

PATHWAYS TO POPULATION HEALTH

An Invitation to Health Care Change Agents



PARTNERS




Stakeholder Health

AN INITIATIVE
FACILITATED BY



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In support of an unprecedented collaboration to create a health system that is good at health and good at care, the [100 Million Healthier Lives](#) team convened the Health Systems Transformation (HST) Hub. The HST Hub brings together more than 25 partner organizations that represent a wide array of perspectives in health care transformation. Over the past two years, the HST Hub has been examining the landscape of how health care organizations operationalize their work in population health. The HST Hub has been instrumental in the development of this framework, together with 40 health care leaders who convened at a design meeting in September 2017.

The following organizations/individuals have pooled their collective assets and expertise in service of creating practical tools for health care organizations to accelerate their population health improvement efforts:

[100 Million Healthier Lives Health Systems Transformation Hub members](#)

[September 2017 design meeting participants](#)

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Introduction

In the last decade, the health care sector has made great strides¹ on the journey to achieving the Triple Aim — the simultaneous pursuit of improving the experience of care, improving the health of populations, and reducing per capita costs of health care.² While health care leaders increasingly recognize the opportunity to improve the health of the communities they serve, the pathways to do so remain the roads less traveled. In the words of one CEO, “I’m on the bus for population health; in fact, I’m driving the bus. But I need help shifting my core business — all of which focuses on sick care — to focus on health and well-being. I need a roadmap to help me know how to do that.”

“Pathways to Population Health: An Invitation to Health Care Change Agents” is intended to support health care professionals in identifying opportunities for their organizations to make practical, meaningful, and sustainable advancements in improving the health and well-being of the patients and communities they serve. This resource is the product of a collaboration among five partner organizations: American Hospital Association/Health Research & Educational Trust, Institute for Healthcare Improvement, Network for Regional Healthcare Improvement, Public Health Institute, and Stakeholder Health. Together, we pooled our collective assets and expertise in service of helping health care organizations accelerate their individual and collective population health improvement efforts. With generous support from the Robert Wood Johnson Foundation, Pathways to Population Health is committed to providing a clearer and more coherent understanding of what it means for health care organizations to be on the journey toward population health. This collaboration is facilitated by [100 Million Healthier Lives](#), a movement of change agents working to transform the way we think and act to create health, well-being, and equity.

This resource is in service of our commitment to help chart the paths toward making practical, meaningful, and sustainable improvements in population health. By adopting a common language, co-creating a framework, and focusing on “the why, the what, and the how,” the five partner organizations aim to help health care change agents make improvements in health, well-being, and equity for patients, populations, and communities.

We also intend for this to be a living document that will evolve as promising concepts and strategies emerge during our shared work in the months and years ahead. We invite you to join us — as well as your colleagues, patients, and communities — on this journey.

This resource has three primary sections:

1. **Foundational Concepts and Creating a Common Language:** This section defines key concepts and terms that are foundational to understanding the journey to population health (the **WHY**);
2. **Portfolios of Population Health:** This section describes four interconnected portfolios of work that contribute to population health (the **WHAT**); and
3. **Levers for Implementation:** This section surfaces the levers that can be used to accelerate your progress within and across portfolios of work to improve population health (the **HOW**).

Foundational Concepts and Creating a Common Language

Foundational Concepts

The six concepts described below (also depicted in Figure 1) help lay the foundation for the Pathways to Population Health. They also articulate several reasons why many health care organizations have chosen to embark on this journey. The concepts represent an evolving understanding of what creates health and the ways in which health care organizations can engage.

Figure 1. Six Foundational Concepts of Pathways to Population Health



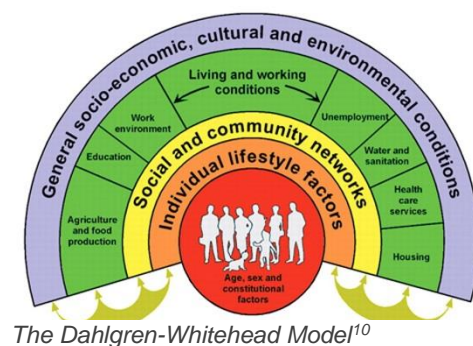
1. Health and well-being develop over a lifetime.

Numerous studies have demonstrated that the health and well-being of an individual begins forming before birth and develops throughout the life course, long before disease becomes manifest.^{3, 4, 5} Children who experience toxic levels of stress, for example, have a dose-dependent risk of developing poor health and life outcomes — with higher rates of cardiovascular disease (heart attacks, strokes), chronic disease (diabetes, asthma, mental illness, substance use disorders), and poor social well-being (poor educational attainment, unemployment, low income).⁶ Therefore, efforts to optimize health and well-being at every stage of life can be cost-effective in the long run.³ Resources, such as [LifeCourse Tools](#), provide individuals, families, and professionals with ideas for integrating supports across the life course.



2. Social determinants drive health and well-being outcomes throughout the life course.

Social determinants of health, as defined by the World Health Organization, are “the conditions in which people are born, grow, live, work and age.” They may enhance or impede the ability of individuals to attain their desired level of health.⁷ Social factors, such as racism, social isolation, violence, inadequate housing, and inadequate employment have a 50 percent higher contribution to poor health outcomes and premature death than health care access alone.^{8,9} This is not meant to minimize the vital role of health care, but rather to underscore the profound contribution of social factors in the lifelong development of health and well-being. The [County Health Rankings and Roadmaps model](#)^{11, 12} offers an example of the predicted impact of different factors (i.e., physical environment, social and economic, clinical care, health behaviors) on health and well-being. The model can be used to convey the influence that social determinants have on health outcomes. It also links to descriptions and statistics showing how different determinants contribute to health.



