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Understanding Disparities In Health Care Access—And Reducing Them—Through A Focus On Public Health

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ABSTRACT Attempts to explain disparities in access to health care faced by racial and ethnic minorities and other underserved populations often focus on individual-level factors such as demographics, personal health beliefs, and health insurance status. This article proposes an examination of these disparities—and an effort to redress them—through the lens of public health. Public health agencies can link people to needed services such as immunizations, testing, and treatment; ensure the availability of health care; ensure the competency of the public health and personal health care workforce; and evaluate the effectiveness, accessibility, and quality of personal and population-based services. Approaching disparities through a public health framework can provide the foundation for developing more robust evidence to inform additional policies for improving access and reducing disparities.

isparities in health care access for minority and other vulnerable populations in the United States are well documented.¹ Researchers to date have described the problem of disparities in detail but have had less to say about "effective, real-world strategies to address it."² To develop policies and programs that reduce disparities in health care access, we need a comprehensive understanding of the multiple factors that underlie them.

Over the past four decades, researchers and policy makers have developed a number of frameworks to conceptualize the factors that influence health care access. Most of these frameworks focus on individual-level factors, such as demographics, personal health beliefs, and health insurance status. There is, however, growing appreciation that factors beyond individual characteristics—including community-level factors—also affect disparities in health care access.³

Public health agencies and activities represent an important way to address disparities in health

care access, but it is one that has been little studied. Public health has been defined as "what we as a society do collectively to assure the conditions in which people can lead healthy lives."4(p1) In recent years there has been a heightened awareness of the importance of the public health system, and public health approaches were acknowledged in provisions of the Affordable Care Act of 2010. Along with environmental factors and other health determinants, public health plays an important role in understanding and resolving disparities in health outcomes, including disparities in health care access and quality.⁵ In this article we propose a framework for understanding public health's role in addressing disparities in health care access.

Frameworks Of Health Care Access

To establish the empirical basis for our proposed framework, we investigated the evolution of existing health care access frameworks to identify gaps and guiding principles. We identified and reviewed the most common frameworks

used to understand health care access. Our focus was on theoretical and conceptual work in this area, rather than on empirical studies and evidence concerning access and its determinants that have been discovered using these frameworks.

THE BEHAVIORAL MODEL (1968-PRESENT) The most common framework used to understand individuals' access to health care is the behavioral model of health services use, also known as the sociobehavioral model and the Andersen model.6 This framework, developed initially by Ronald Andersen, has been influential in explaining individuals' use of health care services, especially physician care. The framework considers an individual's use of health services to be a function of three types of factors: predisposing factors, such as demographics, health beliefs, and other individual characteristics; enabling factors, such as health insurance and income and other personal, family, and community resources; and illness level or need factors, such as health status.6,8

Over the years, the model has been adapted and expanded in various ways. First, it has been refined to distinguish between measures of potential access—for example, whether or not a person has a usual source of care—and measures of realized access-such as use of services and patient satisfaction.^{9,10} In addition, it has been revised to include environmental factors, health behavior, and health outcomes. Furthermore, it has been expanded to incorporate such concepts as equity, efficiency, effectiveness, and health and well-being;11 the importance of variables at the neighborhood or community level;3,12-14 and factors relevant to specific vulnerable populations, such as the homeless,15 rural populations,16 immigrants,17 and African American women.18

More recently, there has been an increasing focus, at least conceptually, on the role of factors beyond the individual level, such as changes in health policy—for example, a new law that established a nonprofit organization to provide health care for the medically underserved¹⁹—and environmental variables such as urban or rural location, provider supply, and health care system characteristics. ²⁰ However, most empirical applications of the behavioral model continue to focus on individual-level factors that affect careseeking behavior.

FOCUSING ON BARRIERS (1981–PRESENT) Another approach for understanding health care disparities, introduced by Roy Penchansky and J.William Thomas, ²¹ focuses on barriers to health care utilization. This approach acknowledges that individual-level factors—such as income, having health insurance, and having a usual

source of care—can facilitate or impede the use of health services. However, it posits that use of services depends largely on the degree of "fit" between individuals (clients) and the health care system. ²¹ This fit can be measured in terms of the availability, accessibility, and affordability of health care services to potential clients, as well as the degree to which the health care system is organized to accommodate clients and the acceptability of particular health care providers to potential clients.

