health**policy**brief

What is "population health"?

"It is no longer sufficient to expect that reforms in the medical care delivery system (for example, changes in payment, access and quality) alone will improve the public's health."

— Institute of Medicine (IOM)[1]

Purpose

The emergence of "population health" as a significant component of healthcare reform reflects widespread recognition that factors outside of the healthcare system, such as the social, economic and physical environment, must be addressed in order to improve the health of the overall population. While there is growing agreement on the importance of population health, there is a lack of consensus on a single, actionable definition of the term. Healthcare system and public health stakeholders tend to define population health differently, which has hampered efforts to work across sectors to improve population health.
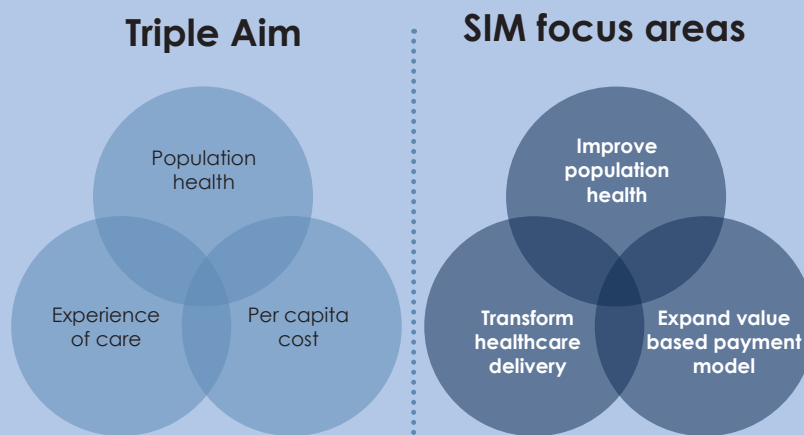
In 2014, with support from the National Network of Public Health Institutes (NNPHI) through a Robert Wood Johnson Foundation-funded project, the Health Policy Institute of Ohio convened a group of healthcare and public health stakeholders to develop a consensus definition of population health for Ohio. The purpose of this work is to operationalize the concept of population health in a way that is useful to Ohio's health leaders in designing population health improvement strategies, such as state-level health improvement plans and local improvement plans led by nonprofit hospitals, local health departments, United Ways and others.

This brief describes the consensus understanding of population health that resulted from discussions among members of the HPIO Population Health Definition Workgroup.

Population health in the Triple Aim and State Innovation Models (SIM)

Population health is one of the components of the Institute for Healthcare Improvement's (IHI) widely-used Triple Aim framework (see Figure 1). Echoing the Triple Aim, the US Centers for Medicare and Medicaid Services (CMS) includes population health as one of the three focus areas for the Innovation Center State Innovation Models (SIM) initiative which provides funding for states to design and test new payment and healthcare delivery models. Ohio was one of 16 states to receive a design grant in 2013 for Round One of the SIM. In July 2014, the Ohio Governor's Office of Health Transformation (OHT) applied for SIM Round Two funding to accelerate health system transformation in Ohio. SIM Round Two requires grantee states to develop a statewide Population Health Improvement Plan. Funding decisions for SIM Round Two are expected by the end of 2014.

Figure 1. **Triple Aim and State Innovation Model (SIM) focus areas**

Triple Aim

- Population health
- Experience of care
- Per capita cost

SIM focus areas

- Improve population health
- Transform healthcare delivery
- Expand value based payment model

Defining population health in Ohio

The HPIO Population Health Definition Workgroup reviewed several existing definitions of population health,[2] including the Kindig and Stoddart definition referenced by CMS for the SIM initiative and by the IOM's Roundtable on Population Health Improvement: "The health outcomes of a group of individuals, including the distribution of such outcomes within the group."[3]

The workgroup identified four common elements that emerged from the review of existing definitions. These included an emphasis on:

1. **Multiple determinants of health**, including factors outside the healthcare system
2. The distribution of outcomes or **health disparities and health equity**;
3. Population defined as **groups of people** and **geographic areas**; and
4. **Measurement of outcomes and health status**, rather than process, output or quality indicators.

The workgroup then identified a fifth element that is not emphasized in many of the existing definitions—the **authority of the individual** to take actions to improve their own health. The group agreed that population health is largely the product of individual behaviors, collectively, and that population health strategies must acknowledge the importance of personal health practices and individual knowledge, skills and ability, as well as the social, economic and physical environments that "make health more likely." As a result, population health strategies work to create the conditions in which individuals and families can be healthy.

