

# Population Health in the Affordable Care Act Era

*by Michael A. Stoto, Ph.D.*

February 21, 2013



AcademyHealth

The phrase “population health” is increasingly used by researchers, practitioners, and policymakers in health care, public health, and other fields. Although their understanding of this phrase differs, many see attention to population health as a potent opportunity for health care delivery systems, public health agencies, community-based organizations, and many other entities to work together to improve health outcomes in the communities they serve. To explore these possibilities and to identify the organizations’ potential contributions and role in advancing the evidence base for population health policy and practice, AcademyHealth is convening an exploratory meeting to identify specific activities, programs, and partnerships to develop and/or pursue to support research and translation activities in this area.

As a starting point for the discussion, this background paper draws on a scan of the policy, practice, and research environment to identify the many distinct but overlapping meanings of population health, identify their commonalities, and suggest a research agenda for the field and opportunities for AcademyHealth. I hope that all meeting participants see their own ideas about population health represented in this paper while discovering other interpretations and perspectives. Comments are, of course, welcome, especially regarding any misinterpretations and missing activities.

### Differences and Commonalities in the Definition of Population Health

Population health was defined by Kindig and Stoddart (2003) as “the health *outcomes* of a group of individuals, including the distribution of such *outcomes* within the group.” I have emphasized the word “outcomes” to make the point that the definition focuses on the implicit goal of improving health outcomes. Jacobson and Teutsch (2012) propose a similar goal, with the term “total population health” defined by geographic areas.

Berwick and colleagues (2008) identify “improving the health of populations” as one element in the Institute for Healthcare Improvement’s (IHI) Triple Aim for improving the U.S. health care system (the other two elements call for improving the individual experience of care and reducing the per capita costs of care for populations). Similarly, “better health by encouraging healthier lifestyles in the entire population, including increased physical activity, better nutrition, avoidance of behavioral risks, and wider use of preventive care” is one of three elements of the Center for Medicare & Medicaid Innovation’s mission. This formulation suggests that population health is instrumental as a means to improving the health care system rather than the end goal.

Dunn and Hayes’s (1999) definition focuses on measurement, not only of health outcomes but also of the factors that influence them: “The health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services.”

Young’s (2005) definition identifies population health as a “conceptual framework for thinking about why some populations are healthier than others,” as well as the policy development, research agenda, and resource allocation that flow from it. The “health in all policies” approach, which encourages policymakers to weigh the health implications of policies that are not normally considered health related (Bostic 2012), is consistent with this definition of population health.