Although the barrier-focused framework has not been used as frequently as the behavioral model to assess health care access, it has been influential. For example, Julio Frenk asserted that organizational, financial, and ecological barriers within the health care system can create resistance to access.²² Other researchers have expanded the barrier-focused model through incorporating nonphysician providers such as nurse practitioners and through collaborative partnerships between health care providers and community agencies.²³ Still others have focused on the wider determinants of health, such as genetic factors, ethnicity, family, physical and social environments, and quality of care.24 However, none of the expanded conceptions has articulated a role for public health in reducing disparities in health care access.

ACCESS TO PERSONAL HEALTH SERVICES (1993-PRESENT) In the early 1990s the Institute of Medicine developed a framework for monitoring individuals' access to personal health services. This model focuses on structural, financial, and personal barriers to utilization, while also incorporating the "appropriateness" of the health care received by the individual, such as the efficacy of treatment, quality of providers, and patients' adherence to prescribed treatments and medications.²⁵

The model has been applied widely to highlight health outcomes as an indicator of health care access. This model had a more explicit focus than previous models on monitoring access, including the equity of access—whether differences in use and outcome among groups are the result of financial or other barriers to care. However, it did not conceive of a specific role for public health in monitoring and addressing inequities when identified.

OTHER CONCEPTUAL FRAMEWORKS Recent work in economics recognizes the potential influence of contextual factors on individuals' demand for health care that may be particularly important for understanding disparities in access. For example, Carole Gresenz and colleagues emphasize that social networks may influence the transmission of information among people about how and where to use care. They

may also influence individuals' ideas about the appropriate use of health care services. ²⁶ Such networks may have an important influence on differences in access across groups, especially those defined by race or ethnicity, language, and geography. ^{26–30}

In addition, physicians' behavior may affect the quantity of health care that patients receive and could therefore contribute to disparities.³¹ Kenneth Arrow emphasizes that health care providers and consumers vary in the information they have about health care services and the usefulness of those services.³² This "information asymmetry" may allow providers to influence consumers' demand for services, persuading them to use less or more care than they might if they had more complete information.³¹ To the extent that behavior of this sort varies across groups—different racial and ethnic groups, or groups with different insurance status—it may be an important factor that affects disparities in health care access.

Incorporating The Role Of Public Health

None of the health care access frameworks developed to date has conceptualized or discussed in any significant way how public health might affect health care access. The public health system could be considered part of the community-level variables. However, when Pamela Davidson and coauthors described community-level variables, most of the suggested measures related to personal health care services such as physician supply, managed care penetration of the market, and safety-net hospital and clinic services.¹⁴

We believe that it is important to incorporate public health agencies and programs into conceptual understandings of access. By doing so, it is possible to identify concrete actions and policy levers to address disparities in health care access in ways that earlier frameworks did not. These actions and policy levers are related to public health's three core functions—assurance, assessment, and policy development⁴—and ten essential services (Exhibit 1).³³

ASSURANCE The oversight or assurance function provides the most direct means through which public health agencies can influence disparities in health care access. In this role, public health agencies link people to needed health care services; make sure that health care and a competent public health and personal health care workforce are available; and evaluate the effectiveness, accessibility, and quality of health care. In most communities, these services involve providing immunizations and testing and treatment for certain communicable diseases, such as TB and sexually transmitted diseases. Public health agencies provide a wider array of health care services, particularly for the underserved, in some communities.

But there are other ways in which public health agencies can reduce disparities in health care access through their assurance function. For example, by mapping health needs and available health care resources, local public health departments can identify gaps in services and help address them by providing the services themselves, partnering with other organizations such as community health centers, or influencing other providers. Local and state public health departments can also play an important role in facilitating outreach and enrollment in health insurance.