As a result of this discussion, the workgroup developed the following definition of population health:

definition

> **Population health is the distribution of health outcomes across a geographically-defined group which result from the interaction between individual biology and behaviors; the social, familial, cultural, economic and physical environments that support or hinder wellbeing; and the effectiveness of the public health and healthcare systems.**

Terms used in the population health definition

Distribution of health outcomes refers to variation in health outcomes by gender or geographic area, or for different groups, such as socio-economic, racial/ethnic or age groups.

Geographically-defined refers to areas such as a neighborhood, county, region, state or country, or to a specific group within a geographic area, such as low-income families, employees, students, or racial or ethnic groups within a state.

Individual biology refers to refers to biologically-determined factors that impact health, such as genetic dispositions for specific types of cancer. Although genetics have traditionally been considered to be "non-modifiable," emerging evidence suggests that environmental conditions can impact genes.

Individual behavior refers to actions that people take to keep themselves and others healthy (such as eating nutritious food and driving safely) or actions people take that harm their health or the health of others (such as smoking or domestic violence perpetration).

Social, familial, cultural, economic and physical environments refer to the conditions in which people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality-of-life outcomes and risks.

- **Social factors** include patterns of social engagement, social-emotional support, racism, violence, trauma and toxic stress, access to education, and sense of belonging and cohesion in one's community.
- **Economic factors** include employment, poverty, economic/social mobility, and income inequality.
- **Familial factors** include marriage and family formation, parenting and intergenerational relationships. Familial factors are particularly important for the health of children and adolescents, and early childhood experiences have a significant impact on health outcomes across the lifespan.
- **Cultural factors** include religious beliefs and practices, values, language, media influences, social norms and ethnic customs.
- **Physical environments** include air and water quality, toxic substances and pollution, food access, housing, weather and natural disasters, and transportation systems and other aspects of the built environment.

Public health is the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of society. Public health organizations include government agencies at the federal, state, and local levels, as well as nongovernmental organizations that are working to promote health and prevent disease and injury within entire communities or population groups.[4]

Healthcare system The system that pays for and delivers clinical health care services to individual patients.[5]

Note that this definition refers to *the what* and *the why* of population health:

- *What is population health?* The health outcomes of a population;
- *Why are health outcomes good or bad, or unevenly distributed in the population?* Because of the presence of factors such as individual genetics and behaviors; social, familial, cultural, and economic factors; the physical environment; and the effectiveness of the public health and health care systems.

The definition does not describe *how* population health improvements are achieved. For this reason, the workgroup also discussed key characteristics of population health strategies, which are presented in the next section.

From definition to action: Key characteristics of population health strategies

To move towards improved population health for Ohioans, healthcare and public health stakeholders must work together to design and implement effective population health strategies. Population health strategies are distinguished from "business as usual" in health care by the following characteristics, described in more detail in Figure 2:

1. **Beyond the patient population**
2. **Beyond medical care**
3. **Measuring outcomes**
4. **Reducing disparities and promoting health equity**
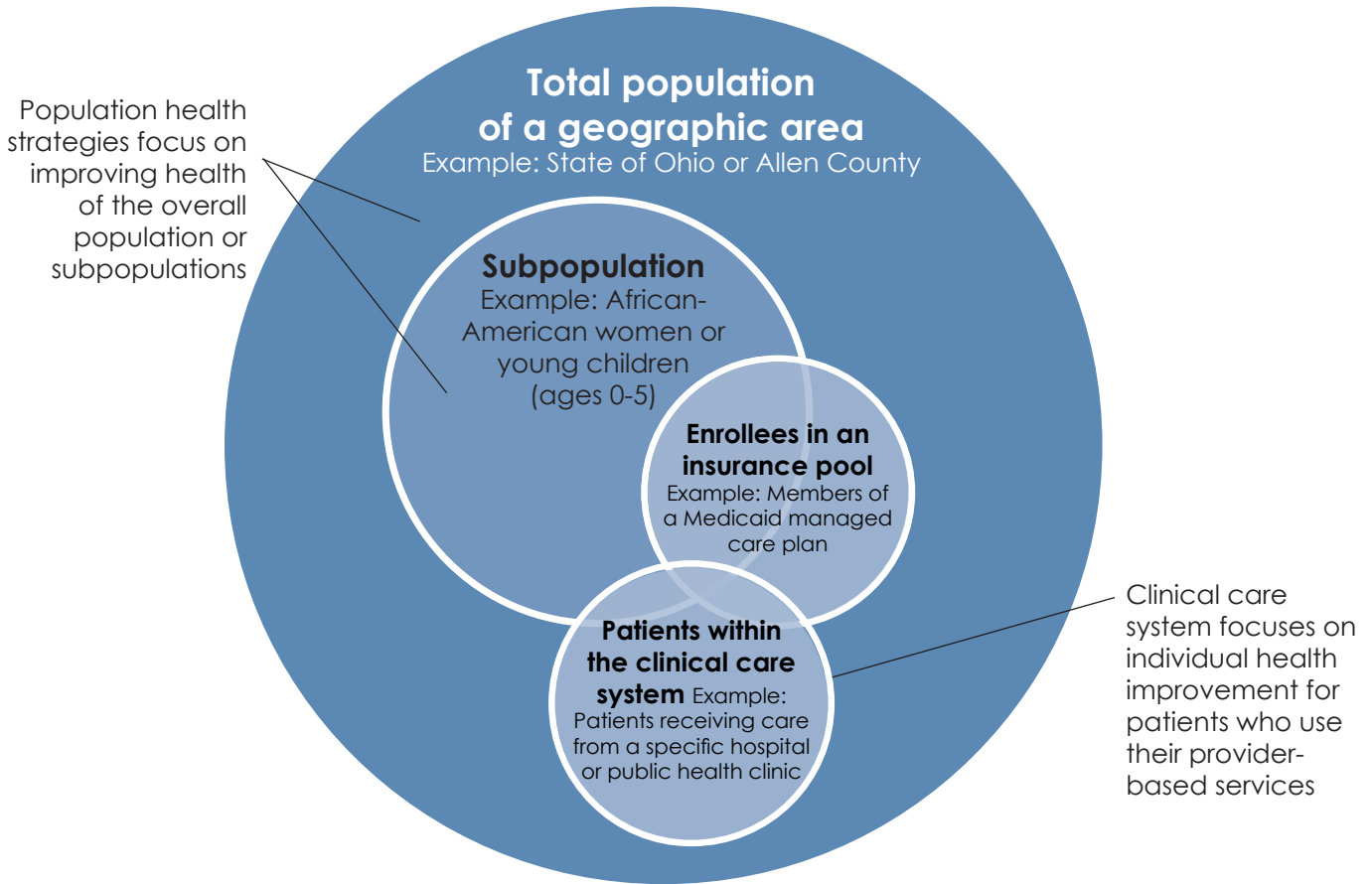5. **Shared accountability**