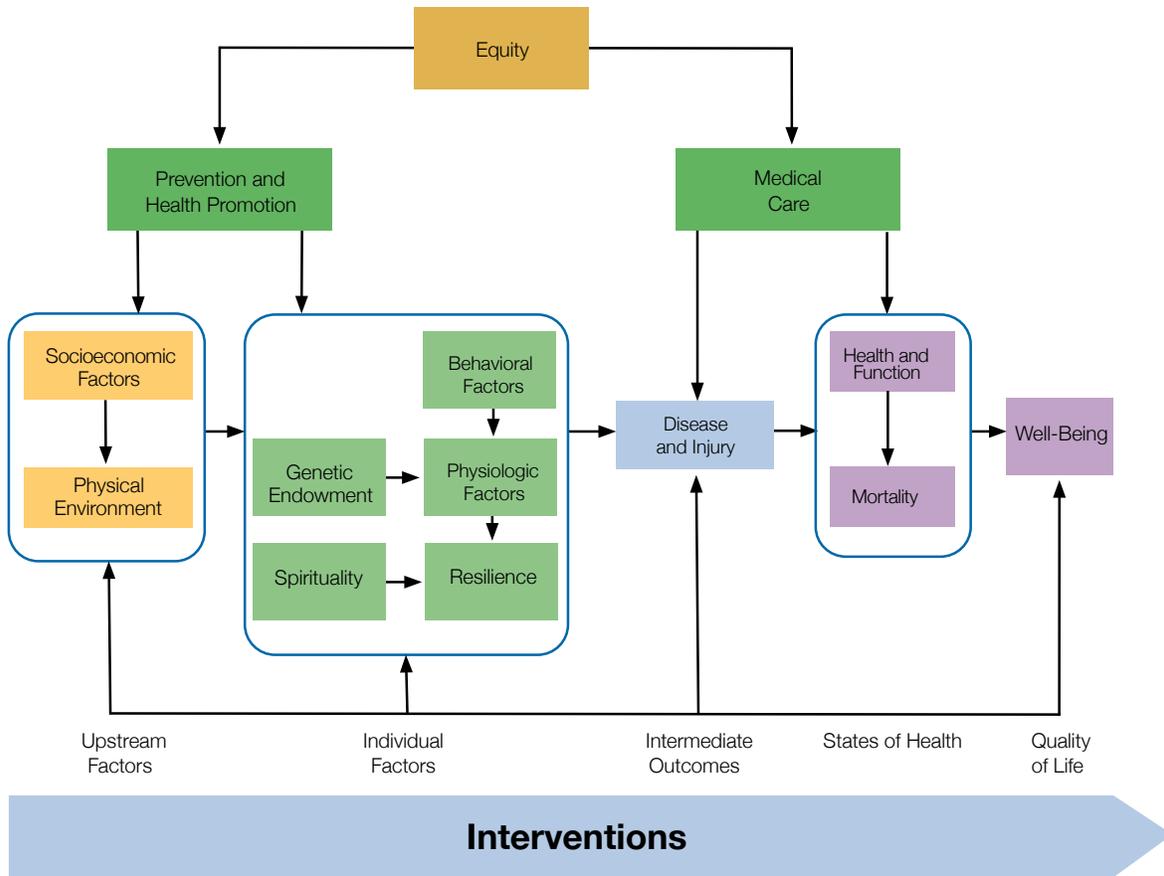
Some view “population health” as a more modern version of “public health,” which itself may be a goal (improving the health of the public), an instrument (governmental public health agencies), a measurement system, and a conceptual framework that undergirds a profession and a scientific field. Population health differs from public health, at least perceptually, in at least two respects. First, it is less directly tied to governmental health departments. Second, it explicitly includes the health care delivery system, which is sometimes seen as separate from or even in opposition to governmental public health.

The different concepts of population health fall along a spectrum, depending in large part on where one starts. At one extreme, the focus is on health outcomes in populations defined by geography or similar factors. County health officers, for instance, are interested in the “total population health” (borrowing from Jacobson and Teutsch 2012) of the county they serve. These outcomes are determined by various factors, including services that the health department provides. This perspective is reflected in the County Health Rankings as well as in the National Association of County and City Health Officials’ (NACCHO) Mobilizing for Action through Planning and Partnership (MAPP) model. At the other extreme, “population health” refers to accountability for health outcomes in populations defined by health care delivery systems such as health plans or Accountable Care Organizations (ACO).

Recognizing this accountability leads providers to address upstream factors such as health promotion and care coordination that influence health outcomes in “their” population. Similarly, Chang (2012) describes the potential for population health integrators, which are entities that serve a convening role and work intentionally and systemically across various sectors to achieve improvements in health and well-being for an entire population in a specific geographic area. “Population management” of patients with one or more chronic diseases is a related concept. In this use, population health improvement emphasizes the central role of the primary care provider, a fully engaged and activated patient, and care coordination (Nash 2012).

Despite the above differences, the concepts embody a number of commonalities in what might be called the population health perspective. First, population health is seen as more than the sum of individual parts or a cross-sectional perspective. Upstream factors are included in the measurement of population health, for instance, not just health outcomes. The goal of reducing disparities and inequities—explicit in Kindig and Stoddart (2003) and implicit in other definitions—is another example of population health’s holistic focus.

**Figure 1. IHI Population Health Composite Model**



Source: Adapted from Stiefel M, Nolan KA. Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2012. (Available on [www.IHI.org](http://www.IHI.org))

Second, the population health perspective requires the consideration of a broader array of the determinants of health than is typical in either health care or public health. This is illustrated by the elements of the IHI composite model (Stiefel and Nolan 2012) reproduced in Figure 1. In particular, it is important to note the emphasis on health promotion and disease prevention as well as on interventions focusing on upstream factors rather than outcomes. Unlike some models of public health, however, Stiefel and Nolan’s perspective recognizes the role of health care and of personal prevention services as part of the population health production system.

