both cases only about 50% of respondents had received care in the previous year. Data was not available for Latino/Hispanics who were insured for part of the year, and data is not available for Medicaid/BadgerCare recipients by race.[10] The report on women's health mentioned above shows a larger disparity in dental care access for African American versus white women in Wisconsin; between 2004 and 2006 32% of African American versus 19% of white women reported not having had a dental check-up in the past two years.[12]
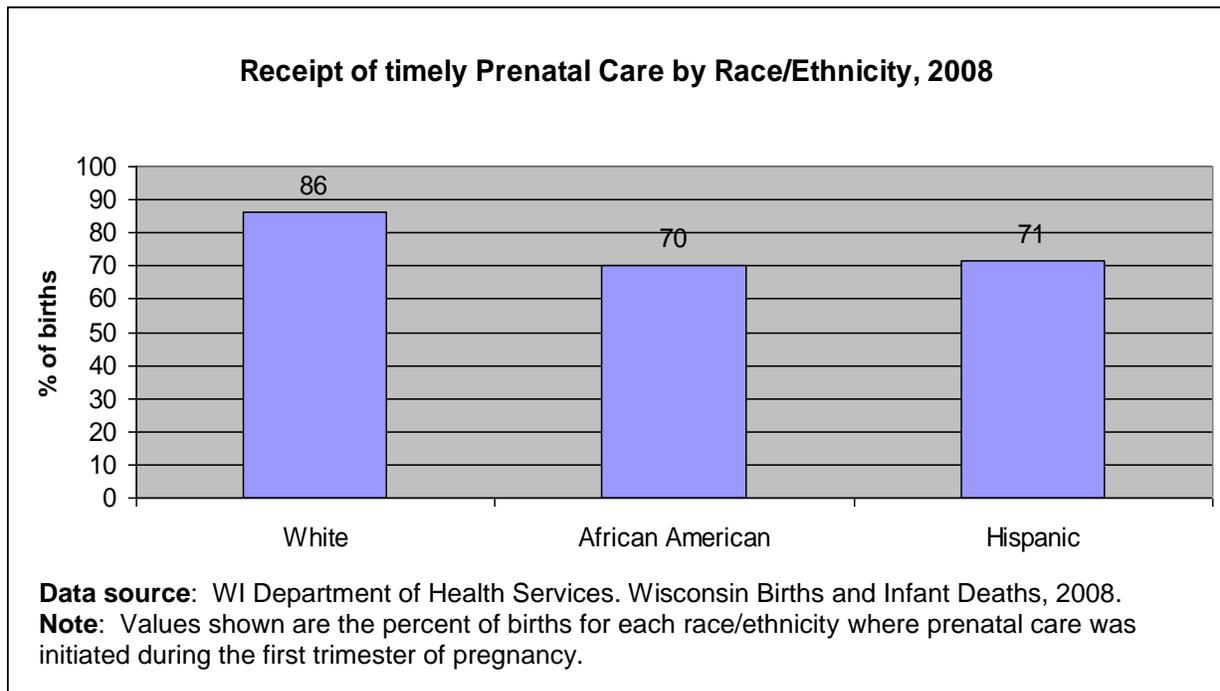
Figure 5.

Dental Care visit in past year among Whites, African Americans and Hispanics aged 1+ in Wisconsin, by Insurance Status, 2004-07

Source: WI Department of Health Services, WI Family Health Survey

Other measures of access—access to prenatal care. Considerable attention has been paid in recent years by governmental, health care and community-based entities to the issue of disparities in infant mortality rates in Wisconsin. Infant mortality rates (the number of deaths among infants aged less than one year per 1000 live births) for babies born to African American women have been significantly higher than those for babies born to women of other races and ethnicities for more than two decades. In 2008 the infant mortality rate for African American babies in Wisconsin was 13.8 per 1000 live births, compared to 7.0 for Hispanics and 5.9 for whites. The average infant mortality rate between 2006 and 2008 was 2.8 times higher for African Americans than the rate for whites.[15]

While the reasons for these startlingly higher rates among African Americans likely involve multiple factors, less access to timely prenatal care for pregnant African American women is clearly cause for concern. Although infant mortality rates among Hispanics are not as high as those for African Americans in Wisconsin, fewer African American and Hispanic women are receiving prenatal care during the first trimester of their pregnancies (Figure 6).

Figure 6.

Receipt of timely Prenatal Care by Race/Ethnicity, 2008

[Bar chart: "% of births" on y-axis (0–100). White = 86, African American = 70, Hispanic = 71.]

Data source: WI Department of Health Services. Wisconsin Births and Infant Deaths, 2008.
Note: Values shown are the percent of births for each race/ethnicity where prenatal care was initiated during the first trimester of pregnancy.

In summary, when compared to other states, Wisconsin is doing well with respect to providing insurance and primary health care to many of its residents. However, differences between racial and ethnic groups within our state exist in terms of insurance coverage, screening for some health conditions, access to oral health and timely prenatal care.

III. Literature Search Methods

The initial strategy for our literature search was to utilize the pre-formulated searches that have been developed by Partners in Information Access for the Public Health Workforce for selected objectives from the federal Healthy People 2010 initiative (www.phpartners.org). By using these criteria, one can search the PubMed database and retrieve articles from a range of peer-reviewed, scientific journals that are related to specific Healthy People 2010 objectives. The most relevant objectives from within the "access to quality health services" focus area were identified. These were related to the proportion of the population with health insurance, the proportion with a specific source of on-going care, and the proportion of health professions degrees awarded to members of underrepresented racial and ethnic groups. A list of the relevant federal Healthy People 2010 objectives is included in Appendix A.

The titles and abstracts of articles retrieved through this initial search were reviewed for relevance, with priority given to systematic and literature review articles and articles focusing on racial and ethnic minority populations. The full texts of the relevant articles were reviewed and summarized by at least one member of the What Works project team.

Because the topic of access to health care is quite complex, and may not lend itself well to tightly controlled studies of discreet interventions, we also looked beyond the academic research literature for evidence of expert consensus on how to address access to care for minorities. After consultations with several colleagues with expertise on the topic within the University of Wisconsin-Madison and the Wisconsin Division of Public Health, we developed a list of organizations, foundations, academic institutions and professional organizations with well-recognized expertise on the topic. We then searched the websites of these organizations for relevant policy statements and papers, issue briefs and other types of consensus documents. A list of the organizations whose websites were searched is included in Appendix B. A similar process was followed with the documents located through this supplemental search, with the full text of the most relevant documents reviewed and summarized by at least one member of the What Works project team.