Figure 2. **Key characteristics of population health strategies**

Defining characteristics of population health strategies	Examples of population health strategies	How are population health strategies different from "business as usual" in health care?
1. **Beyond the patient population.** Population health strategies move beyond a specific patient population and define their target audience as all people living within a geographic area, or all people within a group (such as low-income families, employees, or ethnic groups) (sometimes referred to as a "sub-population"). See Figure 3.	• In Dayton, the **Good Samaritan Hospital's Phoenix Project** is an example of a hospital investing in their surrounding geographic area to improve health and wellbeing for everyone in the community, not just for patients of the hospital. The hospital has partnered with the City of Dayton to invest in a revitalization project in two neighborhoods adjacent to the hospital that includes a park, a playground, community gardens and a new school. • The goal of **Ohio's Plan to Prevent and Reduce Chronic Disease** is to reduce the burden of chronic disease for all Ohioans, not just for specific patient populations.	Population health strategies are for the overall population or sub-populations, rather than only for patients of a specific hospital or provider practice or enrollees of a health insurance plan. Illness or risk is typically the "trigger" for receiving clinical care. In population health, the trigger for inclusion is not related to specific diseases or conditions, but to any opportunity to prevent illness from occurring in the first place.
2. **Beyond medical care.** The population health approach acknowledges that many factors outside the healthcare system impact health, including the social, economic and physical environment. Population health strategies address these factors— referred to as the "social determinants of health"—by going "upstream" to address causes of health problems, rather than just the "downstream" symptoms. As a result, population health strategies often: a. Are implemented in community settings (rather than clinical healthcare settings), b. Involve partnerships with sectors such as transportation, regional planning, education, etc., and/or c. Aim to prevent health problems (primary and secondary prevention) by addressing the causes of poor health and creating optimal conditions for health for all groups, including sub-populations. See Figure 4.	• The **Cincinnati Children's Hospital** works with Legal Aid services to address housing code violations that lead to asthma triggers like mold. • In order to promote active living, **Columbus Public Health** works with the city's Zoning Commission and developers to ensure that new developments include sidewalks, pedestrian access and bike racks. • The **Cuyahoga County Board of Health** is conducting a Health Impact Assessment of a proposed regional trail network (**East Side Greenway Project**) to provide recommendations on how to maximize positive impacts on health and equity, such as improved access to parks, healthy food and active transportation for low-income neighborhoods. • In Columbus, **Nationwide Children's Hospital's Healthy Neighborhoods, Healthy Families** initiative is going upstream to improve housing quality, early childhood education and workforce development within a three-zip code area near the hospital. Their **SPARK** home visiting program, for example, helps to improve kindergarten readiness for preschool-age children, and their **FastPath** workforce development project connects unemployed adults with training and job placement through a partnership with Columbus State Community College.	Healthcare system activities occur in settings such as hospitals, health practitioner's offices, and nursing homes. By contrast, population health activities are implemented in the community (such as in neighborhoods, homes or schools) or involve some kind of partnership between a healthcare provider and a community-based organization or social service provider. While healthcare providers typically address medical problems and symptoms such as pain or loss of function, population health strategies address the wider range of needs that are influencing the health problems, including housing, food access, and safety from violence.