Third, the population health perspective recognizes that responsibility for population health outcomes is shared but that accountability is diffuse. Shared responsibility arises from the many upstream factors that influence population health and the opportunities to address them. Diffuse accountability, on the other hand, reflects the reality that, although there are many possibilities for upstream interventions, the entities that take them on vary from community to community. To improve population health, communities must establish and nurture partnerships that include but go beyond state and local public health agencies and health care delivery systems. And this broad system of partners must share data and adopt a systems focus that identifies accountability for and measures contributions to population health outcomes (IOM 1997, 2010, 2012).

Taken together, these characteristics point to the importance of an epidemiological approach to managing population health that includes measuring inputs and outcomes, understanding how they are related, and setting priorities that consider population health production function. As a result, measurement is a fundamental aspect of the population health perspective. Expanding on Stiefel and Nolan’s (2012) point in the new IHI white paper titled “A Guide to Measuring the Triple Aim,” health care organizations, public health departments, social service entities, school systems, and employers must cooperate because no single sector alone has the capability for successfully pursuing the improved health of a population; indeed, such cooperation requires an integrator that accepts responsibility for the health of the population. With an appropriate governance structure, the integrator should lead the establishment of a clear purpose, the identification of a portfolio of projects and investments to support that purpose, and the creation of a cogent set of high-level measures to monitor progress. The set of measures should operationally define each dimension of population health. Yet, measurement of the factors that influence population health outcomes is challenging and an area where research is needed.

### Population Health in the Affordable Care Act

The passage of the Patient Protection and Affordable Care Act (ACA) addresses population health in four ways. First, provisions to expand insurance coverage (the individual mandate, Medicaid expansions, state insurance exchanges, support for community health centers, for instance) aim to improve population health by improving access to the health care delivery system, which is a critical component of a community's population health production system.

Second, other provisions aim at improving the quality of the care delivered (National Strategy for Quality Improvement, CMS Center for Medicare and Medicaid Innovation, and establishment of the Patient-Centered Outcomes Research Institute).

Third, less well-known provisions of the ACA seek to enhance prevention and health promotion measures within the health care delivery system. Perhaps the biggest change is the promotion and implementation of ACOs to incentivize providers to take responsibility for population health outcomes. Also included are the expansion of primary health care training, requirements that private health plans and Medicare provide specific preventive services recommended by the U.S. Preventive Services Task Force without cost sharing, that Medicare provide for an annual wellness visit, and that Medicaid expand the provision of preventive services for children, as is currently the case, to adults.

Fourth, the final set of provisions aims at promoting community- and population-based activities, including the establishment of the National Prevention, Health Promotion and Public Health Council, which has already produced the mandated National Prevention Strategy (DHHS 2011) as well as a new Prevention and Public Health Fund (authorized at \$1 billion in fiscal year 2012) and funding for Community Transformation Grants. The ACA also provides incentives for workplace wellness programs in the form of grants to small businesses to develop comprehensive wellness programs and insurance discounts for employees participating in wellness plans.

### Community Health Needs Assessments

The ACA also adds a new IRS requirement that has the potential to leverage the strengths and resources of both the health care and public health systems to create healthier communities (Kuehnert, 2012). First, hospitals must conduct a Community Health Needs Assessment (CHNA) once every three years. These reports must describe the community served, identify existing health care resources, and prioritize community health needs. Hospitals must also develop an implementation strategy to meet the needs identified through the CHNA.

Similarly, the Public Health Accreditation Board (PHAB) calls on health departments seeking accreditation to participate in or conduct a collaborative process resulting in a comprehensive Community Health Assessment. Other PHAB standards require that health departments conduct a comprehensive planning process resulting in

a “community health improvement plan,” assess health care service capacity and access to health care services, identify and implement strategies to improve access to health care services, and use a performance management system to monitor achievement of organizational objectives.