IV. Results

A. State of the evidence for each category of access

1. Financial access

Impact of insurance on access to care. Within the framework of the existing health care system in the US, few would argue with the statement that health insurance coverage is a critical component of health care access. A review of the literature on the topic finds a substantial amount of research to support this notion. While insurance alone does not guarantee access, it can be a definitive factor in whether someone is able to obtain health care services. The authors of a recent review focused on the role of health insurance in access to care state,

> Having reasonable access to health care rests on many factors: the availability of health services in a community and personal care-seeking behavior, for example. However, these and other factors are often trumped by whether a person can afford the costs of needed care. Health insurance enables access to care by protecting individuals and families against the high and often unexpected costs of medical care, as well as by connecting them to networks and systems of health care providers.[16(p149)]

The authors go on to discuss the impact of health insurance on two common indicators of access to health care: having a usual source of health care and contact with a health care professional in the past year. They state that both large observational studies and the natural experiments enabled by the implementation of programs such as the State Children's Insurance Program (SCHIP) demonstrate that individuals with insurance are more likely to have a usual source of health care. The review also cites a longitudinal study of the impact of fluctuations in Medicaid

eligibility, which showed the percent of individuals who reported having a usual source of health care rising and falling with eligibility and ineligibility for Medicaid.[16]

Similar results were found for studies which looked at the relationship between insurance coverage and whether individuals had any contact with a physician or other health care professional during the past year. The authors cite a study which showed that children with insurance were more likely to have seen a health care professional in the past year, and another study which showed an even greater difference in whether adults had seen a medical provider based on whether they were insured.[16]

Insurance and access to primary and preventive health services. In addition to these more general indicators of access to care, it is useful to examine the relationship between insurance coverage and the actual utilization of primary and preventive health care services. Whether insurance status is related to the receipt of recommended screenings for various types of cancer has been studied by several authors. A brief summarizing the landmark report from the Institute of Medicine (IOM) published in 2002 states that uninsured adults are less likely than insured adults to receive mammograms, clinical breast exams, Pap tests and colorectal screenings. The report goes on to state, "when they do receive these preventive services, it is not as often as recommended by the U.S. Preventive Services Task Force. The disparities in whether someone uses these vital services holds even after accounting for the possible influence of age, race, education or having a regular source of care."[17(p3)]

A more recent literature review and study confirmed that those without insurance are less likely to be screened for cancer and to be diagnosed with cancer at a later stage when compared to individuals with insurance.[18] A study looking at disparities in the receipt of screening for two types of cancer as well as cholesterol and blood pressure screenings among women also found that uninsured women were less likely to receive all four kinds of tests, compared to women with either private or public insurance.[19]

Studies of the impact of health insurance on health outcomes. It is perhaps not surprising that individuals with health insurance are more likely and more able to access health services than those without insurance, but there is also evidence to suggest that health insurance coverage can impact individuals' health status, in both the short and long term.   The Institute of Medicine report mentioned above details a review of 130 studies which looked at health insurance status as an independent variable and its impact on both access to care and health outcomes for adults aged 18-65. The report's executive summary states,

> The strongest research studies consistently show that working-age Americans (those between 18 and 65) who do not have health insurance have poorer health and die prematurely. The Committee [on the Consequences of Uninsurance] concludes that if these roughly 30 million working-age Americans were to become insured on a continuous basis, their health would be expected to improve.[20(p3-4)]

A systematic review published at roughly the same time as the Institute of Medicine report looks back at ten years' worth of research on the relationships between health insurance, specific

disease outcomes and overall health. The author is somewhat more cautious about the strength of the research literature on the topic:

> Does having health insurance improve health? Although this is a deceptively simple question, there is no definitive research that unambiguously provides an answer one way or the other. In the absence of a definitive study, one must draw conclusions based on the weight of the available evidence.[21(p4S)]

After reviewing of a broad array of studies, however, the author concludes by saying that there is "a substantial body of research supporting the hypothesis that having health insurance improves health."[21(p60S)]

The review by Hoffman and Paradise, published in 2008, also discusses the growing body of evidence demonstrating a relationship between insurance and health status. They review studies looking at short-term health outcomes including a study which found reductions in the number of asthma-related complications such as asthma attacks, hospitalizations and visits to hospital emergency departments in the year after a cohort of low-income children became eligible for SCHIP. They also reviewed studies of longer-term outcomes, including a well-known study which found that adults in late middle-age who did not have insurance at any point over a four-year period were more likely to experience a major decline in their overall health and to develop a new difficulty with mobility when compared to similar adults who had stable insurance over the same period. Finally, they review a group of studies which examine the relationship between insurance coverage and premature mortality and note "the consistent finding that having health insurance, independent of other factors, lowers the risk of death."[16(p155)]

Another recent article on the topic of insurance and its impact on premature mortality is an update of the Institute of Medicine's 2002 report, published by the Urban Institute in 2008. The author applies the IOM's methodology to more recent US Census population estimates and calculates that from 2000 to 2006, an estimated 17,000 to 22,000 deaths each year are attributable to lack of insurance. They also review several recently published studies on the topic which confirm the relationship between lack of insurance and premature mortality. These newer studies use additional statistical controls to tease out the effects of insurance from other factors which may also be associated with premature mortality (e.g., obesity, smoking, self-reported health status), but find results similar to those in the original 2002 study.[22] Simply put, while different studies may produce differing estimates of the number of deaths attributable to lack of insurance, the research continues to support a relationship between lack of insurance coverage and poorer health outcomes, including premature mortality.

Impact of insurance on disparities. The research on whether insurance coverage can also reduce racial and ethnic disparities in access to care or health outcomes is less conclusive. In terms of the impact on children's health care access, one researcher states, "Despite evidence that lack of insurance contributes to racial/ethnic disparities, evidence is scant that provision of health insurance to vulnerable children reduces preexisting disparities."[23(p e701)]

The authors quoted above conducted a study examining the impact on disparities of children's enrollment in New York's SCHIP program, and did find evidence that provision of insurance can

reduce or eliminate racial and ethnic disparities in at least some areas related to access to care. In their study published in 2005, the researchers examined data for 2644 white, black and Hispanic children who were newly enrolled in New York's SCHIP program in 2000 and 2001. The study compared data on several indicators for this group before and during their participation in SCHIP including the percentage with a usual source of health care, continuity of health care, unmet health care needs and parent-rated quality and satisfaction with their health care provider.