Figure 2. **Key characteristics of population health strategies** (cont.)

Defining characteristics of population health strategies	Examples of population health strategies	How are population health strategies different from "business as usual" in health care?
3. **Measuring outcomes.** Population health strategies aim to improve outcomes, such as morbidity and mortality, rather than focusing on process, output or quality measures. The effectiveness of a population health strategy is measured by changes in health outcomes for the population.	Programs and policies that address and measure indicators such as: • Prevalence of obesity among Ohio youth • Average number of days of limited activity due to mental or physical health difficulties, among adults in Ohio • Self-reported health status of adults in Franklin County • Life expectancy at birth	Population health outcomes differ from indicators of the "patient experience of care" component of the Triple Aim, which is often measured through process metrics such as, "Would you recommend your health care provider?" Population health outcomes also differ from indicators of healthcare "effectiveness," "quality," or "appropriateness," such as HEDIS measures. For example, a healthcare provider might track the percent of their female patients who have received a Chlamydia *screening*, while a population health strategy will track changes in the *prevalence* of Chlamydia in the overall population.
4. **Reducing disparities and promoting health equity.** The development of a population health strategy starts with an understanding of the distribution of health outcomes within the population. "Distribution" refers to differences in health outcomes for different groups, such as socio-economic, racial/ethnic, or age groups. Population health strategies aim to improve opportunities for all to achieve optimal health and to prevent and reduce disparities among groups. The effectiveness of a population health strategy is measured by the health outcomes for different groups of residents as well as for the overall population. Collection and meaningful use of data by race, ethnicity, language, income level and other characteristics is therefore a critically important aspect of population health.	• One of the desired outcomes of the **Greater Columbus Infant Mortality Task Force** is to "cut the disparity gap between white and black infant mortality in half." • **Ohio's School Report Cards** display high school graduation rates by race/ethnicity, limited English proficiency and economic disadvantage. Schools must demonstrate progress improving this and other outcomes for each subgroup of students, not just for the overall student body.	Health data are often reported as an average, rate or percent for an overall group of patients or health plan enrollees. This type of reporting can sometimes mask troubling health disparities. The population health approach emphasizes the importance of using data to identify health disparities and inequities and selecting strategies that will improve health for all groups.
5. **Shared accountability.** Population health strategies should provide opportunities for individuals to improve their own health and wellbeing in ways that are meaningful to them. Population health strategies also attribute accountability to both healthcare and public health organizations, and to policy decisions that impact the social, economic and physical environment. The population health approach broadens the range of entities that are held accountable for improving health to include education and social service organizations, as well as policymaking bodies that shape the economic and physical environment.	• **Motivational Interviewing**, a practice often used in substance abuse counseling to help individuals identify their own motivations for change, is an example of restoring the authority of the individual to improve their own health. A population health approach would be to incentivize and support behavioral health providers and school counselors to implement Motivational Interviewing on a more widespread and routine basis. • The **Accountable Care Community (ACC)** model builds upon the Accountable Care Organization (ACO) model in which a network of providers collectively assume responsibility for the care of a defined patient population and share in payer savings if performance metrics are met. An ACC extends accountability to entities outside the healthcare system, such as community-based organizations and local health departments. The **Live Healthy Summit County ACC**, for example, includes local **YMCA Diabetes Prevention Programs** as entities accountable for helping people diagnosed with pre-diabetes to adopt healthy eating and physical activity habits.	Various payment reform mechanisms, such as Episode-Based Payments and ACOs, are beginning to make provider accountability for improved health more explicit by tying payment to performance on various health metrics. Efforts to empower patients to play a more active role in their care or to get consumers to pay attention to the cost of care and the value of prevention through mechanisms such as high-deductible health plans or employee wellness programs reflect the shift toward more shared accountability between patients, providers and insurers.

Figure 3. **Beyond the patient population**

Population health strategies focus on improving health of the overall population or subpopulations

Total population of a geographic area
Example: State of Ohio or Allen County

Subpopulation
Example: African-American women or young children (ages 0-5)

Enrollees in an insurance pool
Example: Members of a Medicaid managed care plan

Patients within the clinical care system Example: Patients receiving care from a specific hospital or public health clinic

Clinical care system focuses on individual health improvement for patients who use their provider-based services

Source: Adapted from "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." Public Health Institute and County of Los Angeles Public Health, 2012.