These tasks are particularly important in light of the Affordable Care Act, which greatly expands

EXHIBIT 1

The Ten Essential Public Health Services And Their Core Functions	
Service	Core function
Monitor health status to identify community health problems	Assessment
Diagnose and investigate health problems and health hazards in the community	Assessment
Inform, educate, and empower people about health issues	Policy development
Mobilize community partnerships to identify and solve health problems	Policy development
Develop policies and plans to support individual and community health efforts	Policy development
Enforce laws and regulations that protect health and ensure safety	Assurance
Link people to needed personal health services and ensure the provision of health care when otherwise unavailable	Assurance
Ensure the existence of a competent public health and personal health care workforce	Assurance
Evaluate the effectiveness, accessibility, and quality of personal and population-based services	Assurance
Conduct research to produce new insights and innovative solutions to health problems	Assurance

sources Notes 4 and 33 in text.

Public health agencies play a leading role in policy development.

the availability of health insurance coverage—through Medicaid and new health insurance exchanges—and mandates that people obtain coverage or face a financial penalty. For undocumented immigrants and other people not eligible for federally subsidized health care coverage, local public health departments are likely to continue to play an important role in linking them to services. Moreover, state public health agencies can develop standards for cultural and linguistic competency among providers and use regulatory approaches to influence professionals, institutions, and health plans to address provider and facility shortages among immigrant and other underserved populations.

ASSESSMENT Public health agencies on the local and state levels and federal agencies such as the Centers for Disease Control and Prevention can also affect health care access through their assessment role. Assessment functions include monitoring the population's health status to identify community health problems and diagnosing and investigating health problems and health hazards in the community (Exhibit 1).

Public health agencies are the only entities that carry out such activities, and they have legal authority to address identified health problems and hazards. Activities in any given community might include periodic population-based health surveys; ongoing surveillance of specific health issues; and inspection of residential facilities, including nursing homes, apartments, and condominiums. Through these surveillance activities, public health agencies could identify disparities in health outcomes, which could in turn point to locations or populations for which disparities in health care access or quality exist.

Once these health care disparities are identified, local public health departments can work with providers and key stakeholders to address them. Similarly, local public health departments can assist nonprofit hospitals in conducting the assessments of community health needs required under the Affordable Care Act.

POLICY DEVELOPMENT Public health agencies also play a leading role in policy development, which includes services such as educating people about health issues and empowering them to take action to improve their health—for exam-

ple, antismoking campaigns; mobilizing partnerships within the community to identify and solve health problems—for example, children's exposure to lead in the environment; and developing policies and plans to support efforts on the individual and community levels to improve health—for example, by promoting physical activity (Exhibit 1). At the local level, these efforts often involve policies and programs to promote healthy living and health literacy, as well as public health campaigns such as those encouraging people to be vaccinated for influenza.

Public health agencies are increasingly partnering with community organizations to more effectively develop and disseminate evidence-based prevention programs, such as smoking cessation training for organizations serving people with mental illnesses or substance abuse disorders. These partnerships are particularly focused on community groups serving populations that have historically been underrepresented or marginalized, including racial and ethnic minorities, people with limited English proficiency, and rural populations.

In addition, public health agencies can partner with health care providers to improve health care access and quality. For example, agencies and providers can work together to develop immunization registries, which in turn can lay the groundwork for the development of more comprehensive, community-based public health information systems.³⁴

ROLE IN REFORM Finally, in light of the Affordable Care Act, an important role for local health departments is to oversee the planning, development, and implementation of health care reform locally and to educate community residents and community-based organizations about the choices available to them for obtaining health insurance.

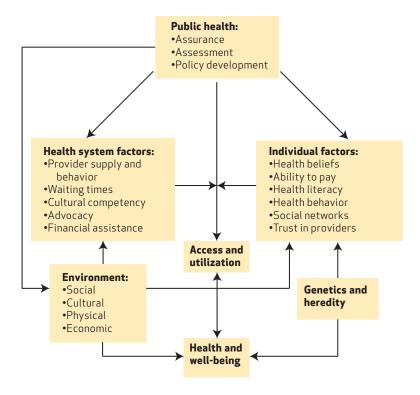
A New Framework

We propose a framework for incorporating the role of public health programs and policies more explicitly into our understanding of disparities in health care access (Exhibit 2). This framework draws on previous access models. For example, it includes the well-known predisposing, enabling, and need factors at the individual level from the behavioral framework, described above. It also includes the health care system factors so well articulated in the barrier-focused frameworks. Finally, it draws on the emphasis in the Institute of Medicine's framework on the relationship between access and health outcomes.