3. Place is a determinant of health, well-being, and equity.

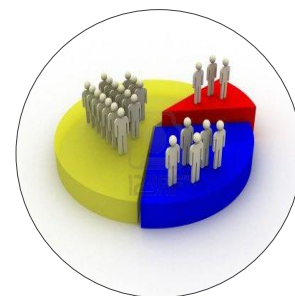
The health, well-being, and equity of people and the places where they live, learn, work, play, and pray are interrelated and connected to the systems (e.g., policies, infrastructure) underlying both. For example, children born in the same hospital who grow up two miles apart might have a 10- to 25-year difference in predicted life expectancy^{13, 14} because of place-based determinants of health. Health inequities appear to arise in part from a series of place-based historical and structural factors, such as redlining and zoning laws, which resulted in a lack of investment in places where communities of color frequently lived.¹⁵ This meant that businesses could not get favorable loans and didn’t invest in these areas because they were perceived to be “risky.” Lack of business investment leads to fewer jobs, a poorer tax base, poorer schools, poor public and social services — a host of conditions that lead to poor health outcomes. This kind of structural inequity is detailed in a report from the Prevention Institute, “[Countering the Production of Health Inequities](#),” which also surfaces potential actions that can be taken to move toward a more equitable culture of health.



RWJF Commission City Maps: New Orleans, LA¹⁶

4. The health system can respond to the key demographic shifts of our time.

The current health system was originally developed to respond to a different set of health needs — primarily infection and injury, the leading causes of death in the early 1900s. However, as the demographics of the US population have shifted substantially over time¹⁷, so too have the prevailing health needs. Today, an aging population¹⁷ and rising rates of obesity, mental illness, chronic disease, and inequity are considerable drivers of health outcomes and cost.⁹ One in five people suffer from [mental illness](#).¹⁸ Approximately 165,000 people have died from an opioid overdose since 1999, and 2 million people are currently suffering from opioid use disorder.¹⁹ By 2020, the cost of prediabetes and diabetes alone is projected to rise from \$322 billion to \$520 billion.²⁰



Such trajectories in the health of populations cannot and should not be “managed” solely at the individual level. Health systems are learning how to authentically partner to improve the health of individual patients and populations while also proactively addressing the social, structural, and clinical drivers of poor health outcomes. The Democracy Collaborative report, “[Can Hospitals Heal America’s Communities?](#)”²³ provides examples of how health systems are partnering with patients and populations to improve health and well-being.

5. The health system can embrace innovative financial models and deploy existing assets for greater value.

Deploying assets that already exist within health care organizations and communities, as well as embracing new and innovative financial models, can unlock resources to address health, well-being, and equity. Key strategies health care organizations have used are described below.



- Improve the lives of the health care workforce. This has the potential value of improving joy in work and organizational productivity while also reducing health insurance costs. With efforts like Healthy Monadnock’s [living wage campaigns](#), health care is increasingly learning to leverage its role as an employer to improve health, well-being, and equity.
- Remove waste from health care and reinvest the savings to create greater value for patients, populations, and communities. Many organizations have focused on reducing waste and reinvesting time, money, and resources into improving health and health care outcomes. Intermountain Healthcare, for example, accrued savings of \$500 million through waste reduction efforts and reinvested a portion of those savings into lower health insurance premiums.²¹
- Mobilize community benefit resources to address health inequities. Coalitions of hospitals in multiple states are aligning strategies to address the health, well-being, and equity needs of their regions. The [Milwaukee Health Care Partnership](#), for example, is a coalition of leading area health systems and public health agencies working together to identify, prioritize, and address the needs of those they serve. Since 2010, the health systems have collectively funded and designed a Community Health Needs Assessment. Together, they have explored the assets that each system, as well as community partners, can bring in service of eliminating siloes and reducing duplication of efforts.²²
- Leverage the role of purchaser to invest in local communities. Health care organizations purchase billions of dollars of food and goods each year to run hospitals and clinics, and they manage investment portfolios. By aligning institutional resources-like hiring, purchasing, investment, with community needs, they can have an impact on population health and equity. This kind of “anchor institution” approach, described in the Democracy Collaborative report, “[Can Hospitals Heal America’s Communities?](#)”²³ has great potential to substantially increase health care’s impact on local economies and social drivers of health and well-being.

6. Health creation requires partnership because health care only holds a part of the puzzle.

Health care clearly holds a key part of the puzzle to creating health, well-being, and equity. However, health systems cannot and should not assume the responsibility for doing so alone. The most effective, efficient, and sustainable way to improve population health is for health care organizations to develop the infrastructure, capacity, and relationships to partner effectively with those who hold the other pieces. In many cases, there are likely efforts already underway in communities that would benefit from investment and partnership as opposed to duplication and siloes. Health care organizations can begin by exploring the assets within their four walls, including patients and staff, as well as outside their walls, such as public health departments, social services, schools, churches, community development agencies, local businesses, and the legal system. It takes time to develop this understanding, along with the trust, governance structures, and policies to create an integrated endeavor. A number of case studies of hospital-community partnerships can be found in "[Hospital-Community Partnerships to Build a Culture of Health: A Compendium of Case Studies](#)," developed by Health Research & Educational Trust²⁴ and "[Stakeholder Health: Insights from New Systems of Health](#)."²⁵



Creating a Common Language

While there is no universally accepted definition of “population health,” the use of a common language is critical for all relevant stakeholders to come to shared agreement on who is the population of focus, what “health” encompasses, and the goals and expectations of any proposed collaboration to improve population health. The World Health Organization defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”²⁶

A commonly accepted definition of population health, as articulated by Drs. David Kindig and Greg Stoddardt, is “the health outcomes of a group of individuals, including the distribution of such outcomes within the group. These groups are often geographic populations such as nations or communities, but can also be other groups such as employees, ethnic groups, disabled persons, prisoners, or any other defined group.”²⁷ In an effort to increase fluency in the field, Table 1 contains a suggested list of key definitions.