Thus, although they use different terminology, both the IRS requirements and the PHAB standards similarly call for two different sets of population health measures: (1) measures of population health outcomes for which healthcare providers, public health agencies, and many other community stakeholders share responsibility, and (2) performance measures capable of holding these same entities accountable for their contributions to population health goals. (This distinction was articulated in *Improving Health in the Community* (IOM, 1997).

The challenge of managing a shared responsibility, however, is that given the broad range of factors that determine health, no single entity can be held accountable for health outcomes. Identifying accountability for specific actions is an essential component of both the Community Health Improvement Plan required by the IRS and the comprehensive planning process in the PHAB standards. To address this, *Improving Health in the Community* (IOM, 1997) suggests that a Community Health Improvement Process (CHIP) identifies specific activities to be conducted by entities in the community (public health, health care providers, employers, schools, and so on) that contribute to overall community health goals. Moreover, communities should develop a set of valid and actionable performance measures to ensure that these entities are held accountable for their activities.

Both improvement plans and their associated performance measures must be tailored to a community's health needs, the resources that are available, and the actions that healthcare providers, health departments, and other entities are willing to take and be accountable for. For the *Public's Health: The Role of Measurement in Action and Accountability* (IOM 2010) lays out a very useful “Framework for Accountability” and suggests specific measures and the stakeholders (or accountable entities) associated with them. This approach can be a useful starting point for non-profit hospitals looking for measures of their contributions to the community to begin the implementation strategy required by the IRS regulations, as well as health departments seeking measures for their community health improvement plans as part of PHAB accreditation.

### A Research Agenda for Population Health

As a starting point for discussion, this environmental scan suggests four areas where research and measure development are needed to advance the practice of population health.

First, additional research is needed to provide evidence establishing that upstream interventions (as opposed to changes in personal risk factors) have a positive influence on health outcomes. For example,

the relationship among physical activity, obesity, and diabetes is reasonably well established. As both health care and public health increasingly emphasize evidence-based practice, policymakers and managers need to know, for instance, whether providing sidewalks and recreation facilities leads to more physical activity and less obesity and eventually improved health outcomes and even reduced health care costs. Decision makers also need to know what works for whom in what context given the wide variations in U.S. communities and populations (Bethell 2009). Health researchers typically assess health risks at the individual level with epidemiological studies and the impact of patient-level interventions in randomized clinical trials (RCT), but new methods need to study the impact of upstream population-level interventions on population health outcomes. Without the ability to randomize at the individual level, new methods must be capable of rigorous analysis of natural and quasi-experiments and other observational approaches and qualitative and mixed-methods approaches such as realist evaluation.

Adopting the population health perspective surfaces a number of important conceptual issues in measurement that must be addressed and clarified. Organizations such as the Agency for Healthcare Research and Quality (AHRQ) and the National Quality Forum (NQF) rely on well-developed concepts of quality and performance measurement for health care service providers, but efforts to translate such concepts to population health settings are just beginning. One aspect of this involves the identification of the relevant “denominator,” for instance, going from patient encounters in a fixed time period to enrolled populations to geographically defined populations. More conceptually, in the context of shared responsibility for population health outcomes, measures that clarify accountability for actions are needed (IOM 1997, 2010). In measuring health outcomes associated with health care organizations, methods for and the appropriateness of risk adjustment is reasonably well understood. How do these issues play out in the context of shared responsibility for population health? Appropriate measures of health disparities, and of success in reducing disparities, are also needed (Kindig, booklet).

The converging interest of health care providers in addressing population health and of official health departments in engaging with providers also raises a number of practical measurement issues. One issue is the challenge of overlapping population definitions. How should populations be defined to encourage collaboration between health care providers and public health when a metropolitan area accounts for several ACOs or ACOs cover several political jurisdictions? Similarly, recognition of a shared interest in population health, and the encouragement provided by the Office of the National Coordinator for Health IT’s “meaningful use” standards, often requires merging existing electronic data in different formats from providers and public health sources (IOM 2012). This in turn surfaces a number of complex data governance issues (ownership, privacy, confidentiality and so forth) that must be addressed.