What is new about our framework is that it conceptualizes and elaborates an explicit role for the public health system in understanding

EXHIBIT 2

A Conceptual Framework For Public Health's Role In Addressing Disparities In Health Care Access



SOURCE Authors' analysis of the literature.

and reducing disparities in health care access. Moreover, it emphasizes the multiple pathways through which public health intervenes in health care access. Public health agencies at the federal, state, and local levels all have a role in ensuring access—in particular, equitable access—to these services.

As explained above and as shown in Exhibit 2, public health can reduce disparities in health care access through its assurance, assessment, and policy development functions, which operate through health care services, public health policies and programs, and public health agencies' role in mobilizing individual and collective action to improve health.

The left side of Exhibit 2 shows how public health influences access both by providing health care services—such as immunizations and testing and treatment for communicable diseases, as well as more general health care services in some communities—and by linking underserved individuals to other providers and the health care system in general. Furthermore, public health's role in ensuring an adequate health care workforce could include assessment not only of the available supply of providers over-

all, but also of the supply of providers who can care for people with public insurance and populations with limited English proficiency. By providing services, linking underserved people to care, and ensuring a culturally competent workforce, public health agencies can narrow gaps in the receipt of these services among vulnerable populations.

The right side of Exhibit 2 focuses on how public health can influence access through its policies, programs, and mobilizing efforts aimed at identifying health needs and informing the public about health issues. Much of the influence on access is through influencing populations' care-seeking behavior—for example, by affecting the public's health beliefs, health literacy, health behavior, and trust in health care providers.

Exhibit 2 also conceptualizes the relationship between public health policies and programs and health and well-being more generally, which can then affect future use of health services. In addition, public health can influence access through its mobilizing or convener role, which can help establish a shared understanding of disparities and develop specific policies or mobilize the community—including residents, providers, and other stakeholders—to address them. Moreover, to the extent that care-seeking behavior varies across groups of individuals, public health can reduce disparities in access through information dissemination and public health campaigns that have the potential to change individuals' behavior and—over time—to reshape community norms.

It is important to note that in Exhibit 2, health care access is not the endpoint but an intermediate outcome between public health programs and health. And, similar to frameworks for understanding the social determinants of health and health disparities,³⁵ our framework identifies other factors that contribute to health and well-being, such as genetics and heredity and the broader social, cultural, physical, and economic environments in which the other factors operate. However, our framework is unique in that it shows how public health efforts can also influence the environment, which can then affect health as well as the health care system and individual care seeking.

Discussion

Our framework can help support empirical studies of the effects of public health programs on disparities in health care access. The results of such studies could be a key input into developing polices aimed at ensuring health care access and improving population health outcomes. Jonathan Fielding and Peter Briss³⁶ advocate

The role of public health in reducing health disparities goes beyond improving health care access.

for evidence-based public health using health impact assessments, systematic reviews, and various other tools that ensure community fit and feasibility, including research conducted in partnership with community-based organizations and groups and qualitative research that provides in-depth information about community perspectives and influences. To support such an approach and, ultimately, to reduce disparities in health care access and improve population health, we need a larger evidence base for public health action and reform.

SHARED RESPONSIBILITY It is important to note that our framework is not intended to imply that the responsibility for reducing disparities in health care access falls on the public health system alone. Some advocates might argue that the health care system should assume primary responsibility for resolving "downstream" disparities in health care access, such as lack of health insurance or culturally competent providers.

The public health system, in contrast, could focus on addressing the "upstream" social, economic, and environmental determinants. In this view, the public health system's role in addressing disparities in health care access should be to hold the health care system accountable for ensuring that everyone has access to high-quality care.

One possible mechanism through which public health agencies could hold the health care system accountable for disparities is the accountable care organization structure proposed in the Affordable Care Act, which calls for networks of physicians and other providers to work together to improve the quality of health care services and reduce costs for a defined patient population.