Before enrollment in SCHIP, a greater proportion of black and Hispanic children versus white children had been without health insurance for a year, while a greater proportion of white children had a usual source of care. Roughly a year after enrollment in SCHIP, the disparity in access to a usual source of care was reduced, as were pre-existing disparities in unmet health care needs and in a measure of continuity of care. However, disparities did not improve in two areas. Parents of Hispanic children still rated health care visit quality lower than parents of white children. Also, while the percentage of children using preventive care services was roughly equivalent for all groups before enrollment in SCHIP, after enrollment both whites and African Americans showed marked improvement while the use of preventive care improved just slightly for Hispanic children.[23]

A study published in 2003 also examined the impact of insurance on disparities. This study sought to determine the extent to which insurance and the availability of community-based safety-net resources reduced racial and ethnic disparities in access to care. Their analysis examined data for three common indicators of access to care (self-reported unmet medical needs, having a regular source of health care, and having seen a physician in the past year) for 96,000 respondents to the Community Tracking Survey in the late 1990s. Results of their analysis showed that lack of health insurance was the most important determinant of health care access, especially for Hispanics. The write, "It is the single most important factor in white–Hispanic differences for all three measures and for two of the white–African American differences."[24(p824)] Insurance status was more important than the presence of safety-net health care providers in the community, and the authors suggest that if racial and ethnic minority groups were insured at the same level as whites, disparities in access to care would be reduced. While this is likely true, providing insurance alone is unlikely to solve the problem of access to care for racial and ethnic minorities.

In an article published in the Journal of the American Medical Association in 2000, Eisenberg and Power[25] propose a set of explanations for why the provision of health insurance is not more effective in ensuring the delivery of high quality health care. The authors frame the issue as a series of "voltage drops" or points of resistance at which the potential power of insurance to ensure that high quality health care is delivered is often diluted. While the article discusses the impact of these voltage drops on various populations, as shown in Table 2, one could argue that racial and ethnic minorities are more likely to be impacted by many of the drops, and thus are particularly unlikely to experience the full benefit of insurance in ensuring access to quality care.

Table 2.
"Voltage Drops" and Racial and Ethnic Minorities

Eisenberg and Power's "Cascade of Voltage Drops from Insurance to Quality Health Care"[25]	Potential for Differential Experience of these "Voltage Drops" by Racial and Ethnic Minorities
1. Many Americans do not have access to affordable health insurance.	⟶ Rates of uninsurance are higher among racial and ethnic minority groups, compared to whites.[11]
2. Even when they are offered insurance, some do not enroll.	
3. Even if they have health insurance, some needed services or providers may not be covered.	
4. Even if services and providers are covered, patients may not be able to choose among plans, institutions, or clinicians, and thus cannot exercise their power in the market to select the care they prefer.	⟶ The percentage of physicians in the US who are racial or ethnic minorities is quite low, which means that minorities who prefer to receive care from a physician of the same race or ethnicity have limited options. [26]
5. Even if people have a choice of plan or provider, a consistent source of primary care may not be accessible.	⟶ Compared to whites, a lower percentage of minorities report having a regular doctor or source of care.[27]
6. Even if primary care is available and accessible, appropriate referral services may not be.	⟶ One study showed that primary care physicians who serve large numbers of minority patients have more trouble referring patients to specialists. [28]
7. Even if people have access to both primary and referral services, there may be gaps between the quality of care that can and should be provided and the quality of care that is delivered.	

A significant body of research supports the idea that insurance is a key driver of access to health care. What is less certain, however, is that by simply providing health insurance coverage to all, without other changes to facilitate access, racial and ethnic health disparities in access will be reduced or eliminated. The issue of access to care is multi-faceted, and will require consideration of issues beyond insurance coverage such as those discussed in the remainder of this report.

2. Logistical access

Logistical access to health care refers to issues such as having transportation to medical appointments, the availability of appointment times that do not conflict with work schedules, and the ability to contact a medical provider after-hours and on holidays. Our literature search produced very little in terms of systematic reviews of interventions aimed at improving specific

aspects of logistical access. The one type of intervention with a significant amount of research is the use of community health workers to improve access to care for minority populations, which is discussed in the following section on cultural and linguistic access.

While there is little systematic research on individual interventions to address logistical access, there is a significant and growing literature focusing on medical homes, a model for organizing primary care services which addresses many of the issues related to logistical access. Since medical homes by definition include enhanced access to medical providers and facilities, advocating for medical homes is less a practical strategy for improving access to care for populations without it, but rather a model of how to optimize the availability of care once individuals have secured regular access to the medical system.

There is no single definition of a medical home, and in fact a topic of debate within the research literature concerns the development of specific criteria to determine which medical practices or facilities qualify as medical homes. Table 3 below presents three recent definitions of a medical home.

Table 3.
Recent Definitions of Medical Homes

Source	Definition	Comments
Beal, 2007 **"Closing the Divide: How Medical Homes Promote Equity in Health Care"**[27(p6)]	This report on the Commonwealth Fund 2006 Health Care Quality Survey defines a medical home as "a health care setting that provides patients with timely, well-organized care and enhanced access to providers." The survey used the following indicators to measure the extent to which adults have a medical home: Respondents reporting: 1) Having a regular doctor or place of care 2) Experiencing no difficulty contacting their provider by telephone 3) Experiencing no difficulty getting care or medical advice on weekends or evenings 4) Having doctors' office visits that are well organizing and running on time.	▪ Functionally defined, primarily from the patient's perspective. ▪ Considers individuals who have a relationship with a doctor or a regular place of care as having a medical home.
American Academy of Family Physicians, et al **"Joint Principles of the Patient-centered Medical Home"**[29(p1-3)]	Below are excerpts from a joint statement from several different medical associations on the seven principles of a patient-centered medical home (PCMH): 1) **Personal physician** - each patient has an ongoing relationship with a personal physician 2) **Physician directed medical practice** 3) **Whole person orientation** 4) **Care is coordinated and/or integrated** across all elements of the complex health care system…and the patient's community.	▪ Definition includes functional aspects, plus philosophical orientation and health system features. ▪ Specifies a relationship with a physician, and that each individuals' medical team be led by a physician.

	5) **Quality and safety** are hallmarks of a PCMH. 6) **Enhanced access** to care is available through systems such as open scheduling, expanded hours and new options for communication… 7) **Payment** appropriately recognizes the added value provided to patients who have a PCMH.	
Starfield and Shi "**The Medical Home, Access to Care and Insurance: A Review of Evidence**"[30(p1493)]	This article presents a medical home as equivalent to having a source of primary care with four basic features: 1) **Accessibility** for first-contact care and for each new problem or health need 2) **"Longitudinality"** or long-term person-focused care 3) **Comprehensiveness** of care in the sense that care is provided for all health needs except those that are too uncommon for the primary care practitioner to maintain competence in dealing with them 4) **Coordination** of care in instances in which patients need care beyond what the primary care practitioner can provide.	▪ Defined in terms of functional and philosophical aspects. ▪ Stresses that a medical home should involve a relationship with a particular health care practitioner (versus with a particular place), but does not specify that this practitioner must be a physician.