Table 1. Definitions for Key Population Health Terminology

Population Health Concept and Definition	Source or Example
Social determinants of health – The conditions in which people are born, grow, live, work, and age. They may enhance or impede the ability of individuals to attain their desired level of health.	Source: World Health Organization ⁷
Health – A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. <i>Some people have adapted this definition to also include spiritual well-being.</i>	Source: World Health Organization ²⁶
Outcomes – The effect the process has had on the people targeted by it. These might include, for example, changes in their self-perceived health status or changes in the distribution of health determinants, or factors which are known to affect their health, well-being, and quality of life.	Source: World Health Organization ²⁸
Well-being – A positive outcome that is meaningful for people and for many sectors of society, because it tells us that people perceive that their lives are going well.	Source: Centers for Disease Control ²⁹
Equity – Everyone has a fair and just opportunity to be healthier. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and the lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.	Source: Robert Wood Johnson Foundation ³⁰
Health inequity – Differences in health outcomes between groups within a population that are systematic, avoidable, and unjust.	Source: Institute of Healthcare Improvement ³¹
Defined population – A group of people with something in common. They can be self-defined or defined by someone working with that population.	Examples: Members of a YMCA; patients of a health system; people belonging to a Native American tribe
Place-based population – A group of people who live in a geographically defined area (e.g., a neighborhood, city, county). All are impacted by policies, structures, and systems that are particular to the place they live.	Example: Residents of Beaufort County, South Carolina
Population health – The health outcomes of a group of individuals, including the distribution of such outcomes within the group.	Source: Drs. David Kindig and Greg Stoddard ³²
Population management – The delivery of health care services toward the achievement of specific health care-related metrics and outcomes for a defined population.	Source: Institute for Healthcare Improvement ³³
Population health improvement – Efforts to improve health, well-being, and equity for defined AND place-based populations.	Example: City-wide approach to mental wellness, including policies that help the whole population in addition to initiatives tailored to the needs of specific groups (e.g., Cambodian immigrants)
Community well-being creation – Efforts to proactively improve drivers of health, well-being, and equity within a place-based community.	Examples: Efforts to create jobs for people in a low-income neighborhood; a coordinated referral system for all homeless services in a community

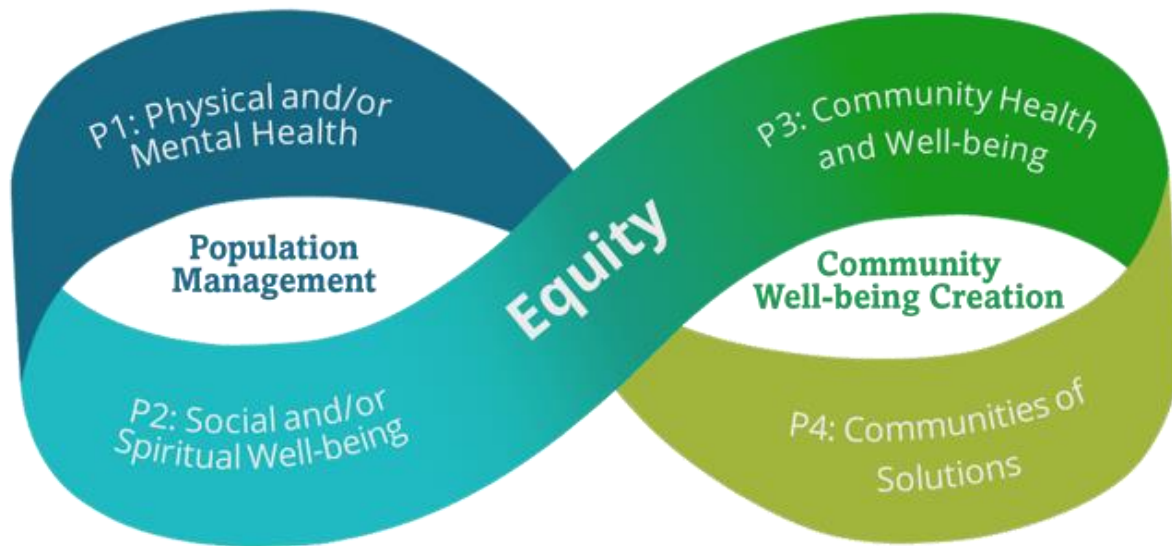
Portfolios of Population Health Framework

In 2014, Halfon and colleagues³⁴ described a path for the evolution of the US health care system from an Acute System 1.0 (episodic, non-integrated care) to a Coordinated Seamless Healthcare System 2.0 (outcome-accountable care) to a Community-Integrated Healthcare System 3.0. These stages mirror John Auerbach's three buckets of prevention — traditional clinical prevention, innovative clinical prevention, and total population or community-wide prevention.³⁵

The Portfolios of Population Health framework (see Figure 2) builds on this important foundation, with several modifications based on our experience with supporting health care organizations in their efforts to improve population health. Two major domains of work emerged: efforts focused on the health and well-being of defined populations for whom health care organizations feel directly responsible, such as patients or employees (Population Management); and efforts focused on the health and well-being of communities (Community Well-Being Creation). We further subdivided these domains into four Portfolios of Population Health on which improvement work is likely to focus. Together, these four interconnected portfolios represent a comprehensive scope of population health-related improvements a health care organization may pursue.

For meaningful transformation to occur within and across portfolios, factors such as partnering with those with lived experience and addressing equity, payment, and measurement are vital to success. These factors, and others, are discussed in detail in the Levers for Implementation section.

Figure 2. Portfolios of Population Health Framework



Description of Portfolios

In **Portfolio 1: Physical and/or Mental Health**, health care organizations are focused on improving the physical and/or mental health of individuals within a defined population for whom those organizations feel directly responsible (e.g., patients and/or employees).

