Improving population health planning in Ohio

Prepared by the Health Policy Institute of Ohio for the Ohio Governor's Office of Health Transformation, Ohio Department of Health and Ohio Department of Medicaid

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Executive summary

Background, purpose and objectives

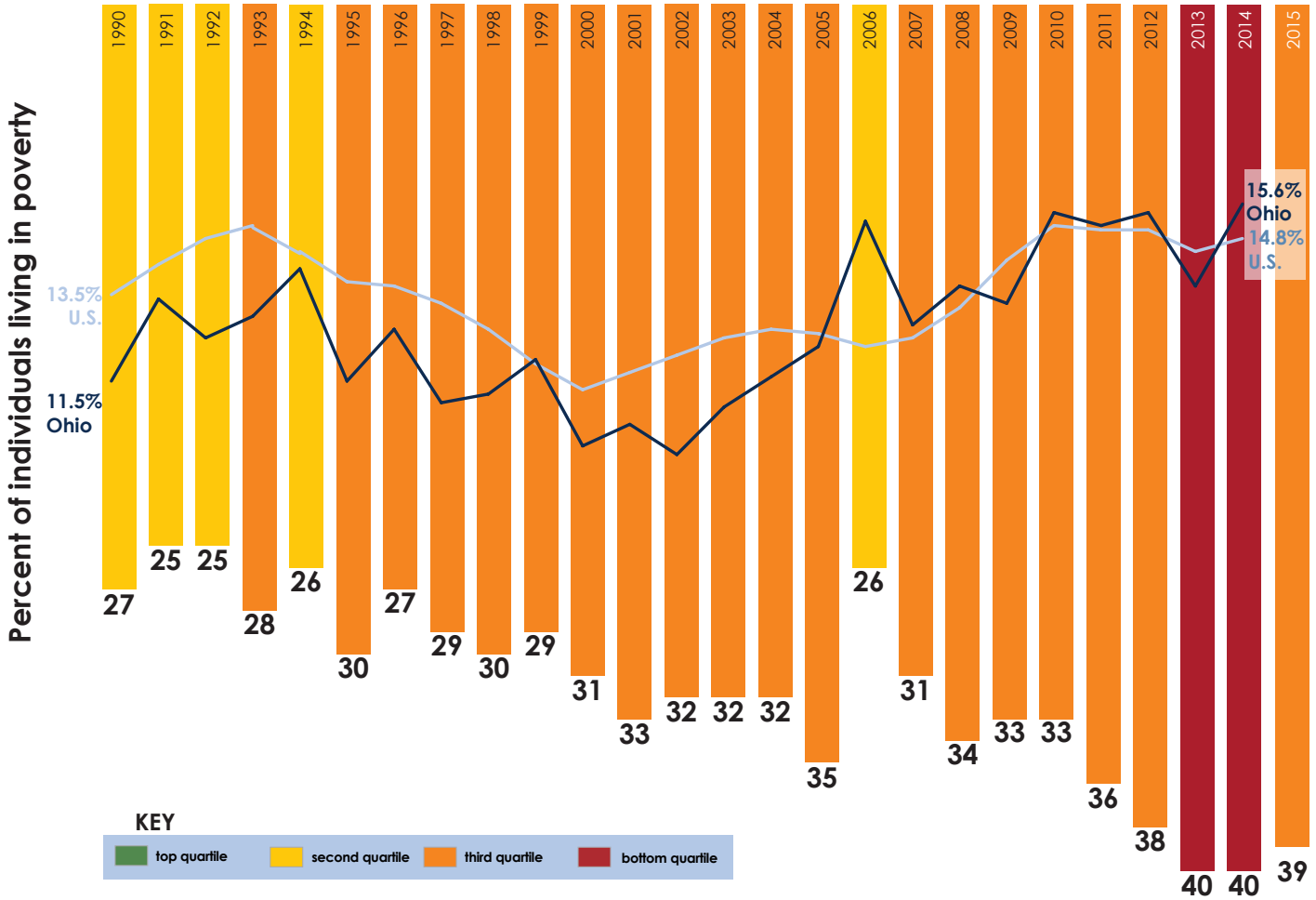
Over the past few decades, Ohio's performance on population health outcomes has steadily declined relative to other states (see Figure ES.1). Ohio also has significant disparities for many health outcomes by race, income and geography, and spends more on health care than most other states.[1]

The federal State Innovation Model (SIM) project provides an unprecedented opportunity to address these challenges. In December 2014, the federal Center for Medicare and Medicaid Innovation (CMMI) awarded Ohio a four-year $75 million SIM test grant for implementation of episode-based payments and rollout of a state-wide patient-centered medical home (PCMH) model over a four-year period. Ohio must also develop a population health plan.

In September 2015, the Ohio Department of Medicaid (ODM) and Ohio Department of Health (ODH) contracted with the Health Policy Institute of Ohio (HPIO) to facilitate stakeholder engagement and provide guidance on improving population health planning. The primary objectives for the project were to:

- Provide recommendations to strengthen the population health planning and implementation infrastructure
- Align population health priority areas, measures, objectives and evidence-based strategies with the design and implementation of the PCMH model

Figure ES.1. **Ohio's rank in America's Health Rankings from 1990 to 2015**



Source for poverty rate: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements, Historical Poverty Tables — People.

Stakeholder engagement process

HPIO convened stakeholder meetings in October and November 2015 to inform the project objectives (see Figure ES.2). Group member lists and all meeting materials are posted on the **HPIO website**.

Figure ES.2. **Stakeholder groups**

	Population Health Planning Advisory Group	Population Health Infrastructure Subgroup
Number of participants	42	34
Number of meetings	4	2
Types of organizations represented*	• Local health departments • Hospitals • Healthcare and behavioral health providers • Healthcare purchasers • Health insurance and managed care plans • Consumer advocates • Philanthropy	• Local health departments • Hospitals

*Representatives from the Governor's Office of Health Transformation, Ohio Department of Medicaid and Ohio Department of Health participated in both groups.