Again, it should be emphasized that organizing primary care services and facilities according to a medical home model will not by itself solve the problem of inadequate access to medical care for minorities or any other population. However, the study from the Commonwealth Fund noted in the table above examined the impact, once individuals have a medical home, on disparities in access to care. This report includes data on adults aged 18-64 from the 2006 Health Care Quality survey, a random, nationally representative survey of 3535 adults living in the continental US. They found that, when individuals had a medical home, racial and ethnic disparities in access to care were reduced or eliminated. Seventy-four percent of individuals with a medical home reported always getting the care they needed, while only 52% of individuals with a regular source of care but no medical home and 38% of individuals with no regular source of care reported always getting the care they needed. Among those with a medical home, there were no differences by race or ethnicity, as seventy-four percent of whites, 76% of African Americans and 74% of Hispanics reported always getting the care needed.

The authors of the study acknowledge that medical homes are only one piece of a larger strategy to reduce disparities in access to care. In the conclusion to their report they write that policies to promote access to medical homes for vulnerable populations, including racial and ethnic minorities, should include:

- ensuring stable health insurance coverage for all;

- publicly reporting which providers meet the standards of a

    medical home;

- recognizing and rewarding high-performing medical homes;

- working with physicians, community health centers and other public clinics, hospital outpatient departments, and other primary care providers to promote features of a medical home, including access to a regular provider, after-hours care, and coordination of health care services;

- working with primary care providers to promote use of preventive care reminders, encourage chronic disease self-management plans, and encourage counseling on diet and exercise; and

- campaigning to transform all primary care providers, including safety net providers, into medical homes.[27]

3. Cultural and linguistic access

The research literature on interventions to improve cultural and linguistic access to care focuses on several types of interventions to address health issues of racial and ethnic minority populations, often with an emphasis on individuals with Limited English Proficiency (LEP). These include culturally diverse staff and workforce diversity, the utilization of interpreters, language concordance between patient and provider, diversity and cultural competency training for providers, culturally appropriate health education materials, and the use of community health workers   Three systematic reviews pertaining to cultural and linguistic access to care are summarized below, followed by a brief synopsis of the literature on the efficacy of interventions involving community health workers.

Systematic reviews on the topic.   In 2003, The Task Force on Community Preventive Services published a systematic review of interventions related to culturally competent health care. According to the Task Force, a culturally competent health care system should include the following: "1) A culturally diverse staff that reflects the community(ies) served, 2) Providers or translators who speak the clients' language(s), 3) Training for providers about the culture and language of the people they serve, 4) Signage and instructional literature in the clients' language(s) and consistent with their cultural norms, and 5) Culturally specific healthcare settings."[(p69)]   The Task Force reviewed five types of interventions related to culturally competent health care including, 1) Programs to recruit and retain staff members who reflect the cultural diversity of the community served, 2) Use of interpreter services or bilingual providers for clients with limited English proficiency, 3) Cultural competency training for healthcare providers, 4) Use of linguistically and culturally appropriate health education materials, and 5) Culturally specific healthcare settings (e.g., neighborhood clinics for immigrant populations). Unfortunately, the Task Force did not find sufficient evidence of effectiveness for interventions in any of the five areas, primarily due to a lack of comparative studies. Additionally, the studies reviewed by the Taskforce often did not evaluate their outcomes of interest which included client satisfaction with care, improvements in health status, and inappropriate racial or ethnic differences in use of health services or in received and recommended treatment.[31]

More recent reviews of the literature.   Other researchers have reviewed the literature related to cultural and linguistic access and attempted to answer a variety of questions. In 2006, Jacobs and colleagues proposed a research framework and conducted a literature review to understand

the consequences of language barriers for individuals with LEP and to assess the research on interventions targeting language barriers in healthcare settings. The authors found that individuals with LEP are less likely to adhere to treatment, to return for follow up visits, to receive needed care, and to be satisfied with care. They are more likely to have less of an understanding of the care they receive, are more likely to be admitted to the hospital and to have longer hospital stays.[32]

Jacobs and colleagues looked at two kinds of interventions that address language barriers: language concordance between patient and provider, and the use of interpreters, both professionally trained and ad hoc or informal interpreters. Studies evaluating language concordant patients and providers showed higher patient satisfaction rates, as well as "better well-being and functioning." Researchers also found increased receipt of primary and preventive services among those with LEP when professional interpreter services were utilized. Research evaluating the effectiveness of ad hoc interpreters is mixed, with studies showing ad hoc interpreters associated with both increased and decreased patient and provider satisfaction. One study showed that ad hoc interpreters made errors in interpreting and should be used with caution.[32]

A systematic review published in 2007 also reviewed the literature on interventions utilizing interpreters in health care settings. Karliner and colleagues found that interventions using interpreters to address or better understand health disparities were effective. The review focused on four types of outcomes: communication errors and patient comprehension, service utilization, clinical outcomes, and satisfaction. The use of professional interpreters was linked to improved care in all four areas they studies and in fact raised quality to a level approaching that of patients without language barriers. Studies of the use of ad hoc interpreters showed mixed results with respect to the areas of interest, and appeared to be less effective than the use of professional interpreters. The results of this review should be interpreted with caution, however, as the authors note that the studies they reviewed did not use a consistent definition of professional interpreters and also that training levels for interpreters vary across institutions.[33]

Workforce diversity. While the Taskforce on Community Preventive Services' review of the literature did not find comparative studies assessing the effectiveness of workforce recruitment and retention programs, other reviews of the literature indicate that greater workforce diversity may lead to improved access to care.[34,35,36] In 2006, the Health Resources and Services Administration published a review titled "Rationale for Recruitment and Workforce Diversity." HRSA found evidence to suggest that more workforce diversity may lead to improved health and patient-provider interactions, through greater access to care for minority populations.[34] The review states that systems-level changes should be considered to improve access to health care for diverse populations. These changes include increasing the number of minority physicians and providers in the nation's healthcare workforce, funding programs that support recruitment of minority medical students and faculty, and increasing the number of physicians practicing in predominately minority areas.