Local public health departments could play an important monitoring role in such networks.

But the role of public health agencies does not need to be seen as solely "downstream" or "upstream." Addressing downstream disparities in health care access is likely to have the greatest benefits for those in poor health and without access to quality care and is also likely to show short-term gains. For example, the health of an uninsured, chronically ill person who gets health insurance and access to high-quality care is likely to improve fairly quickly. In contrast, changing individuals' behavior and addressing more upstream determinants will probably lead to more gradual health improvements-that is, more medium- or long-term gains. Short-term gains in downstream disparities are often needed to obtain the political will to address determinants further upstream. Public health agencies can play an important role in developing such political will.

BEYOND ACCESS Although disparities in health care access are a key factor underlying disparities in health outcomes, naturally other factors also play a role in outcomes. We have limited the focus of the framework presented here to health care access and how public health programs can influence it.

However, the role of public health in reducing health disparities goes beyond improving health care access. Many public health programs are designed to improve health outcomes by promoting a healthy environment beyond the health care system. Examples of such programs include monitoring water quality, inspecting restaurants, and reducing lead exposure. The extent to which these are effective in reducing health disparities more generally is another important avenue of research.

Effectively addressing disparities in health care and health requires a collective effort that includes the full range of public health and health care system stakeholders. Public health agencies can play an important convener role with other organizations and sectors such as communities and community-based organizations, the health care delivery system, academe, business, and the media. Policy and administrative actions are needed to strengthen the incentives for such partnerships. These incentives are important because collaboration could facilitate a more community-based approach to reducing disparities in health care access and, ultimately, in health.

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NOTES

- 1 Smedley BD, Stith AY, Nelson AR, editors. Unequal treatment: confronting racial and ethnic disparities in health care. Washington (DC): National Academies Press; 2003.
- 2 King RK, Green AR, Tan-McGrory A, Donahue EJ, Kimbrough-Sugick J, Betancourt JR. A plan for action: key perspectives from the racial/ethnic disparities strategy forum. Milbank Q. 2008;86(2):261.
- **3** Brown ER, Davidson PL, Yu H, Wyn R, Andersen RM, Becerra L, et al. Effects of community factors on access to ambulatory care for lower-income adults in large urban communities. Inquiry. 2004;41:39–56.
- **4** Institute of Medicine. The future of public health. Washington (DC): National Academies Press; 1988.
- **5** Bynum JP, Fisher ES, Song Y, Skinner J, Chandra A. Measuring racial disparities in the quality of ambulatory diabetes care. Med Care. 2010;48(12):1057–63.
- 6 Andersen R. Behavioral model of families' use of health services. Chicago (IL): University of Chicago, Center for Health Administration Studies; 1968. (Report No. 25).
- 7 Kasper JD. Health-care utilization and barriers to health care. In: Albrecht GL, Fitzpatrick R, Scrimshaw SC, editors. Handbook of social studies in health and medicine. Thousand Oaks (CA): Sage Publications; 1999. p. 323–38.
- 8 Anderson JG. Demographic factors affecting health services utilization: a causal model. Med Care. 1973; 11(2):104–20.
- 9 Aday I.A, Andersen RM. A framework for the study of access to medical care. Health Serv Res. 1974;9(3): 208–20.
- 10 Aday LA, Andersen RM. Equity of access to medical care: a conceptual and empirical overview. Med Care. 1981;19(Suppl 12):4–27.
- 11 Aday L, Awe W. Health services utilization models. In: Gochman DS, editor. Handbook of health behavior research, Vol. 1, Personal and social determinants. New York (NY): Plenum Press; 1997. p. 153–72.
- 12 Auchincloss AH, Van Nostrand JF, Ronsaville D. Access to health care for older persons in the United States: personal, structural, and neighborhood characteristics. J Aging Health. 2001;13(3):329–54.