Figure 4. **Beyond medical care**

Patient care

Population health

Focus on:
- Treatment of specific diseases and conditions
- Downstream symptoms of health problems
- Medical and biological determinants of sickness
- Patients
- Healthcare providers, purchasers and payers

Focus on:
- Wellness, prevention and health promotion
- Upstream causes of health problems
- Social determinants of health and community conditions
- All people
- Partnerships between health and sectors such as eduction, transportation and housing

Transition to population health

Public health and healthcare leaders describe an ongoing shift from focusing on specific disease and condition silos toward a broader focus on wellness, and from serving clinical populations toward reaching out to broader geographic populations. For healthcare entities like hospitals and managed care organizations, the speed and extent of this transition to population health depends on changes in the healthcare payment system. Within the fee-for-service model, more sickness has led to more revenue for some healthcare entities. However, in order to improve the health of the population, the payment system needs to incentivize providers, payers and consumers to achieve and maintain wellness. The goal is to "rig the system" so that it rewards individual and collective actions that lead to better health outcomes.

Health stakeholders are at various places along the continuum from patient care to population health. At the patient care end of the spectrum, providers typically encounter individuals once they are already sick. Activities toward the population health end of the spectrum are for broader groups of people, including many people who are well. The purpose of these activities is to help people stay well.

It is important to note that the goal of population health is not to replace individual patient care, but rather to supplement and integrate it with a comprehensive range of strategies that help all people live longer, healthier lives. High-quality patient care remains the cornerstone of an effective health system.

Everyone has a role to play

Because they reach beyond medical care to address the multiple determinants of health, population health strategies require partnerships between the healthcare and public health sectors and other entities including schools, employers, social service agencies, community-based and faith-based organizations, and regional planners to effectively improve the health of Ohioans.

There are a number of opportunities to leverage alignment between the public health and

healthcare sectors and other partners in Ohio, such as:

- Improved collaboration between hospitals and local health departments in conducting community health assessments, identifying community health priorities and implementing evidence-based population health strategies as part of their local health improvement plans
- Leveraging ACO and ACC models in Ohio that bring together multiple sectors, including local public health, healthcare providers, employers, and other partners to share financial responsibility for the health of an overall community
- Aligning Ohio's SIM Population Health Improvement Plan led by the Governor's Office of Health Transformation with the State Health Improvement Plan (SHIP) led by the Ohio Department of Health
- Improving data collection and sharing capabilities across health care and public health sectors and other partners

Reaching large numbers of people

The focus on groups of people across geographic areas rather than on patients means that population health strategies are designed to reach much larger numbers of people than are typically seen by providers within the healthcare system. Population health activities often reach those who are not currently receiving healthcare services, such as people who lack health insurance or adequate access to care, or those who are well and do not need frequent medical care. The population health approach encourages providers and insurers to consider the health of tomorrow's potential patients, in addition to today's patients. This broadens the time horizon for measuring outcomes and greatly increases the number of people included in health improvement initiatives.

Some are concerned that reaching everyone may lead to inefficient allocation of resources or "watered down" interventions. Understanding the distribution of health problems within a population and prioritizing services for at-risk areas, such as high-poverty zip codes, is one way to address this challenge. Another way to address this challenge is to implement policy and systems changes that reach everyone

in the community. Policies such as Ohio's smoke-free workplace law, for example, impact all Ohioans by changing social norms about tobacco and reducing exposure to secondhand smoke.

The Health Impact Pyramid is a useful framework for identifying a balanced set of population health strategies that include interventions delivered directly to individuals, as well as policy and system changes that impact larger numbers of people. As shown in Figure 5, activities toward the base of the pyramid require minimal individual effort and have the greatest leverage for improving health for large numbers of people, while activities toward the top of the pyramid require increased individual effort and reach smaller segments of the population.[6]

For example, interventions toward the top of the pyramid include educational sessions about how to reduce fall hazards in the home and fitness classes such as A Matter of Balance which help older people make changes to protect themselves from falls. These types of programs can be highly effective for individuals who follow through and make changes in their behavior and home environment, but they only reach those with access to the program. Toward the base of the pyramid, general improvements to housing conditions for low-income seniors, policies requiring grab bars and hand rails, and built environments that make it easy for seniors to remain active in their daily lives (such as safe sidewalks and crosswalks near grocery stores), are examples of strategies that impact a broader population. These types of strategies do not necessarily require individuals to be connected or compliant with a specific service or program. Comprehensive approaches that include strategies at each level of the pyramid are most likely to achieve sustainable improvements in population health.