Community health workers and lay health advisors. Another specific topic within the area of cultural and linguistic access which has received significant research attention is the effectiveness of interventions utilizing community health workers or lay health advisors.

Community health workers or lay health advisors have been utilized in efforts to reduce health disparities by connecting disenfranchised or difficult to reach populations to health care services and interventions. [37,38] One study notes that community health workers have also been used to promote the health of disparate populations and are often seen as a trusted and respected health resource.[39]   The utilization of community health workers to guide or connect individuals in specific communities to the health system has been reported with varying degrees of success. There are a number of studies using control group comparisons that have supplied evidence that community health workers can improve access to and utilization of health care. For example, increases in breast cancer screening practices, participation and retention in patient education programs, and improved cervical cancer knowledge and/or screening practices were seen in studies using community health workers.[40]   However, these programs are not uniformly implemented across communities or populations making it difficult to draw definitive conclusions about their effectiveness.[38] A review of the literature evaluating the effectiveness of community health workers with respect to access to care, increased knowledge, health status, and behavior change reveals mixed results. There is evidence supporting the use of community health workers to improve access to breast and cervical cancer screenings and prenatal care. However, the research needs to be strengthened to better understand the effectiveness of CHWs on increased knowledge of health and prevention, improved health status, and health behavior changes.[38,39]

The evidence-base supporting the effectiveness of interventions addressing cultural and linguistic access to care on health outcomes is in development. As noted by Goode and colleagues, broadly based studies are needed to establish the evidence base. This would address the narrow scope of current studies in terms of populations, sample size, and length of study periods.[41] While researchers have generated theoretical concepts, frameworks and hypotheses to understand this complex issue, others have highlighted the need for more consistency in these frameworks and conceptual models, as well as in definitions of cultural competency. Researchers also point to a need to move beyond race or ethnic specific interventions and address systems-level changes that could increase access to care for all minority populations.

4. Summary of overall state of evidence and key findings for each category of access

Table 4.
Relative Strength of the Evidence in each Category of Access*

Category of access	Relative Strength of the Research Evidence on…	
	Improving access to care in general	**Reducing racial/ethnic disparities in access to care**
Financial	**Strong**	**Medium**
	<u>Key Findings</u> • There is strong evidence that, compared to those without health insurance coverage, individuals with insurance have better access to and are more likely to utilize primary and preventive health services and to have more continuity of care. • There is also a substantial body of evidence showing that health insurance coverage is related to improved health outcomes in multiple areas, including lower rates of premature mortality. • In terms of the impact of insurance coverage on disparities, the research findings are complex--while insurance has been shown to reduce disparities in access to care in some situations, there is little evidence the provision of insurance will by itself eliminate racial and ethnic disparities in access to care.	
Logistical	**Medium**	**Medium**
	<u>Key Findings</u> • There is little systematic research on individual interventions to address logistical access to care. • There is, however, a significant amount of research on medical homes, a model for organizing primary care services which addresses many issues related to logistical access. • There is some evidence that when individuals have medical homes, racial/ethnic disparities in access to care are reduced or eliminated. However, racial and ethnic minorities are less likely than whites to have a medical home. • Organizing care according to a medical home model will not by itself address access to care for minority populations, but is one component of a larger strategy that includes insurance and expanding the number of people who have medical homes.	
Cultural/ Linguistic	**N/A**	**Medium/Low**
	<u>Key Findings</u>	

- A 2003 systematic review the topic of culturally competent healthcare systems by the Taskforce on Community Preventive Services found "insufficient evidence of effectiveness" in all five topic areas included in their review.
- Other reviews have produced some evidence to support the effectiveness of professional interpreters, community health workers and increasing the racial and ethnic diversity of the physician workforce in increasing access to care for racial and ethnic minorities.

*The ratings in this table are relative to each other. The ratings in the left column refer to the strength of the research evidence that interventions have been shown to increase access to primary and preventive health services. Those in the right column refer to the strength of the research evidence in terms on what is effective in reducing racial and ethnic disparities within each category of access.

B. State of the research on other topics related to access to care

1. Data on race, ethnicity and language preference

Issues related to the collection of data on individuals' race and ethnicity do not fit discreetly into any of the three categories of access discussed in this report thus far. Rather, the ability to accurately characterize individuals' and groups' race, ethnicity and language abilities impacts all aspects of access to care. It is needed to be able to assess needs, identify problems, tailor interventions and measure progress towards reducing health disparities.

Several years ago, at the behest of Congress, the U.S. Department of Health and Human Services (DHHS) requested that the National Academy of Sciences conduct a comprehensive study of the nation's health data systems to determine the ability of these systems to assess and monitor disparities in health care access and health outcomes. The wide-ranging study examined federal and state data collection and reporting systems that are required by DHHS programs and activities, the data systems of other federal agencies with which DHHS interacts, and systems within the private health care sector.

The executive summary to the National Research Council's resulting report "Eliminating Health Disparities: Measurement and Data Needs" outlines the issues which gave rise to the study,

> While national-level surveys sponsored or conducted by the federal government collect rich information on individuals, their health, and their use of health care, sample sizes often limit their usefulness to only broad racial and ethnic groups (e.g., blacks, whites, and Hispanics) and are typically too small for analyses within racial and ethnic groups.
>
> Data from Medicare claims and enrollment files have been widely used for analysis of racial and ethnic disparities. However, racial and ethnic data in these files are of limited accuracy, completeness, and detail.

State-based data, such as vital records, administrative data from Medicaid and the State Children's Health Insurance Program, and data from registry systems, are potentially valuable sources of data for analyzing disparities in health and health care. However, these data sources do not collect data on race and ethnicity in standardized ways, and they contain little information on other relevant patient characteristics.

Finally, although much information on health and health care comes from private data systems maintained by health insurance plans, hospitals, and medical groups, data on race and ethnicity usually are not collected in these record systems. When the information is available, it is often unstandardized and contains little information on patients' socioeconomic characteristics or acculturation and language use.[42(p1-2)]

The report offers a variety of recommendations to improve the quality and completeness of race, ethnicity and language data, such as studies of the sampling methods and quality of all major national DHHS surveys; regular, targeted studies of racial and ethnic sub-groups within these large surveys; stronger requirements that programs funded by DHHS collect data on race and ethnicity and utilize the standard federal Office of Management and Budget (OMB) categories; and that DHHS work to develop a culture that supports the sharing of data both within the Department and with other federal agencies, with the aim of reducing racial and ethnic health disparities.

