Improving Population Health in US Cities

Nicholas W. Stine, MD
Dave A. Chokshi, MD, MSc
Marc N. Gourevitch, MD, MPH

INTEREST IN POPULATION HEALTH AND THE PROMOTION OF greater collaboration between medical, public health, and social service institutions has surged in recent months.[1] This approach adopts a comprehensive notion of health determinants that are spread across domains of behavioral risk, social and economic circumstances, environmental exposures, and medical care. The balance and effects of many of these determinants, eg, availability of healthy foods, parks and other safe places to play and exercise, exposure to environmental irritants, and safe housing, are specific to geographic locale.[2]

Although there is general enthusiasm for efforts to advance population health, strategies for tailoring approaches to specific locales are not well established. Of particular strategic interest is the need for developing population health approaches for the 80% of US residents who live in urban environments. While the diversity and fragmentation of services within cities pose formidable organizational challenges, there are several key attributes of urban settings, if harnessed strategically, that offer opportunities for potentially effective population health strategies.

Challenges to Improving Population Health

The most immediate challenge may be the extensive racial, ethnic, and sociodemographic diversity within urban populations—subgroups that vary with regard to exposures, behaviors, and values, and among whom significant disparities may be masked by available data. The understanding of community perspectives that can be essential for leveraging change within social groups may differ throughout a population, requiring multiple tailored communication strategies. Communities may not necessarily conform to geographic boundaries and the geopolitical boundaries and layers of jurisdiction may bear little social relevance to be leveraged for health promotion. Furthermore, cities are heterogeneous entities, such that nonclinical interventions may be less transferable between them than, for example, a chronic disease care model.

This diverse character of urban communities creates significant accountability challenges for clinicians and health care systems seeking to improve a community's health. Although a more rural institution may be fairly confident that community investments will improve the health of "their" patients, delivery systems investing in inner-city communities will inevitably be spending money on mostly "other people's" patients. This dynamic complicates return-on-investment calculations by the health care sector for community engagement.

Outside the clinic, patients may be interacting haphazardly with the many layers of public- and nonprofit-sector services available in cities. Without adequate communication and coordination, there may be little way for clinicians to know what community-based services are being provided for a patient, where, and by whom. Such fractured accountability makes it easier for high-risk patients, who are most in need of continuous and coordinated services to benefit their health, to fall through the cracks.

Contemplating comprehensive population health improvement in this kind of complex urban setting can initially seem daunting; however, several creative approaches may unlock the underlying potential for population health improvement in US cities. The most promising opportunities capitalize on several key urban assets: the density of high-risk patients, the proximity and availability of diverse services, and the potential strength of community networks.

Opportunities in Urban Settings

Density of High-Risk Patients. The density of urban communities contributes to geographic clustering of high-risk patients, creating an opportunity for deploying interventions where they can be most effective. Durham, North Carolina, for example, provides public housing for both low-income elderly and adult disabled persons. The collaborative "Just for Us" program brings together multiple public agencies and the Duke University Health System to embed primary care, mental health, and case management services within these housing communities to deliver tailored services to clusters of high-risk patients.[3]

Other approaches to caring for often-marginalized groups allow for similarly unique efficiencies in population health investment and planning. For example, black men are more likely to die from hypertension and less likely to seek preventive care than any other group. Through embedding outreach services in the community hub of urban barbershops and training barbers to check blood pressure and promote

Author Affiliations: Office of Healthcare Improvement, New York City Health and Hospitals Corporation, New York, New York (Dr Stine); Departments of Population Health and Medicine, NYU School of Medicine (Drs Stine and Gourevitch); and Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts (Dr Chokshi).
Corresponding Author: Nicholas Stine, MD, New York City Health and Hospitals Corporation, 346 Broadway, New York, NY 10013 (nicholas.stine@nychhc.org).

healthy behaviors, innovative programs in several cities are engaging these men and successfully achieving improved rates of blood pressure control.[4]

Proximity of Diverse Services. City residents often have access to a high density of public, nonprofit, and academic-based services. These services are often diminished by fragmentation, yet can be harnessed synergistically if certain barriers are removed. The Breathe Easy at Home program in Boston, Massachusetts, for example, was formed through a partnership between city agencies, delivery systems, and nonprofit organizations. The program provides clinicians with a link in the patient's electronic medical record to initiate referrals to the Boston Inspectional Services Department to investigate if it is suspected that substandard conditions in the home may be triggering a child's asthma symptoms.[5]