Key activities within this portfolio include, but are not limited to, the following:

Optimize clinical care and treatment:

- **Patient empanelment and care management:** Develop a system in which a multidisciplinary care team is responsible for managing an identifiable panel of patients, including prevention, chronic disease management, and complex care management. This may require community-based interventions (e.g., patient navigators, community health workers) to support patients where they live and help them manage their health.
- **Access:** Ensure that patients have 24/7 access to a care team practitioner as well as access to their electronic medical records.
- **Relationship/continuity:** Develop mechanisms for long-term relationships between a patient, their family, and a care team to support behavior change over time.
- **Evidence-based practice:** Use a combination of current best evidence, clinical expertise, and patient values to guide decisions around care.
- **Risk stratification:** Develop a risk stratification process to segment your patient population based on needs and assets. Provide targeted, proactive, relationship-based care management for patients identified as at increased risk. Use a co-designed plan of care that is routinely assessed and updated by the care team.
- **Discharge/transfer procedures:** Develop systems to ensure a smooth transition between care settings and create methods to ensure that patients are contacted in a timely and coordinated manner (e.g., contact patients who are hospitalized within two business days, and ensure follow-up for ED visits within one week following discharge).
- **Behavioral health integration:** Develop a stepwise plan for integrating behavioral health into care and implement a chronic care approach to proactively manage patients with mental health issues.
- **Patient and family partnerships:** Create and regularly convene a Patient and Family Advisory Council (PFAC) to surface opportunities for improvement, and encourage patient/family participation in quality improvement efforts whenever possible.
- **Performance improvement:**
 - **Data utilization:** Identify and track clinical quality measures at the system, practice, and patient panel levels. Use this data to identify, drive, and sustain performance improvement.
 - **Evaluation:** Regularly review care provided to individuals against key measures and evidence-based practice guidelines. Review care for safety, effectiveness, timeliness, equity, and patient-centeredness.
 - **Improvement methods and tools:** Use an improvement approach to identify and test changes to improve clinical care and treatment."

Build community partnerships:

- Identify opportunities to leverage community-based programs and assets to improve health and well-being for patients and the community as a whole. Focus on interventions to address health conditions that are common in the community. For example, the Centers for Disease Control and Prevention 6/18 initiative³⁶ provides toolkits for 18 interventions with a strong evidence base to address 6 common health conditions: tobacco use, blood pressure, healthcare-associated infections, asthma, unintended pregnancy, and diabetes.

Example: Signature Healthcare in Brockton, Massachusetts, focused on improving health and well-being for the frail elderly Medicare segment of its patient population. The team improved access to care and extended appointment times after learning that 15-minute appointments were not adequate for this population. They focused on standardizing care in key areas such as falls prevention, cognition, functional assessments, social needs, depression, and end-of-life planning. In addition, Signature Health assessed available community resources and established partnerships for community services, many of which are free for patients and the health system. The services include visiting nurses, who can also conduct home safety evaluations; hospice and palliative care programs; the local branch of the Alzheimer's Association; and group self-help chronic disease management classes offered by the local branch of the National Association of Area Agencies on Aging. At weekly care plan meetings, the medical care team and community organization representatives match individual patients with local resources that can help meet their needs.¹

In **Portfolio 2: Social and/or Spiritual Well-Being**, health care organizations consistently screen for **and address the social and spiritual drivers of health and well-being for a defined population** (e.g., patients and/or employees). Social drivers encompass socioeconomic factors, such as food, housing, education, transportation, and income, as well as social connectedness. Spiritual drivers include factors that contribute to a sense of purpose, meaning, self-worth, hope, and resilience.³⁷

Key activities in this portfolio include, but are not limited to, the following:

- **Identify key social and spiritual drivers of health:** Use population needs assessment tools to identify key social and spiritual drivers that affect a defined patient population. Drivers may include income, housing, education, food access, transportation, and social connectedness.
- **Screen for social and spiritual needs and connect individuals to community resources:** Ensure mechanisms are in place to reliably screen for social service and spiritual needs, establish a referral system to match needs with community assets, and develop a process to track follow-through and progress.
- **Develop community partnerships:** Partner with local social-service agencies, faith communities, housing organizations, and other community-based organizations that have experience with addressing defined social and spiritual drivers.
- **Track improvements for the defined population:** Track identified social and/or spiritual well-being activities using defined and agreed-upon measures of progress, outcomes, and impact.

Example: Methodist Le Bonheur Healthcare in Memphis, TN works with congregations in its community to support the social and spiritual well-being of its patients. The Congregational Health Network (CHN) is a partnership between the hospital system, over 600 mostly African American congregations, and other community partners located in Memphis. The CHN engages trained volunteers from within the congregation (called Congregational Liaisons) to work closely with Community Navigators that are employed by the hospital. Together, they support patients after hospital discharge — answering questions, supporting follow-up care, and connecting patients with resources in the community. In addition, the CHN provides several community-based trainings for the congregations on health and well-being topics, including personal finance and healthy lifestyles. The CHN's work has shown decreases in inpatient costs^{38, 39} and improved readmission rates and utilization of both hospice and home health services⁴⁰ for those served by the CHN partner networks versus matched controls.

In **Portfolio 3: Community Health and Well-Being**, health care organizations work together with community partners to improve specific health and well-being outcomes for a place-based population, for instance, improving asthma care among elementary school children in Spartanburg, South Carolina. The area of focus for collaboration is deemed a priority both for the health care organization and the community.

Key activities in this portfolio include, but are not limited to, the following:

- **Collaboratively perform a community health needs assessment:** Partner with other organizations in the community (e.g., public health agencies, faith-based organizations, the United Way, etc.) as well as other health care organizations in the area to assess community strengths and assets, health-related needs and disparities, and identify specific opportunities for improvement.
- **Set goals and identify a collection of improvement projects:** Collectively identify concrete goals and select projects in service of achieving them. Ensure there is a “theory of change” with respect to how the identified efforts will help achieve the aim and how progress and success will be measured. Utilize tools such as a driver diagram to establish the rationale for the choices of projects and interventions.
- **Establish a learning and improvement system:** Understand the unique contributions that each stakeholder can make in service of achieving the goals, including those with lived experience (i.e., those most affected by an issue). Given that not all stakeholders may be involved in each project, it is important to ensure mechanisms are in place to share learnings and progress with one another. In addition to having a unified “theory of change,” the group should also explore the best methods to test, implement, and scale-up promising solutions and ensure that all stakeholders have the requisite improvement skills required to do so.
- **Create the enabling conditions for collective improvement:** Co-invest in infrastructure that facilitates collaboration and the sharing of data, improvement methods, learning, and resources.