- 13 Litaker D, Koroukian SM, Love TE. Context and healthcare access: looking beyond the individual. Med Care. 2005;43(6):531–40.
- 14 Davidson PL, Andersen RM, Wyn R, Brown ER. A framework for evaluating safety-net and other community-level factors on access for lowincome populations. Inquiry. 2004; 41(1):21–38.
- **15** Gelberg L, Andersen RM, Leake BD. The behavioral model for vulnerable populations: application to medical care use and outcomes for homeless people. Health Serv Res. 2000; 34(6):1273–302.
- **16** Slifkin RT. Developing policies responsive to barriers to health care among rural residents: What do we need to know? J Rural Health. 2002; 18(Suppl):233–41.
- 17 Kao DT. Generational cohorts, age at arrival, and access to health services among Asian and Latino immigrant adults. J Health Care Poor Underserved. 2009;20(2):395–414.
- **18** Copeland VC, Butler J. Reconceptualizing access: a cultural competence approach to improving the mental health of African American women. Soc Work Public Health. 2007; 23(2–3):35–58.
- **19** Smith-Campbell B. Access to health care: effects of public funding on the uninsured. J Nurs Scholarsh. 2000; 32(3):295–300.
- 20 Phillips KA, Morrison KR, Andersen R, Aday LA. Understanding the context of healthcare utilization: assessing environmental and provider-related variables in the behavioral model of utilization. Health Serv Res. 1998;33(3):571-98.
- 21 Penchansky R, Thomas J. The concept of access: definition and relationship to consumer satisfaction.

 Med Care. 1981;19:127–40.
- 22 Frenk J. The concept and measurement of accessibility. In: White KL, editor. Health services research: an anthology. Washington (DC): Pan American Health Organization; 1992. p. 842–55.
- **23** Anderko L, Robertson JF, Uscian MM. The effectiveness of a rural nursing center in improving health care access in a three-county area. J Rural Health. 2000;16(2): 177–84.
- **24** Gulliford M, Morgan M, Hughes D, Beech R, Figeroa-Munoz J,

- Gibson B, et al. Access to health care: report of a scoping exercise for the National Co-ordinating Centre for NHS Service Delivery and Organisation R&D (NCCSDO). London: King's College, Public Health and Health Services Research Group; 2001
- 25 Institute of Medicine. Access to health care in America. Washington (DC): National Academies Press; 1993.
- 26 Gresenz CR, Rogowski J, Escarce JJ. Social networks and access to health care among Mexican-Americans. Cambridge (MA): National Bureau of Economic Research; 2007. (Working Paper No. 13460).
- **27** Alba RD. Ethnic identity: the transformation of white America. New Haven (CT): Yale University Press; 1990.
- **28** Marsden PV. Core discussion networks of Americans. Am Sociol Rev. 1987;52:122–313.
- **29** Marsden PV. Homogeneity in confiding relations. Soc Networks. 1988;10:57–76.
- **30** McPherson M, Smith-Lovin L, Cook JM. Birds of a feather: homophily in social networks. Annu Rev Sociol. 2001;27:415–44.
- **31** McGuire TG. Physician agency. In: Culyer AJ, Newhouse JP, editors. Handbook of health economics. Amsterdam: Elsevier Science; 2000. p. 461–536.
- **32** Arrow KJ. Uncertainty and the welfare economics of medical care. Am Econ Rev. 1963;53(5):941–73.
- **33** Baker EL, Melton RJ, Stange PV, Fields ML, Koplan JP, Guerra FA, et al. Health reform and the health of the public: forging community health partnerships. JAMA. 1994; 272(16):1276–82.
- **34** Wood D, Saarlas KN, Inkelas M, Matyas BT. Immunization registries in the United States: implications for the practice of public health in a changing health care system. Annu Rev Public Health. 1999;20:231–55.
- **35** Kaplan GA. What's wrong with social epidemiology, and how can we make it better? Epidemiol Rev. 2004;26: 124–35.
- **36** Fielding JE, Briss PA. Promoting evidence-based public health policy: can we have better evidence and more action? Health Aff (Millwood). 2006;25(4):969–78.

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In this month's Health Affairs, Kathryn Derose and coauthors propose that disparities in access to health care faced by racial and ethnic minorities and other underserved populations should be analyzed and addressed through the lens of public health. Such an approach, they argue, could help develop better evidence for addressing disparities—which public health agencies could then take steps toward reducing, through such measures as community mobilization and ensuring access to immunizations, testing, and treatment.

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