A promising movement toward promoting interventions across sectors is the increasing interest in a "health in all policies" strategy, in which decision makers take health effects into consideration in all public agencies, including those without a traditional or statutory responsibility for health. Recently endorsed by the Institute of Medicine, this type of approach holds particular promise for leveraging the community development, transportation services, and housing resources concentrated in urban areas to align with community health initiatives.[6]

Strength of Community Networks. Urban communities may also have more community partners outside of the public sector. For example, communities of faith are often among the most respected and socially powerful organizations in low-income neighborhoods. The Congregational Health Network in Memphis, Tennessee, has shown that clergy and other church representatives can promote better health by serving as role models, helping individuals adopt healthier lifestyles, encouraging use of community-based programs, and serving as a link between congregants and the health care system. As part of the program, enrolled congregants are flagged by the health system's electronic medical record whenever admitted to the hospital. A hospital-employed navigator visits the patient to determine his or her needs and then works with a church liaison to arrange postdischarge services and facilitate transition. This approach has resulted in reduced mortality, readmissions, and health system costs along with improved patient satisfaction.[7]

Looking Forward

The health care community is increasingly focused on the triple aim of reducing health care costs, increasing health care quality, and improving population health. Several key provisions of the Affordable Care Act highlight the population health tenet, including new payment arrangements seeking to reward improved health rather than services delivered, and strengthening Internal Revenue Service requirements for tax-exempt hospitals to demonstrate meaningful efforts to improve the health of the communities they serve. The success of these efforts will depend, to a significant extent, on reducing barriers between the local health care systems, public health departments, and community partners with experience and expertise in addressing the determinants of health beyond the traditional purview of health care. Promoting these collaborative approaches will require adjustment of our understanding of how multisectoral models must adapt to the needs of different communities.

These efforts represent the early stages of understanding how to build durable strategies to improve population health. Much like the ongoing redesign of primary care practices into medical homes, for which interdisciplinary models are reimagining traditional roles to create more effective care teams, the "population health practice" will need to eliminate siloes derived from historically misaligned incentives so that partners operate together at the top of their respective abilities. This will require an organizing framework for which a broadly conceived network of stakeholders negotiates complementary roles and is held accountable for common goals.

Nowhere is this more critical than in the urban setting, where the fragmentation and accountability challenges of the current health system are particularly pronounced. Despite these challenges, there are uniquely urban opportunities in the scale, density, and proximity of communities and services. With leadership and governance willing to think broadly about these assets, US cities are well positioned for innovative approaches for improving population health.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Drs Chokshi and Stine report receipt of a grant and also support for travel to meetings from the New York Academy of Medicine. Dr Gourevitch reports receipt of a grant to his institution from the National Institutes of Health (UL1 TR000038, National Center for the Advancement of Translational Science).
Additional Contributions: We acknowledge Jo Ivey Boufford, MD, and the New York Academy of Medicine Primary Care and Population Health Working Group for their contributions. Neither were compensated in association with work on this article.

REFERENCES

1. Institute of Medicine. *Primary Care and Public Health: Exploring Integration to Improve Population Health*. Washington, DC: National Academies Press; 2012.
2. Jacobson DM, Teutsch S. An environmental scan of integrated approaches for defining and measuring total population health by the clinical care system, the Government Public Health System, and Stakeholder Organizations. Commissioned Paper, National Quality Forum; February 2012.
3. Yaggy SD, Michener JL, Yaggy D, et al. Just for us: an academic medical center-community partnership to maintain the health of a frail low-income senior population. *Gerontologist*. 2006;46(2):271-276.
4. Victor RG, Ravenell JE, Freeman A, et al. Effectiveness of a barber-based intervention for improving hypertension control in black men: the BARBER-1 study: a cluster randomized trial. *Arch Intern Med*. 2011;171(4):342-350.
5. City of Boston, Inspectional Services Department. Housing division—breathe easy at home. http://www.cityofboston.gov/isd/housing/bmc. Accessed November 18, 2012.
6. Institute of Medicine. *For the Public's Health: Revitalizing Law and Policy to Meet New Challenges*. Washington, DC: National Academies Press; 2011.
7. Agency for Healthcare Research and Quality. Service delivery innovation profile: church-health system partnership facilitates transitions from hospital to home for urban, low-income African Americans, reducing mortality, utilization, and costs. http://www.innovations.ahrq.gov/content.aspx?id=3354. Accessed November 18, 2012.