Other research literature on this topic also shows that health-related systems and procedures for collecting data on race and ethnicity are often fraught with inconsistencies, incompatible categories, and missing data. One study by Health Research and Educational Trust (HRET), the research and education affiliate of the American Hospital Association, examined practices related to the collection of racial and ethnic data by hospitals across the country. While they found that most (approximately 78%) of the hospitals in their study collect data on patients' race and ethnicity, the procedures and systems for collecting this data are not standardized across, or sometimes within, hospitals. The study found significant variability in the racial and ethnic categories used by hospitals, which means that data often cannot be aggregated with other data files and systems. The authors also found inconsistencies in who provides the information about patients' race and ethnicity. While the information is most often provided by patients or their caregivers, 51% of the hospitals that collect race and ethnicity data reported that, at least some of the time, a patient's race or ethnicity is recorded based on the observations of an admitting clerk. The study's report concludes with recommendations that hospitals standardize several aspects of their data systems including:

- Who provides the information (preferably patients or caregivers rather than relying on observations of admitting clerks),
- When the information is collected (preferably upon admittance),
- Which racial and ethnic categories are used (The authors recommend that when pre-determined categories are used, hospitals should use the federal OMB categories, with the

option to also create "finer-grained" categories when more detail about sub-groups is desirable.),

- Where and how the data will be stored, and
- How hospital staff will respond to patient concerns about providing information about their race and ethnicity[43]

While research conducted in hospital settings may not be directly relevant to the issue of primary and preventive health services, other studies of the data collection procedures within other health care organizations reveal similar issues. Researchers affiliated with HRET and Northwestern University reviewed studies and reports on the data collection practices in a variety of settings, including private medical groups, community health centers and health plans. They found that, in general, little is known about the data collection practices of private medical groups, and report that 75% of medical groups that responded to one survey did not collect data on patient race and ethnicity because they thought it was "unnecessary or potentially disturbing to patients."[44(p1506)] Federally-qualified community health centers (CHCs), on the other hand, appear to be ahead of the curve in collecting data on race and ethnicity. The Bureau of Primary Health Care, which provides funding for these clinics, has specific statutorily-mandated requirements for the collection and reporting of data on patients' race, ethnicity and language preferences for several programs and services provided by CHCs. The data collection practices of health insurance plans appear to be inconsistent across plans, though the authors report that studies have found that health plans are generally supportive of collecting this information.[44]

The issue of who should report individuals' race and ethnicity, as well as how this information should be recorded, was also discussed by the authors. They promote the notion of self-reporting by patients whenever possible, and cite studies by themselves and others that show that third parties are not the best judges of race and ethnicity. One study conducted in the late 1990s found that registration and admissions clerks were fairly accurate in identifying individuals as black or white, but often misidentified Hispanic and multiracial individuals. Finally, the authors suggest that allowing individuals to self-report their race and ethnicity, using their own words to describe themselves, not only produces more complete and more accurate data, but also creates an opportunity for individuals to provide information that may be directly relevant to their health and health care. The authors state, "When an individual identifies as being from a certain population subgroup, it may also mean that the individual is more likely to have health beliefs, health care use patterns and perspectives about the health care system that are common to that community."[44(p1509-10)]

The authors conclude with recommendations similar to those for hospitals. They propose that health care organizations include the following five elements in their "uniform framework" for collecting data about individuals' race, ethnicity and language:

- A rationale for why the patient is being asked to provide information about his/her race, ethnicity and language.
- A script for staff to use each time so that they ask questions in a uniform fashion.
- A method for allowing patients to self-identify their race, ethnicity and language using their own words rather than a preestablished set of categories.

- A standardized approach for "rolling up" granular responses to the OMB categories for analytical and reporting purposes.
- Assurances that the data will be held confidential and that a limited number of people will have access to the data, and a mechanism to guarantee this claim[44]

An interesting article by one of the authors of the previously mentioned report tackled head-on the issue of possible discomfort among staff when asking about race and ethnicity as well as potential patient discomfort with reporting this information. While far from conclusive, the authors conducted a study with a small but relatively diverse group of participants of individuals leaving a general internal medicine clinic in Chicago (n=220 participants; 41.4% white, 34.1% black/African American, 9.1% Latino/Hispanic, 4.6% Asian, 8.2% multiracial/multiethnic, and 2.7% other or refused to answer). They found that individuals were largely supportive of health care providers collecting information about patients' race and ethnicity, but nearly a third of respondents reported significant discomfort in providing their own information. In particular, African Americans were more likely to report that being asked to provide this information would make them uncomfortable, and more than half of African Americans said that they were concerned that information about race could be used to discriminate against them or other patients. A small but not insignificant percentage of both Hispanics and African Americans reported that they would be less likely to come to a health care facility that asked them to report their race and ethnicity.

The authors also explored what types of rationales for asking patients about their race and ethnicity were viewed most favorably. They tested four different rationale statements, and found that a "quality monitoring" statement explaining that, "We want to be sure that all our patients get the best care possible, regardless of their race of ethnic background..." had the most positive impact on patients' comfort levels.[45(p900)] Again, while this was a exploratory study, the findings point out the importance of not only dealing directly and honestly with patient concerns related to being asked to report their race and ethnicity but also to be thoughtful and deliberate in explaining the reasons for requesting the information.[45]

2. Impact of primary care physician supply

Another topic discussed in the literature on improving access to care that does not fit into any of the three sub-categories of access discussed previously in this report is the size of the primary care physician workforce. One review article on this topic looked at the authors' and others' studies of the relationship between the supply of primary care physicians (generally quantified as the number of primary care physicians per 10,000 population) and a variety of health outcomes. Studies in the early 1990s by Shi and colleagues found a positive relationship between the supply of primary care physicians and health outcomes such as all cause mortality; mortality from cancer, heart disease or stroke; infant mortality; low birth weight; and poor self-reported health, even after controlling for a range of sociodemographic and lifestyle factors such as seatbelt use, obesity and smoking.[46]

Later studies in late 1990s and early 2000s made further attempts to control for confounding factors, particularly income inequality. Shi and colleagues found that both income inequality

and primary care had a "strong influence on life expectancy, total mortality, stroke mortality, and postneonatal mortality at the state level."[46(p460)] They also found that smoking rates were related to these outcomes, but that the relationship between health outcomes and primary care physician supply remained after controlling for smoking. The authors state, "In summary, the studies consistently show a relationship between more or better primary care and most of the health outcomes studied."[46(p463)]

Starfield and colleagues also looked specifically at the impact of primary care physician supply on low income and racial and ethnic minority groups. They write,

> Thus the U.S. studies showed that an adequate supply of primary care physicians reduced disparities in health across racial and socioeconomic groups. Multivariate analyses controlling for individual, community, and state-level characteristics provided strong evidence for the association of primary care with fewer disparities in several aspects of health.[46(p471)]

The authors did make one notable exception to their finding that physician supply was associated greater access to care for minorities. One study they reviewed found that this relationship did not hold in metropolitan areas, and suggest that in urban areas, minorities "may receive their care in places such as hospital clinics and emergency rooms, which do not emphasize primary care."[46(p470)] This is an important exception to note; nonetheless, the research in this area is persuasive.