Figure 5. **Health Impact Pyramid**
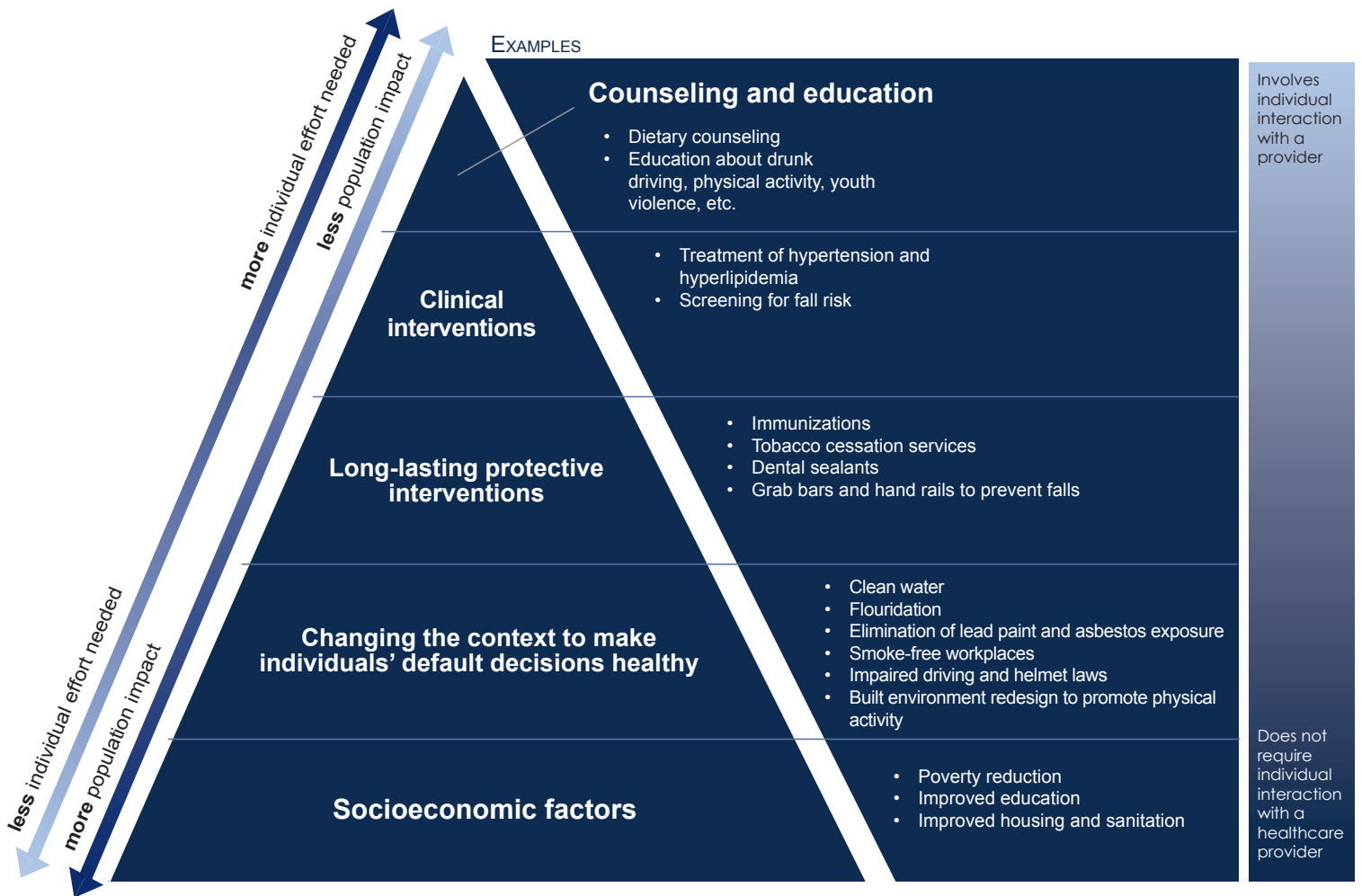
Source: Adapted from Frieden, Thomas R., "A framework for public health action: The Health Impact Pyramid." *American Journal of Public Health* 100, no, 4 (2010).

How is population health measured?

Length of life, as measured by mortality, and *quality of life*, as measured by health status and morbidity, are the ultimate population health outcomes. Researchers have identified many sets of indicators for measuring health behavior, the prevalence of disease and injury, overall wellbeing and health status, functioning, and mortality among geographically-defined populations.[7] Through the multi-stakeholder Health Measurement Initiative, HPIO has built upon existing measurement frameworks to develop the *Pathway to Improved Health Value* framework shown in Figure 6. The framework defines health value as the intersection of improved population health and sustainable health costs.