Ohio's population health planning infrastructure

Population health planning is a collaborative process to assess and prioritize a population's most significant health needs and develop and implement plans and strategies to address those needs. This project focused on improving Ohio's population health planning infrastructure within the context of the following requirements:

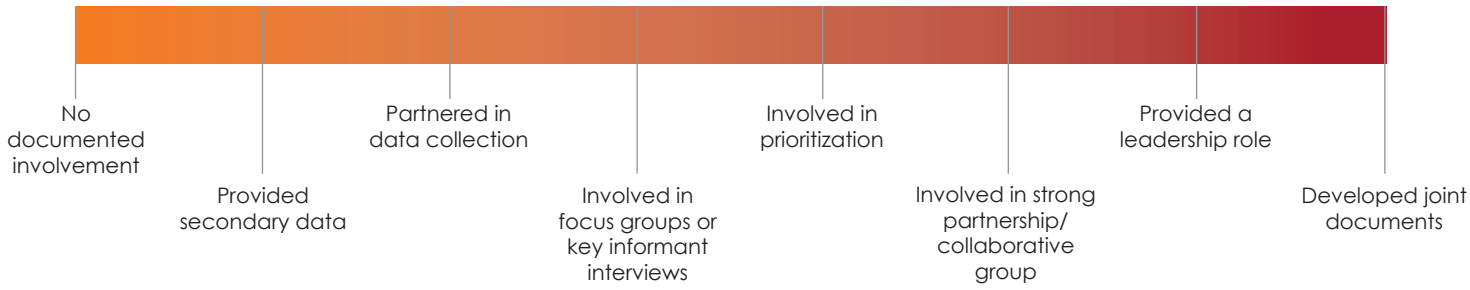
- State health departments are required to develop a state health assessment (SHA) and a state health improvement plan (SHIP) at least every five years for accreditation by the Public Health Accreditation Board (PHAB).[2]
- Local health departments must be PHAB accredited by 2020 and conduct community health assessments (CHAs) and community health improvement plans (CHIPs) as a prerequisite for PHAB accreditation.[3]
- Tax-exempt 501(c)(3) charitable hospital organizations under the Internal Revenue Code (IRC) are required to conduct a community health needs assessment (CHNA) and adopt an implementation strategy (IS) every three years.[4]

Current status and key challenges

Under this relatively new policy landscape, requirements for the SHA and SHIP largely parallel assessment and planning requirements for local health departments and 501(c)(3) tax-exempt hospitals. However, there are missed opportunities at the state and local level to conduct population health planning in a more integrated, meaningful and effective way. Ohio's population health planning infrastructure faces a number of key challenges including:

- A 2011 SHA and a 2012-2014 SHIP that lack clearly defined priorities, objectives, implementation strategies and an ongoing evaluation and communication plan
- Wide variation along a continuum of collaboration (see Figure ES.3.) between local health departments and hospitals within the same community, due in part to misaligned timelines and varying definitions of communities served
- Inefficient data collection and sharing of both population-level and clinical data between local health departments and hospitals
- Limited implementation of evidence-based community health improvement activities,
- Inadequate and fragmented funding for community health planning activities
- Unclear standards for tracking progress and evaluating the impact of implemented activities.

Figure ES.3. **Continuum of collaboration between local health departments and hospitals**



Source: HPIO and the Ohio Research Association for Public Health Improvement analysis of local health department and hospital community health planning documents, March 2015. For more information, see HPIO's publication "Making the most of community health planning in Ohio: The role of hospitals and local health departments."

What is population health?

The advisory group adopted the following definition of population health:

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.

This definition was developed by a group of Ohio healthcare and public health stakeholders HPIO convened in 2014. See the HPIO policy brief, **What is "population health"?** for more detail on Ohio's consensus on the key characteristics of population health strategies.

Summary of recommendations for state health assessment (SHA) and state health improvement plan (SHIP)

HPIO reviewed best practices and facilitated discussions to identify ways to improve Ohio's SHA and SHIP. The recommendations summarized in Figure ES.4 are intended to inform development of the next iteration of the SHA and SHIP in early 2016.

Overarching goal for improving population health planning by the state health department, local health departments and hospitals

Improve the health of Ohioans by deploying a strategic set of evidence-based, upstream population heath activities at the scale needed to measurably improve population health outcomes.

Figure ES.4. **Summary of state health assessment (SHA) and state health improvement plan (SHIP) recommendations**

Cross-cutting recommendations for the SHA and SHIP		
1.	**Conceptual framework**	The SHA and SHIP should be guided by a broad conceptual framework that includes the social determinants of health, health equity and a life-course perspective.
2.	**Leadership and cross-sector engagement**	The SHA and SHIP development process should engage leadership from within the Ohio Department of Health and other state agencies and include input from sectors beyond health.
3.	**Fostering alignment with local assessments and plans**	The SHA and SHIP should be designed to provide statewide leadership on population health goals and to foster alignment between state and local-level planning.
SHA recommendations		
4.	**Existing data**	The SHA should build upon existing information about Ohio's health needs.
5.	**Metric selection**	The SHA should select metrics based upon specific prioritization criteria, resulting in a set of metrics that the state will use to monitor progress on the SHIP and that local partners can use in their own assessments.
6.	**Communicating findings**	The SHA should summarize and synthesize the findings in a compelling format that puts data into context and directly informs the SHIP.
SHIP recommendations		
7.	**Existing plans**	The SHIP should build upon related state-level plans.
8.	**Prioritization process**	The SHIP should select health priority areas based upon specific prioritization criteria, resulting in a set of priorities concise enough to drive targeted action to "move the needle" on a strategic set of health outcomes.
9.	**Objectives and evaluation**	The SHIP should include measurable objectives, an evaluation framework and mechanisms for ongoing monitoring and communication of progress.
10.	**Evidence-based strategies**	The SHIP should include evidence-based strategies that link primary care with community-based population health activities and address upstream social determinants of health.
11.	**Implementation and financing**	The SHIP should specify how selected strategies will be implemented and financed.

Figure ES.5. **Summary of recommendations for population health planning infrastructure**