Example: Proviso Partners for Health (PP4H), a coalition of local community groups in the suburbs west of Chicago, Illinois, includes the Loyola University Health System, Proviso-Leyden Council for Community Action, Proviso East High School, and the Quinn Community Center, among others. The coalition is addressing childhood obesity and increasing access to healthy food in the community. PP4H initiatives include school wellness committees, changes in school food environments, renovations to a community kitchen to teach healthy cooking and catering skills to Hispanic women, and an entrepreneurial garden to improve food access and showcase careers in the food service industry. These initiatives are having a noticeable impact on the community. For example, the changes in school food environments, such as the Grab 'N' Go Salads, have enabled the coalition to surpass their aim of increasing access to fruits and vegetables by 50 percent in one-third of the district's high schools.^{41, 42}

In **Portfolio 4: Community of Solutions**, health care organizations actively engage in contributing to the long-term, overall well-being of the community as part of their mission and responsibility. The Democracy Collaborative draws the distinction between a health care system making a *contribution* to the community versus considering itself *accountable* for all impacts it may have on community well-being, including its social, ecological, and economic footprints.²³ The health system does the latter by understanding traditional and nontraditional assets and roles it can play, and by working in partnership with other organizations and community members to build and steward a thriving community for all. While there is some overlap between Portfolios 3 and 4, the primary distinction is that in Portfolio 4, the health care organization and community partners are focused on long-term, overall well-being of the community as a whole beyond subpopulations or priority topics of focus. Key elements of this portfolio are described below, and a more complete description of the Community of Solutions approach is included in "[Overview of SCALE and a Community of Solutions.](#)"

Key activities in this portfolio include, but are not limited to, the following:

For health care organizations, individually:

- **Leverage nontraditional roles, levers, and assets:** Leverage roles such as a purchaser, employer, investor, and an environmental steward to improve overall community well-being.²³

For community coalitions, including health care organizations:

- **Identify stakeholders:** Understand which stakeholders are ready to be engaged as long-term stewards of the community's well-being.
- **Create a vision:** Work with community members to co-develop a concrete and motivating vision for the community.
- **Map community assets:** Work to understand assets in the community and use those assets in both traditional and nontraditional ways. For example, the community asset of school playing fields may be used (through a mechanism called joint-use agreements) as community spaces for gathering and recreation during non-school hours.
- **Develop distributed leadership:** Identify leaders at multiple levels in the community to drive change within each area of the coalition's portfolio.⁴³
- **Create a learning system:** Identify and use measures that are meaningful to multiple stakeholders in the community and develop a comprehensive learning system to drive the work.

- Address policy and system changes to promote health, well-being, and equity:** Actively address, advocate for, and advance the policies and system changes that will create sustainable, long-term improvement in health and well-being and address the historic root causes of inequity.

Example: University Hospitals in Cleveland, OH embraced the invitation to be accountable for the traditional and nontraditional ways they impact health in the community. The organization is part of the Greater University Circle Initiative, a unique, multi-stakeholder initiative in which partners deploy their resources together to foster economic development in the poorest seven zip codes surrounding their institutions. The initiative established goals for economic inclusion, including buy local, hire local, and live local (using employer-assisted housing programs to promote more stable neighborhoods). Leaders in the initiative emphasize the importance of giving a voice to residents about how resources are used. They support monthly resident-led events that attract hundreds of participants and focus on topics such as building resiliency, sharing job and housing opportunities, reinventing public space, addressing health and safety concerns, and creating healthy dialogue on race and inequality. As a result of their efforts, 5,200 jobs have been created and \$500 million has been infused into their communities. You can learn more about the governance structure, the strategies employed, and lessons learned in a case study produced by the Democracy Collaborative.²³

Table 2. Portfolios of Population Health

	Portfolio 1: Physical and/or Mental Health	Portfolio 2: Social and/or Spiritual Well-Being	Portfolio 3: Community Health and Well-Being	Portfolio 4: Communities of Solutions
Type of population	Defined	Defined	Place-based and defined	Place-based and defined
Focus of work	Proactively address mental and/or physical health for the population for which your organization is directly responsible (e.g., patients, employees)	Proactively address social and spiritual drivers for the population for which your organization is directly responsible (e.g., patients, employees)	Improvement of health, well-being, and equity focused on specific topics across a place-based or defined population	Whole community transformation with a focus on long-term structural changes needed for a thriving, equitable community
Example activities	Manage diabetes outcomes for a primary care panel; integrate mental health into primary care	Screen for and address social determinants of health in partnership with community social- service agencies; establish peer-to-peer supports	Engage in a multisector partnership to address food insecurity in key neighborhoods	Engage in a multisector partnership to create long-term structure, policy, and systems changes (e.g., preferred purchasing from minority-owned local businesses)

Considerations to Develop a Balanced Portfolio of Population Health Improvement Over-Time

The four portfolios connect and build on one another and are intended to represent a balanced portfolio of efforts that could be part of a health care organization's overall population health improvement strategy. Consider each portfolio to be a force multiplier — all four portfolios are necessary to achieve maximum impact. If one is missing or weak, it is likely that the health care organization is missing an important part of its optimal population health strategy.

In addition, the portfolios are not sequential and any portfolio can be a starting point. While most health care organizations will likely have a predominance of activities in Portfolio 1, our experience indicates that most organizations can identify some existing activity in all four portfolios, albeit often siloed. Health care organizations would be well-served to develop an asset map to identify activities already underway in all four portfolios, and then create a plan to develop a balanced portfolio of activities over time.