Figure 6. **Pathway to improved health value: A conceptual framework**
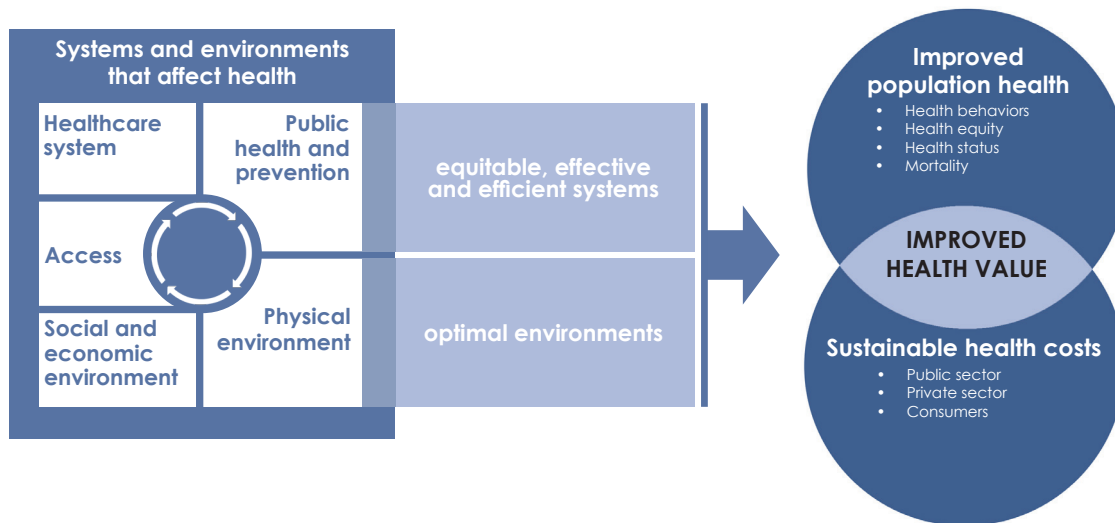
In 2013 and 2014, HPIO convened workgroups to select metrics for each domain in this framework. Figure 7 lists the metrics selected for the Population Health domain. HPIO will be reporting state-level data for these metrics in a Health Value Dashboard later in 2014.

Figure 7. **Population health metrics from the HPIO Health Value Dashboard**

Health behaviors	1. **Adult binge drinking.** Percent of adults who self-report having 4 or more (women) or 5 or more (men) alcoholic beverages on at least 1 occasion in the past 30 days (Behavioral Risk Factor Surveillance System)
	2. **Adult insufficient physical activity.** Percent of adults 18 years and older not meeting physical activity guidelines for muscle strength and aerobic activity (Behavioral Risk Factor Surveillance System)
	3. **Tobacco use**
	  a. **Youth all-tobacco use.** Percent of high school students who smoked cigarettes, cigars, cigarillos, or little cigars, or used chewing tobacco, snuff, or dip during past 30 days (Youth Risk Behavior Surveillance System)
	  b. **Adult smoking.** Percent of population age 18 and older that are current smokers (Behavioral Risk Factor Surveillance System)

Conditions and diseases	4. **Infant mortality.** Number of infant deaths per 1,000 live births (within 1 year) (CDC vital statistics) 5. **Cardiovascular disease mortality.** Number of deaths due to all cardiovascular diseases, including heart disease and strokes, per 100,000 population (CDC vital statistics) 6. **Youth obesity.** Percent of high school students who are obese (grades 9-12) (Youth Risk Behavior Surveillance System) 7. **Adult diabetes.** Percent of adults who have been told by a health professional that they have diabetes (Behavioral Risk Factor Surveillance System) 8. **Poor mental health.** Average number of days in the previous 30 days when a person indicates their mental health was not good (includes stress, depression, and problems with emotions; adults only) (Behavioral Risk Factor Surveillance System) 9. **Suicide deaths.** Number of deaths due to suicide per 100,000 population (CDC vital statistics) 10. **Drug overdose deaths.** Number of deaths due to drug overdoses per 100,000 population (CDC vital statistics) 11. **Poor oral health.** Percent of adults who have lost teeth due to decay, infection, or disease (Behavioral Risk Factor Surveillance System)
Overall health and wellbeing	12. **Overall health status.** Percent of adults that report fair or poor health (Behavioral Risk Factor Surveillance System) 13. **Limited activity due to health problems.** Average number of days in the last 30 days in which a person reports limited activity due to mental or physical health difficulties (ages 18 and older) (Behavioral Risk Factor Surveillance System) 14. **Premature death.** Years of Potential Life Lost before age 75 (YPLL-75) (CDC vital statistics)
Health equity	15. **Life expectancy by race/ethnicity.** Life expectancy at birth based upon current mortality rates (CDC vital statistics, as reported by Robert Wood Johnson Foundation DataHub)

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Note that the denominator for each of these metrics is all Ohioans, or Ohioans in specific age groups, rather than specific patient populations. Population health indicators are characterized by *numerators* that reflect "ultimate destinations" like death or overall health status (rather than outputs or process measures), and *denominators* that encompass all residents of a geographic area, or groups that are defined by demographic characteristics (such as age or race/ethnicity) rather than by use of a healthcare service or enrollment in an insurance plan.