Recommendation 1. State health assessment (SHA) and state health improvement plan (SHIP) and local level (local health department and hospital) assessment and plan alignment	
1a. Health priorities	State **issues guidance** encouraging local health departments and tax-exempt hospitals to address at least two health priorities in their plans from a menu of priorities identified in the SHIP (referred to hereinafter as SHIP-aligned priorities). *Guidance issued by July 2016*
1b. Measures	State **issues guidance** encouraging local health departments and tax-exempt hospitals to include at least one core metric from the SHA and SHIP in their assessments and plans for each SHIP-aligned priority. *Guidance issued by July 2016*
1c. Evidence-based strategies	State **issues guidance** encouraging local health departments and tax-exempt hospitals to select evidence-based strategies from a menu of strategies in the SHIP to address SHIP-aligned priorities. *Guidance issued by July 2016*
Recommendation 2. Hospital and local health department alignment	
2a. Collaboration on assessments and plans	State **issues guidance** encouraging local health departments and tax-exempt hospitals in the same counties or with shared populations to partner on assessments and plans through a common: • Conceptual framework • Process template or checklist • Set of metrics (including metrics tracking racial and ethnic disparities) • Health prioritization criteria • Set of health priorities • Set of objectives • Set of evidence-based strategies that can be implemented in community-based and clinical settings • Evaluation framework • Accountability plan • Exchange of data and information *Guidance issued by July 2016*
2b. Timeline	State **requires** local health departments and tax-exempt hospitals to align with a three-year timeline for assessments and plans. Local health department and hospital plans covering years 2020-2022 and their related assessments must be submitted to the state in 2020 and every three years thereafter (in 2023, 2026, etc.). *Requirement issued by July 2016, effective in 2020 per subsequent guidance*
Recommendation 3. Funding	
3a. State funding for county-level assessments and plans	To defray the cost of transitioning to a three-year assessment and planning cycle, the state will **seek additional funding** for local health departments that choose to collaborate on one county-level assessment and plan. Local health departments can pool together this additional funding to support development of multi-county collaborative assessments and plans. *Funding and disbursement methodology identified by July 2016*
3b. Hospital community benefit	State **issues guidance** encouraging tax-exempt hospitals to allocate a minimum portion of their total community benefit expenditures to activities that most directly support community health planning objectives, including community health improvement services and cash and in-kind contributions. *Guidance issued by July 2016*
Recommendation 4. Transparency and accessibility	
4a. Assessments and plans	• State **requires** local health departments and tax-exempt hospitals submit their assessments and plans to the state. • State provides online repository of all assessments and plans. *Requirement issued by July 2016, effective in 2017 and every three years thereafter*
4b. Schedule H	• State **requires** tax-exempt hospitals to submit to the state their Schedule H and corresponding attachments, including reporting on each category of expenditures in Part I, Line 7(a)-(k) and Part II of the Schedule H on an annual basis. (Government hospitals with "dual status" as a 501(c)(3) must submit equivalent information). • State provides online repository of Schedule H and equivalent information. *Requirement issued by July 1, 2016, effective in 2017*

Note: Tax-exempt hospitals refers to all nonprofit and government-owned hospitals that are recognized as a tax-exempt charitable organization under §501(c)(3) of the Internal Revenue Code and that are required to comply with the Internal Revenue Service community health needs assessment requirements; 79 Fed. Reg. 78954 (Dec. 31, 2014).

Summary of recommendations for population health planning infrastructure

HPIO reviewed best practices and facilitated discussions to develop recommendations for a more efficient, effective and aligned population health planning infrastructure. The resulting recommendations, summarized in Figure ES.5, include new requirements for local health departments and hospitals, as well as provisions for the state to issue guidance designed to encourage best practices.

Population health priority areas and alignment with patient-centered medical home (PCMH) model

Population health priority areas

HPIO compiled and reviewed health priorities identified in 290 state and community-level health planning documents conducted in Ohio over the past five years:

- 10 state-level health assessment/improvement plans[5]
- 110 local health department community health assessments and community health improvement plans[6]
- 170 hospital community health needs assessments and implementation strategies[7]

The top 10 health priorities identified from these planning documents are listed in Figure ES.6 and indicate the types of health issues that statewide collaboratives and local communities recognize as being most important to address in order to improve population health in Ohio.

These top 10 priorities have informed SIM PCMH model design and can be used for the next iteration of the SHIP:

- **PCMH quality measures:** The SIM PCMH design team referred to the top 10 population health priorities as they were selecting the clinical quality measures for the PCMH model. As a result, there is strong alignment between the population health priorities identified by existing state and local plans and the clinical metrics that will be used to determine outcome-based payments for PCMH practices.
- **SHIP priorities:** This analysis provides a starting place for selection of priorities for the 2016 SHIP. In order to drive targeted action on a strategic set of health objectives, however, the 2016 SHIP will need to identify an even more concise set of priorities and should consider prioritizing the upstream community conditions that impact these health issues.

Figure ES.6. **Top 10 population health priorities for Ohio**

Health priority	Percent of documents that include health priority (state-level, local health department, and hospital documents weighted equally)
1. Obesity	56.0%
2. Physical activity	49.5%
3. Nutrition	47.0%
4. Substance abuse treatment/prevention	44.7%/33.5%
5. Infant mortality	39.9%
6. Tobacco use	38.1%
7. Mental health	37.2%
8. Diabetes	32.9%
9. Cancer	32.0%
10. Heart disease	29.4%

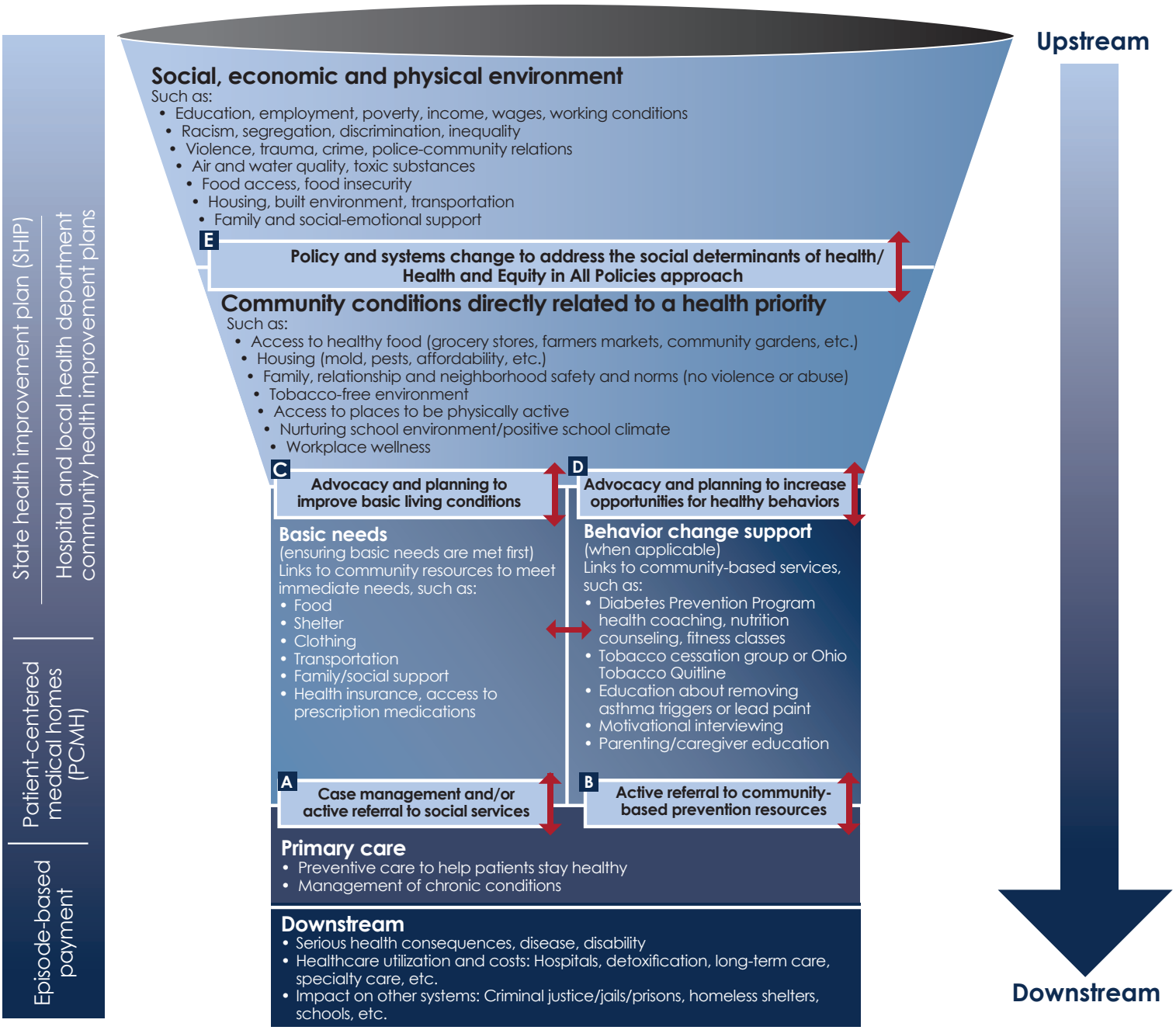
Source: HPIO and Ohio Research Association for Public Health Improvement (RAPHI) analysis of 290 state and local-level population health planning documents.