Finally, these portfolios are meant to be interconnected and synergistic. The more the activities across portfolios are balanced, the easier it may be to improve population health because each portfolio unlocks a set of relationships, capacities, and levers that a health care organization can use to create change.

Key Levers for Implementation

While describing four portfolios with concomitant activities is a great first step, there still exist considerable challenges in operationalizing activities in these portfolios and building synergies across them. Table 3 outlines proposed actions across a set of key levers deemed vital to accelerating improvements within and across portfolios. The actions are meant to build on one another, with actions described in Portfolio 1 also present in Portfolio 2, etc. For visual clarity, however, these actions are not repeated across portfolios; only those actions that are unique to each portfolio are included in Table 3.

Table 3. Key Levers for Health Care Organizations to Accelerate Improvements Within and Across Portfolios of Population Health

	Portfolio 1: Mental and/or Physical Health	Portfolio 2: Social and/or Spiritual Well-Being	Portfolio 3: Community Health and Well-Being	Portfolio 4: Communities of Solution
Roles to leverage	<ul style="list-style-type: none"> • Care deliverer • Employer • Insurer 	<ul style="list-style-type: none"> • Social service and community connector 	<ul style="list-style-type: none"> • Community partner • Community needs and assets assessor • Community funder (community benefit) • Community co-improver 	<ul style="list-style-type: none"> • Community steward (in partnership with others), leveraging roles as: <ul style="list-style-type: none"> ○ Purchaser ○ Employer ○ Investor ○ Policymaker ○ Advocate
Relationships	<ul style="list-style-type: none"> • Partnerships are in place with agencies representing specific patient cohorts (e.g., National Alliance on Mental Illness, American Diabetes Association, etc.) 	<ul style="list-style-type: none"> • Partnerships are in place with agencies defined by the social service they provide (e.g., Alcoholics Anonymous, food bank, Union Mission, etc.) 	<ul style="list-style-type: none"> • Partnerships are in place with community-based organizations needed to effect change in a defined health or well-being topic (e.g., YMCA) 	<ul style="list-style-type: none"> • Partnerships are in place with agencies that focus beyond sectarian or defined areas (e.g., United Way, ministerial organizations, mayor's office, etc.)
Governance	<ul style="list-style-type: none"> • Governance model is shifted toward educating and engaging board members to provide input prior to decisions on care redesign and related health care transformation processes • Shared governance includes patients and families 	<ul style="list-style-type: none"> • Competencies of the board are developed and adjusted to support transition from an acute or primary care provider to a community-engaged institution • Shared governance includes social sector, community, and faith-based agencies 	<ul style="list-style-type: none"> • A diverse, competency-based committee informs the design and monitors the impact of comprehensive community health improvement strategies • Shared governance includes partnership in multisector community coalitions 	<ul style="list-style-type: none"> • Health system commits to being part of an independent governing board focused on health and well-being improvement that supports resource pooling, proactive investment, and shared ROI

	Portfolio 1: Mental and/or Physical Health	Portfolio 2: Social and/or Spiritual Well-Being	Portfolio 3: Community Health and Well-Being	Portfolio 4: Communities of Solution
Financing models	<ul style="list-style-type: none"> • Payment mechanisms are in place that fund or incentivize health care organizations to meet improvement goals for patients under their care • Examples include: pay for performance, bundled payments, shared savings, global budget models, ACOs, and primary care capitation 	<ul style="list-style-type: none"> • Payment mechanisms are in place that fund or incentivize health care organizations to address social determinants of health and well-being • Examples include: payment for screening for and connecting people with appropriate services, population health goals in payment contracts with insurers, accountable health communities grants, and philanthropic grants 	<ul style="list-style-type: none"> • Payment mechanisms are in place that can fund coordinated and collaborative population health improvement efforts between organizations within a community • Examples include: Health care organization board investment and community benefits, wellness trusts (funding pools raised to support prevention interventions),⁴⁴ braided funds (using multiple funding streams to pay for services or interventions),⁴⁵ and shared assets 	<ul style="list-style-type: none"> • Payment mechanisms are in place that coordinate population health efforts within a community, with an emphasis on cross-sector financing and reinvestment • Examples include: integrated, community-wide social investment and funds set aside by purchasers (including government) to build population health infrastructure
Policy	<ul style="list-style-type: none"> • Regulations require insurers to choose consistent, meaningful quality metrics that focus on outcomes (as opposed to process) and increase the amount of health care spending that goes to primary care 	<ul style="list-style-type: none"> • Policies are in place that make it easier for health care providers to connect patients to needed services outside of health care • The curriculum of health professional training is mandated to emphasize cross-sector collaboration 	<ul style="list-style-type: none"> • Policies are in place that make it easier for health systems to share data with public health departments (including addresses, a personal identifier) and other sectors • Health care organizations advocate for policies to improve community environments 	<ul style="list-style-type: none"> • Policies are in place that make it easier for community integrators to play the role of data “stewards” for population health improvement

	Portfolio 1: Mental and/or Physical Health	Portfolio 2: Social and/or Spiritual Well-Being	Portfolio 3: Community Health and Well-Being	Portfolio 4: Communities of Solution
Data	<ul style="list-style-type: none"> • Cost and quality data is collected on physical and mental health and used for population health management and performance improvement efforts • Data might include: # of ED visits, 30-day readmissions, mental health markers • Data is accessible across the continuum of care in the health system • Patient data on race, ethnicity, language, and social risk factors is collected and used to reduce disparities in patient care 	<ul style="list-style-type: none"> • Data is collected on financial, social, and spiritual well-being • Supplemental data is obtained from other sources such as the American Community Survey, including median income, crime rate, and unemployment level in the individual's neighborhood or census block • Data is shared across the health system and with social service or referral agencies (e.g., a data field on affiliated congregation is used to support faith-health partnerships) • Patient data on race, ethnicity, language, and social risk factors is collected and used in partnership with social service agencies to reduce disparities in social and spiritual well-being 	<ul style="list-style-type: none"> • Data is collected at the community level on health and well-being and is used to prioritize initiatives, set clear aims, and measure improvement • Community-level data is shared with partners in the community • Data on health and well-being is stratified and used to identify opportunities to address inequities in particular populations in the community 	<ul style="list-style-type: none"> • Data on health and well-being in the community is collected as part of a comprehensive measurement framework and is used to set system-level priorities and focus on sustainability • Community-level data is systematically shared across the community, with, for example, public health departments, community planners, community members, anchor institutions, and other sectors