Glossary of additional terms

Accountable Care Community (ACC) A broadened concept of accountable care organizations (see below) that includes other entities, such as community-based prevention organizations, local health departments, or social service providers, in addition to health care providers, in the group held accountable for performance .

Accountable Care Organization (ACO) A network of providers that collectively assumes responsibility for the care of a defined patient population and shares in payer savings if set quality and cost performance metrics are met. The provider network may also be at risk and bear financial responsibility for spending that exceeds target metrics.

Government public health system A network of administrative or service units of local, state, or the federal government as well as tribes and territories concerned with health and carrying responsibility for the health of a geopolitical jurisdiction. This governmental system is a central player within the public health system, but relies on an array of stakeholders to achieve total population health improvement .

Health A state of complete physical, social, and mental wellbeing, and not merely the absence of disease or infirmity .

Health disparities Differences in health status among distinct segments of the population including differences that occur by gender, race or ethnicity, education or income, disability, or living in various geographic localities .

Health equity The absence of differences in health that are caused by social and economic factors. Achieving health equity means that all people have the opportunity to achieve their full health potential, with no one at a disadvantage because of social or economic circumstances .

Health inequity A subset of health disparities that are a result of systemic, avoidable and unjust social and economic policies and practices that create barriers to opportunity .

Health value The combination of improved population health outcomes and sustainable health costs. Population health outcomes include: health behaviors, conditions and diseases, overall health and wellbeing and health equity. Health costs include: total costs and costs paid by employers, consumers, Medicare, Medicaid, and the public health and mental health systems.

HEDIS measures Healthcare Effectiveness Data and Information Set (HEDIS) measures are used by health plans to measure performance on important dimensions of health care and service including effectiveness of care, access/availability of care, experience of care, and service/resource utilization.

Policy, systems, and environmental change (PSEC) Policy, systems, and environmental change is a way to modify the environment to make healthy choices practical and available to all community members .

Prevention A systematic process that promotes healthy behaviors and reduces the likelihood or frequency of an incident, condition, or illness. Ideally, prevention addresses health problems before they occur, rather than after people have shown signs of disease or injury.

Primary prevention Efforts to prevent a disease, injury, or other heath problem from occurring in the first place.

Secondary prevention Efforts to detect health problems at an early stage and/or to slow or halt the progress of an existing disease, injury, or other problem.

Social determinants of health Conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. In addition to the social, economic, and physical conditions of a person's environment, social determinants also include patterns of social engagement and sense of security and well-being. Examples of resources that can influence (or, "determine") health outcomes include safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins .

Sub-population A group of individuals that is a smaller part of a population. Sub-populations can be defined by age, race, ethnicity, disabilities, gender, socio-economic status or other shared characteristics.

Tertiary prevention Prevention activities targeted to the person who already has symptoms and seeks to reduce further complications, increasing pain, or death.

Triple Aim A term used to describe an approach for enhancing health system performance. The goals of the Triple Aim, as conceptualized by the Institute for Healthcare Improvement are: improve the patient experience of care, improve health of populations, and reduce the per capita cost of health care .

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Notes

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2. Nash, Reifsnyder, Fabius and Pracilio (2011) as included in the Public Health Advisory Board Acronyms and Glossary of Terms, Version 1.0; Health Canada (1997) as cited by Dunn and Hayes (1999); Public Health Agency of Canada, http://www.phac-aspc.gc.ca/ph-sp/approach-approche/index-eng.php#What ; Jacobson and Teutsch, Public Health Institute and County of Los Angeles Department of Public Health (2012) 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
3. Kindig, David and Stoddart, Greg. *What is population health?* American Journal of Public Health. March 2003, Vol 93, NO. 3.
4. The World Health Organization Health Promotion Glossary. Geneva, Switzerland: World Health Organization, 1998.
5. Modified from National Academy for State Health Policy (NASHP) *Financing prevention*, 2014.
6. Frieden, Thomas R. A framework for public health action: The Health Impact Pyramid. *American Journal of Public Health* 100, no. 4 (2010).
7. Examples include: Institute for Healthcare Improvement, A guide to measuring the Triple Aim, 2012; Institute of Medicine, State of the USA Health Indicators: Letter report, 2008; America's Health Rankings; and County Health Rankings.