Role of primary care in population health

Ohio's PCMH model acknowledges that strong connections between primary care providers and community-based resources can help patients stay well or manage chronic conditions. The infrastructure and financing to support those connections, however, is not yet fully developed. In response to stakeholder

discussions on the challenges of addressing the social determinants of health in a primary care setting, HPIO developed a "glide path" framework (see Figure ES. 7). Upstream factors that impact health are at the top of the funnel and downstream interventions to address poor health outcomes are at the bottom of the funnel. The boxes labeled A-E describe the types of activities and partners needed to help patients meet their basic needs and engage in healthy behaviors and to improve community conditions and the broader social, economic and physical environment. The framework also illustrates opportunities for alignment between the PCMH model, the SHIP and community health planning.

Figure ES.7. **"Glide path" framework to connect primary care with upstream population health activities**



Summary of recommendations for connecting primary care with upstream population health activities

As the Ohio PCMH model is rolled out and further refined, the following recommendations can increase the impact of primary care on population health.

Office of Health Transformation:

1. Monitor implementation of the "community connectivity" activities from the PCMH care delivery model.
2. Identify opportunities to increase connections between PCMH practices and community-based social service and prevention programs.
3. Include more outcome, rather than process, measures in future phases of PCMH quality metric selection, especially as new nationally recognized measures emerge.
4. Create stronger incentives for healthcare purchasers, payers and providers to pay for effective community-based social service and prevention programs, and the infrastructure and personnel needed to connect PCMH patients with these resources.
5. Explore ways to quantify savings at the primary care and downstream levels brought about by upstream activities and reallocate those savings into population health activities that improve community conditions and the broader social, economic and physical environment.
6. Partner with ODH to ensure alignment between statewide PCMH implementation and the SHIP.

Ohio Department of Health:

7. Include a strategic set of clinical-community linkage activities in the SHIP to help PCMH practices and patients achieve positive outcomes on a prioritized sub-set of the PCMH quality measures.

Local health departments and nonprofit hospitals:

8. Include representatives from PCMH practices in community health prioritization and planning processes and/or include aggregate PCMH data in community health assessments (such as patient priorities identified in patient satisfaction surveys, clinical utilization data or outcome data).
9. Partner with local PCMH practices to implement and evaluate clinical-community linkage activities (in alignment with the SHIP).

Executive summary notes

1. Health Policy Institute of Ohio. *2014 Health Value Dashboard*. Dec. 16, 2014.
2. PHAB's accreditation process, which launched in 2011, is meant to advance the quality and performance of public health departments. PHAB is a relatively new national nonprofit organization created in 2007 out of a process led by the Robert Wood Johnson Foundation.
3. Ohio Revised Code (ORC) § 3701.13
4. Affordable Care Act (ACA) § 9007
5. See Appendix 3A for a list of these state-level assessments and plans.
6. Review conducted by the Ohio Research Association for Public Health Improvement (RAPHI), housed at Case Western Reserve University, as part of the "Quick Strike" study. Health Policy Institute of Ohio. "Making the most of community health planning in Ohio: The role of hospitals and local health departments," 2015.
7. Health Policy Institute of Ohio. "Making the most of community health planning in Ohio: The role of hospitals and local health departments," 2015.

1 Background, purpose and objectives

Purpose and objectives

Over the past few decades, Ohio's performance on population health outcomes has steadily declined relative to other states (see Figure 1.1).

Researchers have estimated that our health is influenced by a number of modifiable factors, with 20 percent attributed to clinical care (access to care and quality of care), 30 percent to behaviors, 40 percent to social and economic factors and 10 percent to physical environment.[1] Ohio does not perform well on many of the metrics related to these domains.[2]