The final research opportunity that I would highlight derives from the confluence of the new IRS requirements for non-profit hospitals and the development and implementation of the PHAB standards. Together, these requirements provide an important opportunity to operationalize the types of partnerships and collaboration needed for population health. Many communities in the United States are currently engaged in these activities, and no doubt some hospitals and health departments have found ways to collaborate effectively. Research is needed, however, on how to measure population health in this context and to identify effective models for collaboration to improve population health.

### About the Author

Mike A. Stoto, Ph.D., is a professor of Health Systems Administration and Population at Georgetown University and a senior scholar in residence at AcademyHealth.

### References

- Bethell C. et al. “Consistently Inconsistent: A Snapshot of Across- and Within-State Disparities in the Prevalence of Childhood Overweight and Obesity,” *Pediatrics*, Vol. 123, 2009, pp. S277-S286.
- Bostic, R.W. “Health in All Policies: The Role of the U.S. Department of Housing and Urban Development and Present and Future Challenges,” *Health Affairs*, Vol. 31, 2012, Web exclusive doi: 10.1377/hlthaff.2011.1014.
- Center for Medicare and Medicaid Innovation. <http://innovations.cms.gov/>.
- Chang, D.I. “What Does a Population Health Integrator Do? Improving Population Health Blog,” <http://www.improvingpopulationhealth.org/blog/2012/05/what-does-a-population-health-integrator-do.html>, 2012.
- County Health Rankings. <http://www.countyhealthrankings.org/>.
- Dunn, J.R. and M.V. Hayes. “Toward a Lexicon of Population Health,” *Canadian Journal of Public Health* Supplement, November/December 1999, pp. S7-10.
- Institute for Healthcare Improvement Triple Aim. <http://www.ihl.org>, 2013
- Institute of Medicine. *For the Public’s Health: The Role of Measurement in Action and Accountability*. Washington, D.C.: National Academies Press, 2010.

Institute of Medicine. *Improving Health in the Community: A Role for Performance Monitoring*. Washington, D.C.: National Academies Press, 1997.

Institute of Medicine. *Integrating Primary Care and Public Health*. Washington, D.C.: National Academies Press, 2012.

Jacobson, D.M. and S. Teutsch. “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.” Washington, D.C.: National Quality Forum, [http://www.quality-forum.org/Publications/2012/06/An\\_Environmental\\_Scan\\_of\\_Integrated\\_Approaches\\_for\\_Defining\\_and\\_Measuring\\_Total\\_Population\\_Health.aspx](http://www.quality-forum.org/Publications/2012/06/An_Environmental_Scan_of_Integrated_Approaches_for_Defining_and_Measuring_Total_Population_Health.aspx), 2012.

Kindig, D.A. and G. Stoddart. “What Is Population Health?” *American Journal of Public Health*, Vol. 93, 2003, pp. 3669.

Kindig, D.A. “Which Health Disparities Do We Want to Reduce?” In *Population Health Outcomes Improving Population Health Blog eBooklet 2*, 2012.

Kindig, D.A. “Understanding Population Health Terminology” *The Millbank Quarterly*, Vol. 85(3), 2007, pp. 139-61.

Kuehnert, P. “Public Health and Health Care Working Together.” *New Public Health Blog*, [http://www.rwjf.org/en/blogs/new-public-health/2012/11/public\\_health\\_andhe.html?cid=XEM\\_A6639](http://www.rwjf.org/en/blogs/new-public-health/2012/11/public_health_andhe.html?cid=XEM_A6639), 2012.

Nash, D.B. “The Population Health Mandate: A Broader Approach to Care Delivery,” <http://GovernanceInstitute.com>, 2012.

National Prevention Council. *National Prevention Strategy*. Washington, D.C.: U.S. Department of Health and Human Services, Office of the Surgeon General, 2011.

Public Health Accreditation Board (PHAB). <http://www.phaboard.org>.

Stiefel M. and K. Nolan K. “A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost.” IHI Innovation Series white paper. Cambridge, Mass.: Institute for Healthcare Improvement, [www.IHI.org](http://www.IHI.org), 2012.

Young, T.K. *Population Health: Concepts and Methods*. Oxford University Press, USA, 2005.