The authors also provide an explanation for why an adequate primary care physician supply is associated with better health outcomes. They write,

> Six mechanisms, alone and in combination, may account for the beneficial impact of primary care on population health. They are (1) greater access to needed services, (2) better quality of care, (3) a greater focus on prevention, (4) early management of health problems, (5) the cumulative effect of primary care delivery characteristics, and (6) the role of primary care in reducing unnecessary and potentially harmful specialist care.[46(p474)]

This explanation underscores the point that the number of primary care physicians is important, but it is also important for the care provided by these physicians fulfills the authors' four main features of good primary care: first-contact access for each new need; long-term person- (not disease-) focused care; comprehensive care for most health needs; and coordination of care when it must be sought elsewhere.[46]

3. The role of Community Health Centers in reducing disparities

Several researchers have also pointed to a specific type of primary care facility, federally qualified community health centers, as particularly promising players in efforts to increase access to care and reduce health disparities. In their literature review on the potential of CHCs to reduce health disparities, Politzer and colleagues note that the majority of patients seen at the more than 700 CHCs across the country are members of racial and ethnic minority groups, poor,

and have significant health care needs. And yet, studies have shown that CHC patients have better access to care and better screening rates for a variety of conditions and receive high quality primary care, particularly when compared to similar groups in the US.

Politzer and colleagues report on studies published in 1995 and 1999 that showed that compared to others without health insurance, uninsured CHC patients were much less likely to report unmet health care needs such as not filling prescriptions or delaying care due to cost. CHCs also do well in terms of screening rates, particularly related to women's health issues. The authors report that the rates of mammographies, clinical breast exams and Pap smears among female CHC patients far exceed rates for comparable women who are not CHC patients. The article also cites a study published in 2000 that showed no racial or ethnic disparities among CHC patients in screening rates for breast, cervical or testicular cancer, or for cholesterol screening. Finally, the article reports that CHCs have been shown to provide high-quality care related to chronic disease management, in some cases meeting or exceeding the recommended guidelines for the general population.

While the current network of CHCs serves a relatively small proportion of those without access to a private primary care provider, there is evidence that they serve this population well. Politzer and colleagues suggest that CHCs' success in providing access to care is due at least in part to their efforts to provide enabling services such as transportation and interpreter services, as well as cultural competence training for staff and targeted outreach to communities. In short, CHCs strive to become their patients' regular and usual source of care. Politzer and colleagues recommend that the current network of CHCs be strengthened, the network expanded to reach additional people without access to primary care, and that whatever strategy is used to provide care for vulnerable populations include an emphasis on providing these individuals a usual and regular source of care.[47]

V. Discussion

The current body of research on improving access to primary and preventive health services for minority communities provides some direction and priority areas; however the research has not yet yielded a well-defined package of proven strategies to address this issue. The most obvious and well-supported recommendation from the literature is to ensure that everyone has financial access to health care services, and within our current health care system this translates into having health insurance.

While the research evidence to support other strategies to improve access to care for minorities is somewhat less conclusive, several strategies at the health care organization and the policy level do have substantial evidence to suggest that they may improve access to primary care services for minorities.

**Improving Access to Primary and Preventive Health Services
for Racial and Ethnic Minorities:**

Interventions and Strategies with substantial Evidence of Effectiveness

HEALTH CARE ORGANIZATION/SYSTEM LEVEL

- **The use of preventive care reminders by primary care providers**
- **The availability of professional interpreters for individuals with limited English proficiency**
- **Interventions utilizing community health workers/lay health advisors to improve access to and utilization of health care**
- **Improving and standardizing systems for collecting race and ethnicity data**

POLICY LEVEL

- **Universal health insurance coverage**
- **An adequate supply of primary care physicians**
- **Increased representation of racial and ethnic minorities in the health professions, especially primary care physicians**
- **Strengthening and expanding the system of federally-qualified community health centers**
- **Organizing primary care services according to the medical home model, and ensuring that everyone has a medical home.**

There are likely many strategies that could improve or are already helping to improve access to primary and preventive health services for minority communities. However, the research for this report was focused on identifying evidence-based strategies that have been proven effective by systematic research or have been deemed effective by consensus of topical experts. The current lack of definitive answers for how to improve access to care for minorities should be viewed as a further call to action to practitioners, researchers and policy makers to collect and analyze utilization and health outcome data by race and ethnicity, evaluate the impact of interventions, and continue to build the evidence base.

While the way forward to improving access to primary and preventive health services is still being developed, access to these services for minority communities is a vital component of larger strategies to reduce racial and ethnic disparities in health outcomes. As with access to care, the roadmap for how to eliminate health disparities is also evolving. Below are several sets of recommendations for reducing or eliminating health disparities. Again, it should be noted that these should not necessarily be considered evidence-based strategies. As the authors of one of the documents write, "Given this complexity and the paucity of systematic reviews documenting such solutions [to racial and ethnic health and health care disparities], the information presented in this chapter is designed more to highlight potentially successful strategies identified in the literature than to present 'proven' interventions."[48(p94)] Nonetheless, as shown by the overarching

categories in the table, there appears to be a significant amount overlap in the types of interventions being put forth to address health disparities.

Table 5.
Compilation of Recommendations
for Reducing or Eliminating Racial and Ethnic Health Disparities

Category of Recommendation
Better race and ethnicity data collection and analysis methods.
▪ Better and more consistent data collection.   "The accepted national standard for data collection relies on the categories included in the Federal Office of Management and Budget's Directive 15 (revised October 30, 1997)" (A.) ▪ Strengthening and standardizing efforts to collect information on the race and ethnicity of enrollees, either directly or indirectly. (B.)
Concerted program evaluation efforts focused on minority groups and/or general quality improvement efforts
▪ Effective evaluation of programs. (A.) ▪ Analyzing utilization and performance data by race and ethnicity to identify disparities and target patient and provider interventions (B.) ▪ Efforts designed to improve the quality of health services may also result in closing these gaps   (Note, however, that the authors point out, "…[Quality improvement] efforts could lead to faster change for some populations; actually increasing gaps. To date there is not enough definitive evidence to conclude which dynamic is more common." (C.)
Including disparities reduction as a performance measure for providers
▪ Incorporating disparities reduction goals and objectives into health plan and provider contracts (B.) ▪ Linking monetary incentives to initiatives to reduce disparities in health care (B.)
Increasing access to the health care system/providing insurance coverage for all.
▪ Health screening and access to services (insurance) (A.) ▪ Increasing access to culturally and linguistically appropriate care (B.) ▪ Access to a high-quality system of health care may also reduce disparities   (The authors cite the Department of Veterans Affairs system as an example of a system that has made

some progress in reducing disparities among enrollees) (C.)