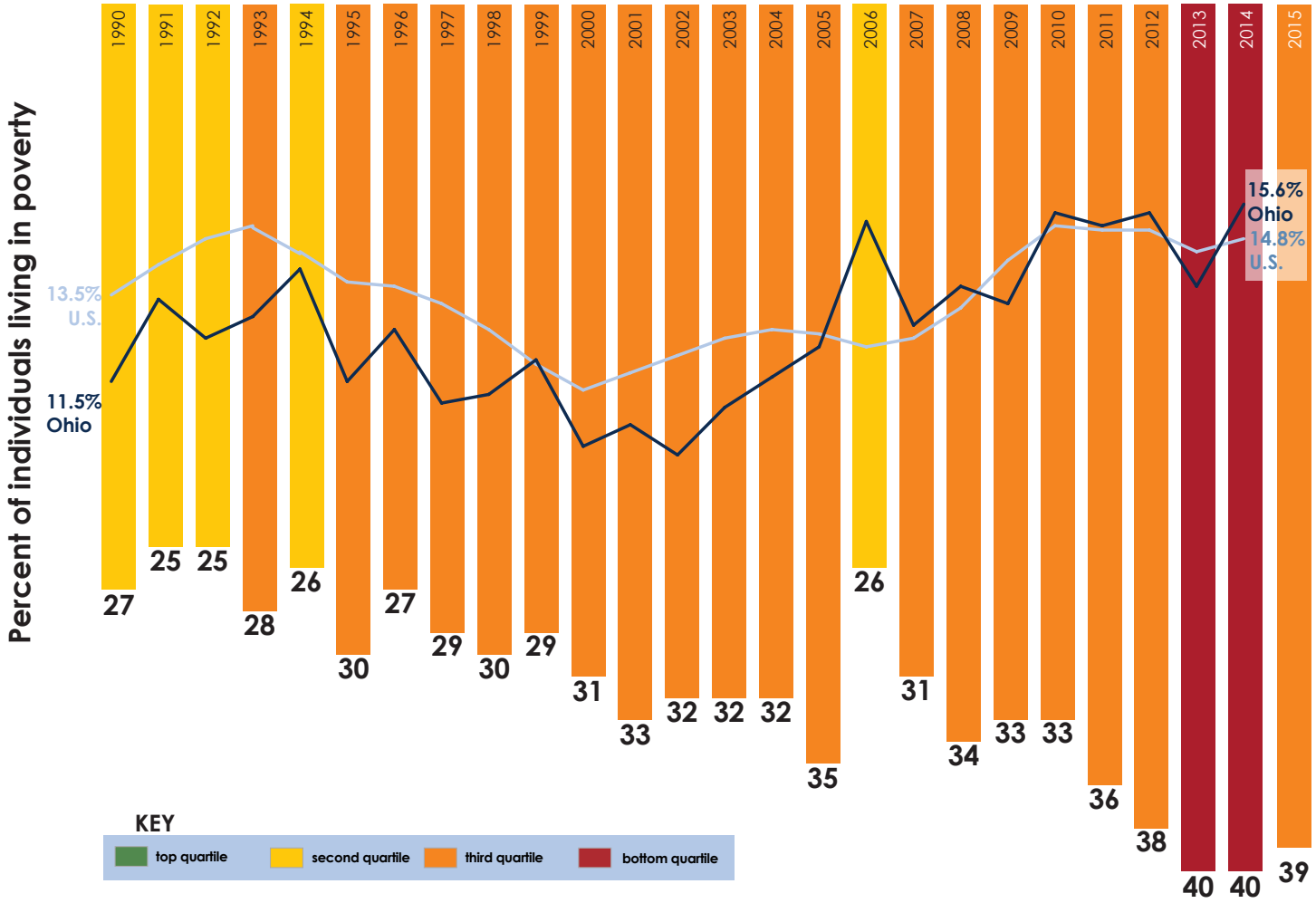
In addition, Ohio has significant disparities for many health outcomes by race, income, geography, and other factors. Ohio's black infant mortality rate (14.3 per 1,000), for example, is more than twice as high as the white infant mortality rate (5.3).[3]

Ohio also ranks 40th on a composite measure of healthcare costs, spending more on health care than most other states.[4] The amount Ohio spends on health care is a concern for policymakers, taxpayers, businesses and consumers.

The federal State Innovation Model (SIM) project provides an unprecedented opportunity for states to transform their healthcare payment and delivery system to reward care that achieves positive outcomes at lower costs. In December 2014, the federal Center for Medicare and Medicaid Innovation (CMMI) awarded Ohio a $75 million Round Two SIM test grant for implementation of episode-based payments and rollout of a state-wide patient-centered medical home (PCMH) model over a four-year period.

Ohio also is required to develop a population health plan, identifying opportunities to maximize the impact of health system transformation activities on population health. In August 2015, CMMI offered SIM awardees guidance regarding plans for improving population health, although states are provided considerable flexibility in developing these plans.

Figure 1.1. **Ohio's rank in America's Health Rankings from 1990 to 2015**



Source for poverty rate: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements, Historical Poverty Tables -- People.

State health leadership from the Governor's Office of Health Transformation (OHT), the Ohio Department of Medicaid (ODM) and the Ohio Department of Health (ODH) recognized several key emerging opportunities related to improving population health planning:

- **Opportunity to improve state and local population health planning:** In 2016 Ohio will conduct the next state health assessment (SHA) and develop the next state health improvement plan (SHIP). Similarly, local health departments and hospitals are responding to relatively new requirements regarding community health assessments and plans. Ohio's leaders saw the potential for improving future iterations of the SHA and SHIP and strengthening the overall efficiency and effectiveness of population health planning and implementation at the state and local levels.

- **Opportunity to connect population health planning and Patient-Centered Medical Home (PCMH) model design:** Given that the SIM PCMH design process was occurring during the same time period as the SIM population health plan development, Ohio's leaders saw the potential for interaction between the two processes in order to drive stronger alignment and collaboration between primary care, public health and other community-based population health partners.