	Portfolio 1: Mental and/or Physical Health	Portfolio 2: Social and/or Spiritual Well-Being	Portfolio 3: Community Health and Well-Being	Portfolio 4: Communities of Solution
Equity	<ul style="list-style-type: none"> • Health equity is a strategic priority for the health care organization • Infrastructure is developed to support health equity work that is funded and includes data infrastructure to stratify data by race, ethnicity, language, and other relevant sociodemographic factors (e.g., sexual orientation, gender identity, etc.) • The organization is focused on eliminating institutional racism by building staff knowledge and skills in this area through trainings, and by assessing and improving organizational policies and practices that disproportionately impact outcomes for communities of color and other marginalized populations 	<ul style="list-style-type: none"> • Efforts are in place to build awareness and provide education about equity and disparity reduction related to social and spiritual well-being • The organization actively seeks out community partners that are already working to advance equity and address social determinants of health 	<ul style="list-style-type: none"> • Community data are stratified based on key sociodemographic factors (including geographic location) and used to close identified equity gaps • The organization invests in and works alongside community organizations that address equity and social determinants of health 	<ul style="list-style-type: none"> • The organization advocates for equity-promoting policies as well as changes to local and state policies that may exacerbate inequities

	Portfolio 1: Mental and/or Physical Health	Portfolio 2: Social and/or Spiritual Well-Being	Portfolio 3: Community Health and Well-Being	Portfolio 4: Communities of Solution
Partner with people with lived experience	<ul style="list-style-type: none"> • Patients and family members are engaged in identifying, prioritizing, and participating in improvement efforts and are advocating at the leadership level for system change • The organization learns about the root causes of utilization and the assets that can be leveraged to improve outcomes by understanding the lives of the people served (via patient and family interviews, clinical input, and reviewing all available data on the population of focus) 	<ul style="list-style-type: none"> • Efforts that are meant to address social and/or spiritual drivers of well-being are created in partnership with those who stand to benefit the most • Peer-to-peer support networks are created and expanded 	<ul style="list-style-type: none"> • Improvement efforts are conducted to address disparities in partnership with people affected — this requires involving community residents not only in identifying needs, but also in designing and implementing solutions and engaging their peers 	<ul style="list-style-type: none"> • People with lived experience are engaged as senior leaders and champions in community-wide improvement efforts, including design, implementation, and evaluation of community efforts

Conclusion

Changing population health needs, evolving science, and the readiness of health care organizations and key partners in the community are converging to create the current conditions for transformative change in population health. We hope this resource and supplemental tools available at www.pathways2pophealth.org will help your health care organization make progress in improving health, well-being, and equity in partnership with your patients and communities. We commit to learning and improving with you along the way.

Bibliography

1. Whittington JW, Nolan K, Lewis N, Torres T. Pursuing the Triple Aim: The first seven years. *Milbank Quarterly*. 2015;93(2):263-300.
2. Berwick D, Nolan T, Whittington J. The Triple Aim: Care, health, and cost. *Health Affairs*. 2008 May/June;27(3):759-769.
3. Shonkoff J, Garner A. The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*. 2012;129(1).
4. Halfon N, Hochstein M. Life course health development: An integrated framework for developing health, policy, and research. *Milbank Quarterly*. 2001;80(3):433-479.
5. Braverman P, Egerter S, Arena K, Aslam R. *Early Childhood Experiences Shape Health and Well-Being Throughout Life*. Princeton, NJ: Robert Wood Johnson Foundation; 2014. Retrieved from: <https://www.rwjf.org/en/library/research/2014/08/early-childhood-experiences-shape-health-and-well-being-througho.html>
6. Centers for Disease Control and Prevention. *About Behavioral Risk Factor Surveillance System ACE Data*. April 1, 2016. Retrieved from: https://www.cdc.gov/violenceprevention/acestudy/ace_brfss.html
7. World Health Organization. *Social Determinants of Health*. 2017. Retrieved from: http://www.who.int/social_determinants/sdh_definition/en/
8. McGinnis M, Foege W. Actual causes of death in the United States. *Journal of the American Medical Association*. 1993;270(18):2207-2212.
9. Murray C, Atkinson C, Bhalla K, et al. The state of US health, 1990-2010: Burden of diseases, injuries, and risk factors. *Journal of the American Medical Association*. 2013;310(6):591-608.
10. Dahlgren G, Whitehead M. *Policies and Strategies to Promote Social Equity in Health*. Stockholm, Sweden: Institute for Futures Studies; 1991.
11. Hood C, Gennuso K, Swain G, Catlin B. County Health Rankings: Relationships between determinant factors and health outcomes. *Am J Prev Med*. 2016;50(2):129-135.
12. University of Wisconsin Population Health Institute. *County Health Rankings & Roadmaps*. 2017. Retrieved from: www.countyhealthrankings.org
13. Arkin A, Braverman P, Egerter S, Williams D. *Time to Act: Investing in the Health of Our Children and Communities: Recommendations from the Robert Wood Johnson Foundation Commission to Build a Healthier America*. Princeton, NJ: Robert Wood Johnson Foundation; 2014.
14. Haley, A., Emily Zimmerman, S. Woolf, and B. Evans. *Neighborhood-level determinants of life expectancy in Oakland*. California, Technical Report, Center on Human Needs, Virginia Commonwealth University, Richmond, Virginia, 2012.
15. Davis R, Savannah S, Yañez E, et al. *Countering the Production of Inequities to Achieve an Equitable Culture of Health: Extended Summary*. Oakland, CA: Prevention Institute; 2016.
16. Robert Wood Johnson Foundation Commission to Build a Healthier America. *Metro Map: New Orleans, LA*. 2014. Retrieved from: <http://www.buildhealthyplaces.org/resources/rwjf-commission-city-maps/>
17. He W, Goodkind D, Kowal P. *An Aging World: 2015*. US Census Bureau. Washington, DC: US Government Publishing Office; 2016.
18. Health and Human Services. (n.d.). *MentalHealth.gov*. Retrieved from: <https://www.mentalhealth.gov/basics/what-is-mental-health/index.html>
19. National Institute on Drug Abuse. *Overdose Death Rates*. January 2017. Retrieved from: <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>
20. American Diabetes Association. *The Staggering Cost of Diabetes*. July 2017. Retrieved from: <http://www.diabetes.org/diabetes-basics/statistics/infographics/adv-staggering-cost-of-diabetes.html>
21. Intermountain Healthcare. *Reducing Costs by Improving Quality*. 2017. Retrieved from: <https://intermountainhealthcare.org/about/transforming-healthcare/reducing-costs-by-improving-quality/>
22. Butcher L. Case study: Milwaukee health systems partner to identify and address community health needs. *Hospitals & Health Network*; October 2017. Retrieved from: <https://www.hhnmag.com/articles/8628-case-study-milwaukee-health-systems-partner-to-collectively-identify-and-address-community-health-needs>
23. Norris T, Howard T. *Can Hospitals Heal America's Communities?* Democracy Collaborative; 2015.