▪ Access to a usual source of care also appears to help reduce disparities. (C.)

▪ Insurance coverage may also be an important strategy to overcome disparities. (C.)

Creating an infrastructure and strategic partnerships to support disparities elimination efforts.

▪ Focus on creating and/or improving state minority health offices and infrastructure. (A.)

▪ Involve all health system stakeholders, including state government executive and legislative branch leaders, the broader health sector and the public (A.)

▪ For national policy makers and national health sector leaders: Create a national coordinating body to promote continuing state-based activities to eliminate racial and ethnic health disparities. (A.)

Specific interventions by health care organizations or systems.

▪ Developing community-based strategies to reach out to minority members (B.)

▪ An emphasis on improving public health services such as childhood immunization appears to play a role in lessening disparities. (C.)

▪ Reminders of preventive care visits are strongly associated with an increase of the percentage of adults getting important preventive services. (C.)

Increasing the diversity of the health care workforce/Efforts to improve cultural and linguistic competency of health care and public health workforce and institutions.

▪ Emphasize stronger cultural and linguistic competence in all disparities reduction activities. (A.)

▪ Workforce development programs and improvement to the cultural competence of all health care professionals (A.)

Sources:
A: McDonough JE, Gibbs BK, Scott-Harris JL et al. A State Policy Agenda to Eliminate Racial and Ethnic Health Disparities. The Commonwealth Fund. June 2004[49]
B: Angeles J and Somers S, From Policy to Action: Addressing Racial and Ethnic Disparities at the Ground-Level. Center for Health Care Strategies August 2007 Issue Brief[50]
C: Mead H, Cartwright-Smith L, Jones K, Ramos C, Siegel B, Woods K. Racial and Ethnic Disparities in U. S. Health Care: A Chartbook. Commonwealth Fund. 2008[48]

Finally, it should be noted that, as a group, even these broader recommendations are focused fairly heavily on the health care system, and may not be sufficiently broad to achieve true equity in health. Access to medical care is only one of several drivers of individuals' and communities' overall health. Two researchers who focus on primary care remind us, "Although primary care

delivery serves an important role in maintaining or improving health status, there are other mechanisms by which disparities in health can be remedied."[51(p24-5)] They go on to say,

> Perhaps more fundamental to the development of good health are investments in the [socio-economic status] and social capital of racial and ethnic groups. Improvements in public education, for example, could serve to fundamentally alter the barriers that racial and ethnic minority families face in obtaining higher income levels, higher social status, adequate insurance coverage, and facility navigating the health care system. Without these fundamental changes, resolving disparities in health care delivery may still only serve to cover inequities in the underlying determinants of health."[51(p25)]

Appendix A:

Healthy People 2010 Objectives* related to Access to Primary and Preventive Health Services
Focus Area: Access to Quality Health Services
Increase the proportion of persons with health insurance (Objective 01-01)
Increase the proportion of persons appropriately counseled about health behaviors, specifically smoking cessation counseling (Objective 01-03a)
Increase the proportion of persons appropriately counseled about health behaviors - STD prevention counseling. (Objective 01-03g)
Increase the proportion of persons who have a specific source of ongoing care. (Objective 01-04)
In the health professions, allied and associated health profession fields, and the nursing field, increase the proportion of all degrees awarded to members of underrepresented racial and ethnic groups. (Objective 01-08)

*These are the federal Healthy People 2010 objectives within the access to quality health services focus area for which pre-formulated PubMed searches have been developed by Partners in Information Access for the Public Health Workforce. The three objectives shown in bold are those for which the pre-formulated searches were performed for this report.

Appendix B:

| Organizational Websites included in Supplemental Literature Search |
|---|
| Agency for Health Care Research and Quality
www.ahrg.gov |
| American Association of Medical College
www.aamc.org |
| American Medical Student Association
www.amsa.org |
| Center for Health System Change
www.hschange.com |
| Cochrane Library
www.cochrane.org |
| Commonwealth Fund
www.commonwealthfund.org |
| Family Health International
www.fhi.org |
| Guide to Community Preventive Services
www.thecommunityguide.org |
| Institute of Medicine
www.iom.edu |
| Kaiser Family Foundation
www.kkf.org |
| National Association of Community Health Centers
www.nachc.org |
| National Medical Association
www.nmanet.org |
| NCI/Cancer Control Planet
www.cancercontrolplanet.cancer.gov |
| National Quality Forum
www.qualityforum.org |
| Robert Wood Johnson Foundation
www.rwjf.org |
| US DHHS HRSA, Bureau of Primary Health Care
www.healthdisparities.net/hdc/html/collaboratives |

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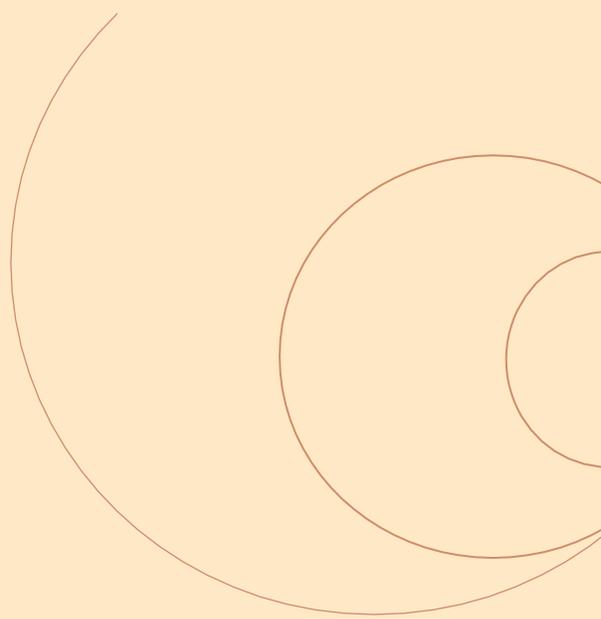
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