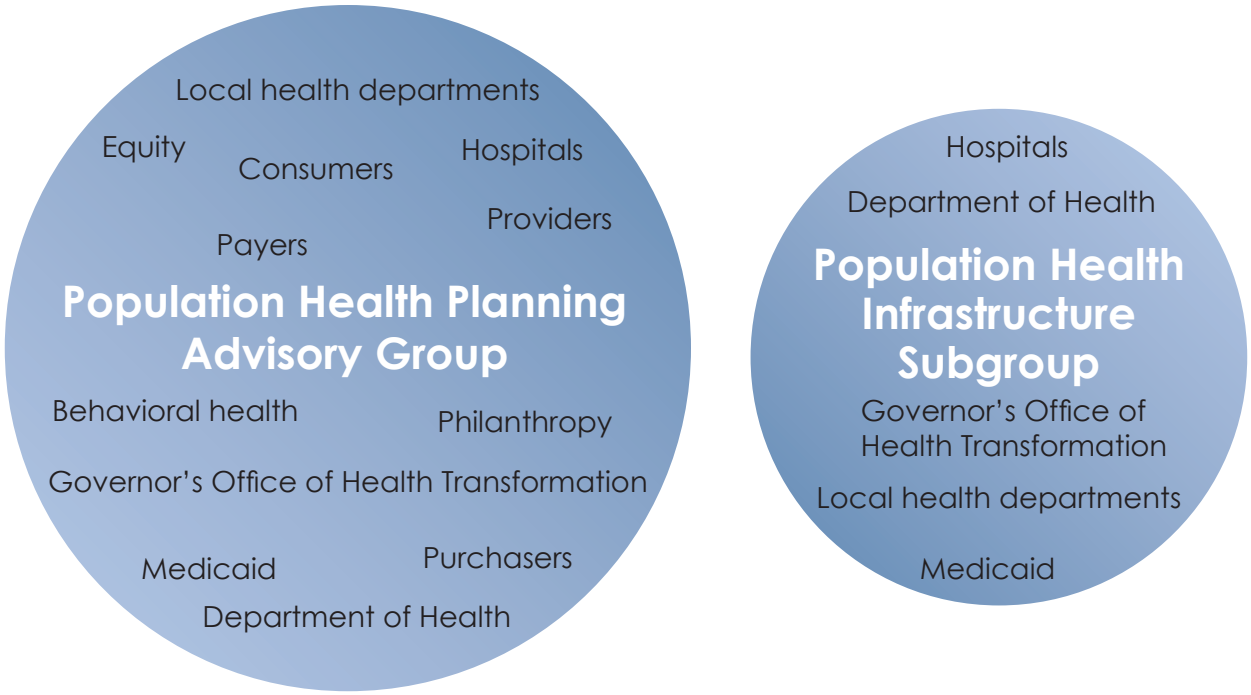
- **Opportunity to leverage changing financial incentives:** The concept of paying for value is central to the SIM project, with a focus on quality measurement and total cost of care reduction. As providers are held accountable for better outcomes, connections to community-based resources that help patients stay healthy are increasingly sought out by providers. Ohio's leaders saw the potential to structure financial incentives to achieve improved population health outcomes and recognized the importance of aligning clinical quality measurement and payment with population health priorities to achieve this goal.

In September 2015, ODM and ODH contracted with HPIO to facilitate stakeholder engagement and provide guidance on improving population health planning in Ohio. The primary objectives for the project were to:

- **Provide recommendations to strengthen the population health planning and implementation infrastructure in Ohio.**
  - **Objective 1.** Provide recommendations for improving the SHA and SHIP
  - **Objective 2.** Provide recommendations for a framework for state and community-level population health planning that:
    - Aligns state and community-level population health planning processes, priorities and objectives
    - Provides state and local/regional coordination for implementation of community-based health improvement activities
    - Identifies existing financing mechanisms for implementation of community-based health improvement activities
  - **Objective 3.** Develop an evaluation framework for tracking Ohio's progress on improving population health

- **Align population health priority areas, measures, objectives and evidence-based strategies with the design and implementation of the PCMH model in Ohio.**
  - **Objective 4.** Identify an initial set of population health priority areas, measures and objectives to inform PCMH model design
  - **Objective 5.** Develop a menu of evidence-based strategies that can lead to improved population health outcomes
  - **Objective 6.** Provide recommendations for aligning identified population health objectives with PCMH model design

Figure 1.2. **Convened group membership**



Stakeholder engagement process

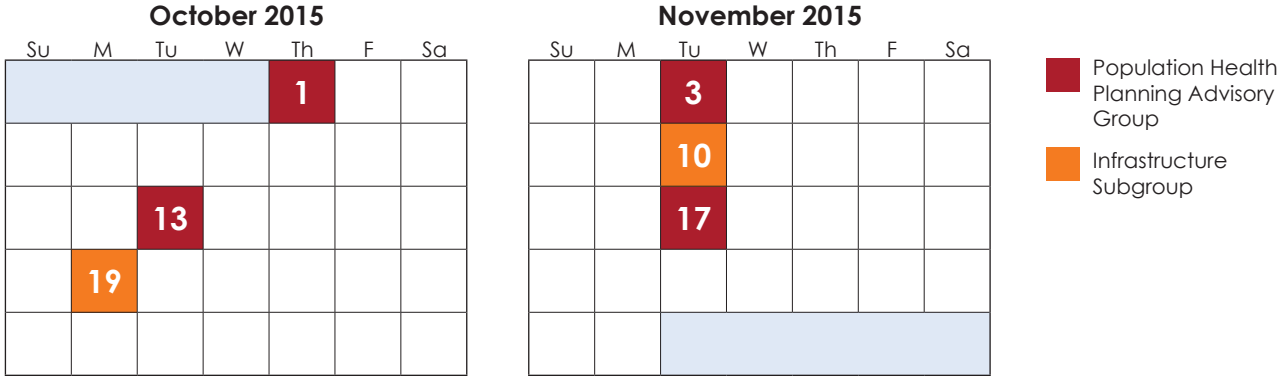
HPIO convened two groups to inform these objectives: the Population Health Planning Advisory Group and the Infrastructure Subgroup (see Figure 1.2).

The advisory group provided input for achieving all of the above objectives. The subgroup focused on Objective 2. The advisory group met four times and the subgroup met twice. All meetings took place in October and November 2015 (see Figure 1.3).

There were 42 members of the advisory group; 29 were external to state government and 13 were state government or HPIO employees. Thirty-four entities were represented by these members, including health insurance companies, primary care providers, hospitals, local health departments and advocates. Approximately 40 advisory group members were in attendance at each meeting. An additional five to 15 observers also attended, either in person or via phone.

There were 34 members of the subgroup; 23 were external to state government and 11 were state government or HPIO staff. Twenty-five entities were represented by these members. Approximately 30 subgroup members were in attendance at each of the subgroup meetings. Infrastructure subgroup members were encouraged to attend the second full advisory group meeting on October 13 for orientation purposes. Several subgroup members were also on the advisory group or attended one or more advisory group meetings as observers.

Figure 1.3. **Convened group meeting timeline**



See Appendix 1A for lists of advisory group and subgroup members and meetings attended. While specific members were designated to serve on these groups, any interested parties were welcome to observe the meetings. Agendas, presentations, materials and notes from the meetings are **posted on the HPIO website**.

The SIM PCMH design team met during the same time period as the above activities and several stakeholders participated in both groups.

Definition of population health

In 2014, HPIO convened a group of healthcare and public health stakeholders to develop a consensus definition of population health and to operationalize the concept of population health in a way that is useful to Ohio's health leaders. The results of this consensus-building process are described in the HPIO policy brief **What is "population health"?**, which includes the following 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.*

In addition to this definition, the Population Health Definition Workgroup identified five key characteristics of population health strategies, described in Figure 1.4.

The definition workgroup established important groundwork for the Population Health Planning Advisory Group. HPIO recruited many members from the definition workgroup to serve on the advisory group and distributed the **What is "population health"?** brief to all participants prior to the first meeting to provide a common baseline understanding for the project. This enabled the advisory group to come to quick agreement in the first meeting about the definition of the term "population health."