24. Health Research & Education Trust. *Hospital-Community Partnerships to Build a Culture of Health: A Compendium of Case Studies*. August 2017. Retrieved from: <http://www.hpoe.org/Reports-HPOE/2017/hospital-community-partnerships-case-study-compendium.pdf>
25. Cutts TF, Cochrane JR (eds). *Stakeholder Health: Insights from New Systems of Health*. Stakeholder Health; 2016. Retrieved from: <https://stakeholderhealth.org/the-book/>
26. Grad FP. The preamble of the constitution of the World Health Organization. *Bulletin of the World Health Organization*. 2002;80(12):982.
27. Kindig D, Stoddart G. What is population health? *American Journal of Public Health*. 2003;93(3):380-383.
28. World Health Organization. *Health Impact Assessment (HIA) Glossary of Terms Used*. 2017. Retrieved from: <http://www.who.int/hia/about/glos/en/index1.html>
29. Centers for Disease Control and Prevention. *Health-Related Quality of Life (HRQOL): Well-Being Concepts*. May 2016. Retrieved from: <https://www.cdc.gov/hrqol/well-being.htm>
30. Braverman P, Arkin E, Orleans T, Proctor D, Plough A. *What Is Health Equity? And What Difference Does a Definition Make?* Princeton, NJ: Robert Wood Johnson Foundation, 2017.
31. Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. *Achieving Health Equity: A Guide for Health Care Organizations*. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2016. (Available at ihi.org)
32. Kindig, DA, Stoddart G. What is population health? *American Journal of Public Health*. 2003;93(3):366-369.
33. Loehrer S, Lewis N, Bogan M. Improving the health of populations: A common language is key. *Healthcare Executive*. 2016 Mar;31(2):82-83.
34. Halfon N, Long P, Chang D, Hester J, Inkelas M, Rodgers A. Applying a 3.0 transformation framework to guide large-scale health system reform. *Health Affairs*. 2014;33(11):2003-2011.
35. Auerbach J. The three buckets of prevention. *Journal of Public Health Management & Practice*. 2016;22(3):215-218.
36. Centers for Disease Control and Prevention. *The 6/18 Initiative: Accelerating Evidence into Action*. October 2017. Retrieved from: <https://www.cdc.gov/sixteen/index.html>
37. Gunderson G, Cutts T, Cochrane J. *The Health of Complex Human Populations*. Washington, DC: National Academies of Science, Engineering, and Medicine; 2015. Retrieved from: <http://nam.edu/perspectives-2015-the-health-of-complex-human-populations/>
38. Cutts T. The Memphis Congregational Health Network model: Grounding ARHAP theory. In: Schmid B, Cochrane JR, Cutts T (eds). *When Religion and Health Align: Mobilizing Religious Health Assets for Transformation*. Pietermaritzburg, South Africa: Cluster Publications; 2011.
39. Cutts T, Rafalski E, Grant C, et al. Utilization of hot spotting to identify community needs and coordinate care for high-cost patients in Memphis, TN. *Journal of Geographic Information Systems*. 2014;6:23-29.
40. Barnes P, Cutts T, Dickinson S, Guo H, Squires D, Bowman S, Gunderson G. Methods for managing and analyzing electronic medical records: A formative examination of a hospital-congregation-based intervention. *Population Health Management*. 2014;17(5):279-286.
41. Proviso Partners for Health. *PP4H Healthy Food Access and Economic Development*. Retrieved from: <https://insight.livestories.com/s/v2/pp4h-healthy-food-access-and-economic-development/b79633cf-b624-4080-9c6c-e78d3637b65e/>
42. Andreoni V, Kouba J, Hatchett L, Sigman G. *Proviso Partners for Health: A Community Approach to Childhood Obesity*. 2015.
43. McAndrews C, Kunreuther F, Brinznick S. *Structuring Leadership: Alternative Models for Distributing Power and Decision-Making in Nonprofit Organizations*. New York, NY: Building Movement Project; 2011.
44. Solomon L. Fast fact: Wellness trusts are an innovative way to fund prevention and health equity efforts. *Build Health Places Network Blog*. July 28, 2016. Retrieved from: <http://buildhealthyplaces.org/whats-new/wellness-trusts-innovative-way-fund-prevention-health-equity-efforts/>
45. Spark Policy Institute. *Blending and Braiding Toolkit*. 2014. Retrieved from: <http://tools.sparkpolicy.com/overview-blending-braiding/>