Figure 1.4. **Key characteristics of population health strategies**

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").
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 that move beyond health such as transportation, regional planning and education 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.
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.
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.
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.

Source: What is "population health?", HPIO, 2014.

2 Ohio's population health planning infrastructure

Description of existing population health improvement assessments, plans and processes

Population health planning refers to a collaborative process to assess and prioritize a population's most significant health needs and develop and implement plans and strategies to address those needs. There are many public and private entities engaged in population health planning activities at the national, state and community level.

Part Two of this report focuses on improving the infrastructure for population health planning that occurs at the state level, led by the Ohio Department of Health (ODH), and at the community level, led by local health departments and hospitals. The requirements and processes around population health planning for these different entities are outlined in Appendix 2A.

State-level population health planning

State health assessment (SHA) and state health improvement plan (SHIP)

State health departments are required to develop a SHA and a SHIP at least every five years as a prerequisite for accreditation by the Public Health Accreditation Board (PHAB).[5] The SHA is a state-level community health assessment through which a state health department engages in a collaborative process with other organizations to share and analyze data and information on health outcomes, health challenges and resources. The SHIP, which also must be developed through a collaborative process, describes how the health department and community will work together to improve the health of the state.

ODH released a **SHA in 2011** and the **2012-2014 SHIP** in 2012. ODH applied for PHAB accreditation in 2014, submitting the 2011 SHA and 2012-2014 SHIP to PHAB as prerequisite documents. In response to quality improvement guidance received during the accreditation review process, ODH released a revised version of the SHIP (**2015-16 SHIP Addendum**) in October 2015. ODH achieved PHAB accreditation on Nov. 10, 2015.

Other state-level assessments and plans

Ohio's SHA and SHIP are intended to be the guiding population health assessment and planning documents for the state. However, there are several other population health assessments and plans conducted at the state level by ODH and other public and private entities.

Other key state-wide assessments in Ohio include:

- **HPIO Health Value Dashboard**, 2014: HPIO's *Dashboard* is a tool to track Ohio's progress towards health value – equally weighting population health outcomes and healthcare costs. The *Dashboard* compares Ohio's performance to other states, tracks change over time and includes information on best state performance and disparities in performance across Ohio's subpopulations. The *Dashboard* also reflects the many factors impacting population health outcomes and healthcare costs, including healthcare system performance, public health and prevention, access to health care and the social, economic and physical environments. HPIO plans to update the *Dashboard* every two years.
- **State Health Access Data Assistance Center (SHADAC) Ohio State Profile**, 2015: This profile was prepared by SHADAC for the State Innovation Models (SIM) program, under contract with the University of Chicago. The profile is intended to identify key health issues and opportunities for the state that can be addressed through the Center for Medicare and Medicaid Innovation (CMMI) SIM project. The profile pulls together information from a wide range of data sources and provides a state-level overview of key healthcare indicators, with comparisons to national averages.
- **Impact of Chronic Disease in Ohio**, 2015: This ODH report provides a comprehensive assessment of the burden and impact of chronic disease in Ohio. The report provides recent and relevant data and information to

guide chronic disease program planning, monitor trends, evaluate public health interventions and policies, identify health disparities and determine the financial costs of chronic disease.

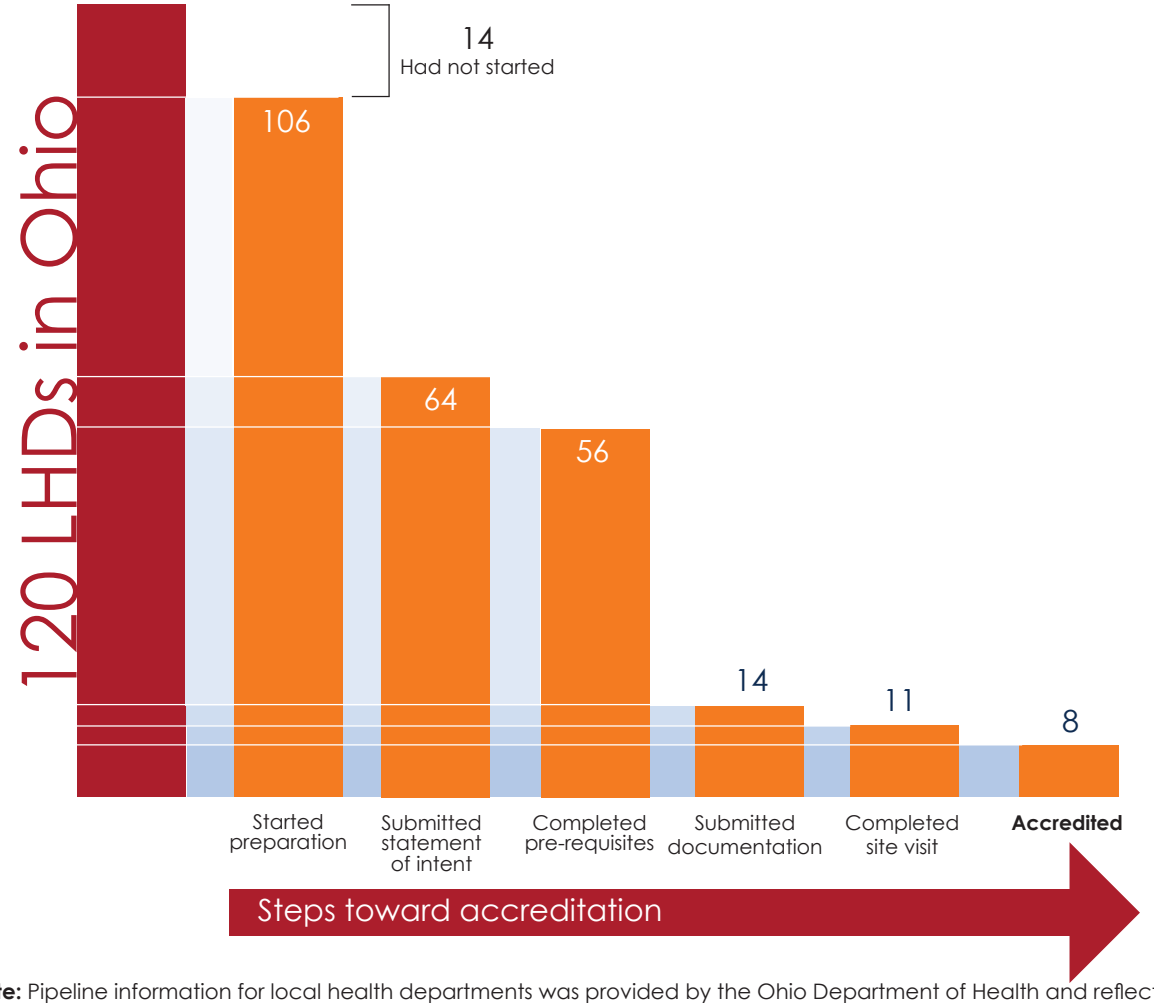
In addition to these key state-wide assessments, there are a number of state-level population health improvement plans. Many of these plans are more topic-specific than the SHA and SHIP:

- **Ohio Infant Mortality Reduction Plan, 2015-2020**
- **The Ohio Comprehensive Cancer Control Plan, 2015-2020**
- **Ohio's Plan to Prevent and Reduce Chronic Disease, 2014-2018**
- **Ohio Adolescent Health Strategic Plan, "Promoting and Improving the Health of Ohio Adolescents", 2013-2020**
- **Ohio Suicide Prevention Foundation Strategic Plan, 2013-2016**
- **Ohio Injury Prevention Partnership, Child Injury Action Group Strategic Plan, 2011-2016**
- **Ohio Commission on Minority Health White Paper: Achieving Equity and Eliminating Infant Mortality Disparities within Racial and Ethnic Populations: From Data to Action, 2015**
- **Ohio Injury Prevention Partnership Ohio Older Adult Falls Prevention Coalition Plan, 2014-2016**

Local-level population health planning

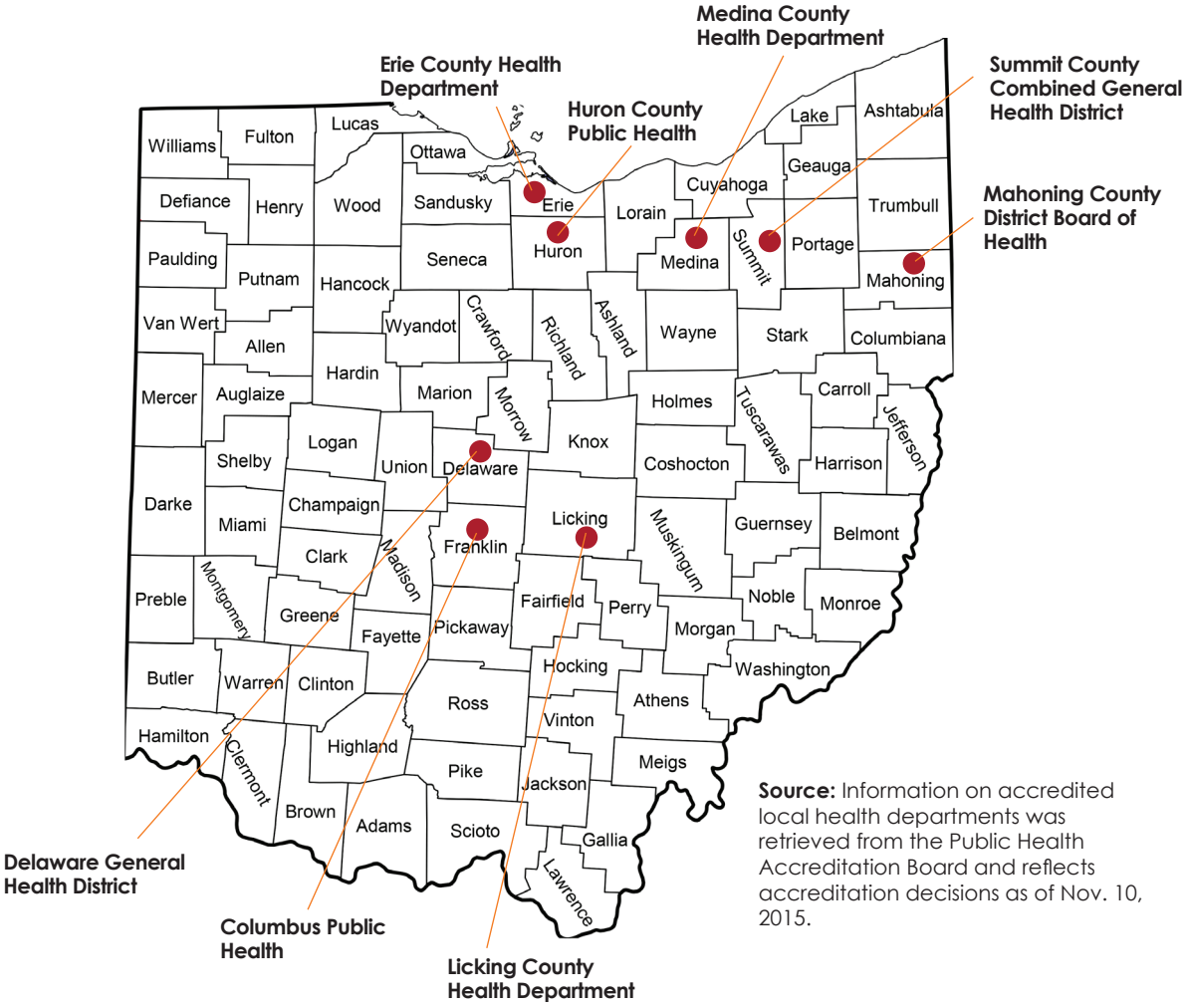
Due to a number of federal and state policy changes, there has been increased focus on community-level population health planning activities led by local health departments and hospitals. Under this new policy landscape, hospitals and local health departments play a critical role in aligning and leveraging population health planning activities across the state to improve the overall health of Ohioans.

Figure 2.1. **Ohio local health department completion of each phase of the Public Health Accreditation Board (PHAB) pipeline**



Note: Pipeline information for local health departments was provided by the Ohio Department of Health and reflects cumulative status as of March 2015, with the exception of total local health departments and number accredited, which are current as of Jan. 1, 2016. The number of accredited local health departments was retrieved from PHAB and reflects accreditation decisions as of Nov. 10, 2015.

Figure 2.2. **Map of accredited local health departments in Ohio**



Source: Information on accredited local health departments was retrieved from the Public Health Accreditation Board and reflects accreditation decisions as of Nov. 10, 2015.

Local health departments

The director of ODH may require local health departments to apply for PHAB accreditation by July 1, 2018 and be PHAB accredited by July 1, 2020, as a condition for receiving funding from ODH.[6] Similar to state health departments, as a prerequisite for PHAB accreditation local health departments must lead a community health assessment (CHA) and develop a community health improvement plan (CHIP) at least every five years.

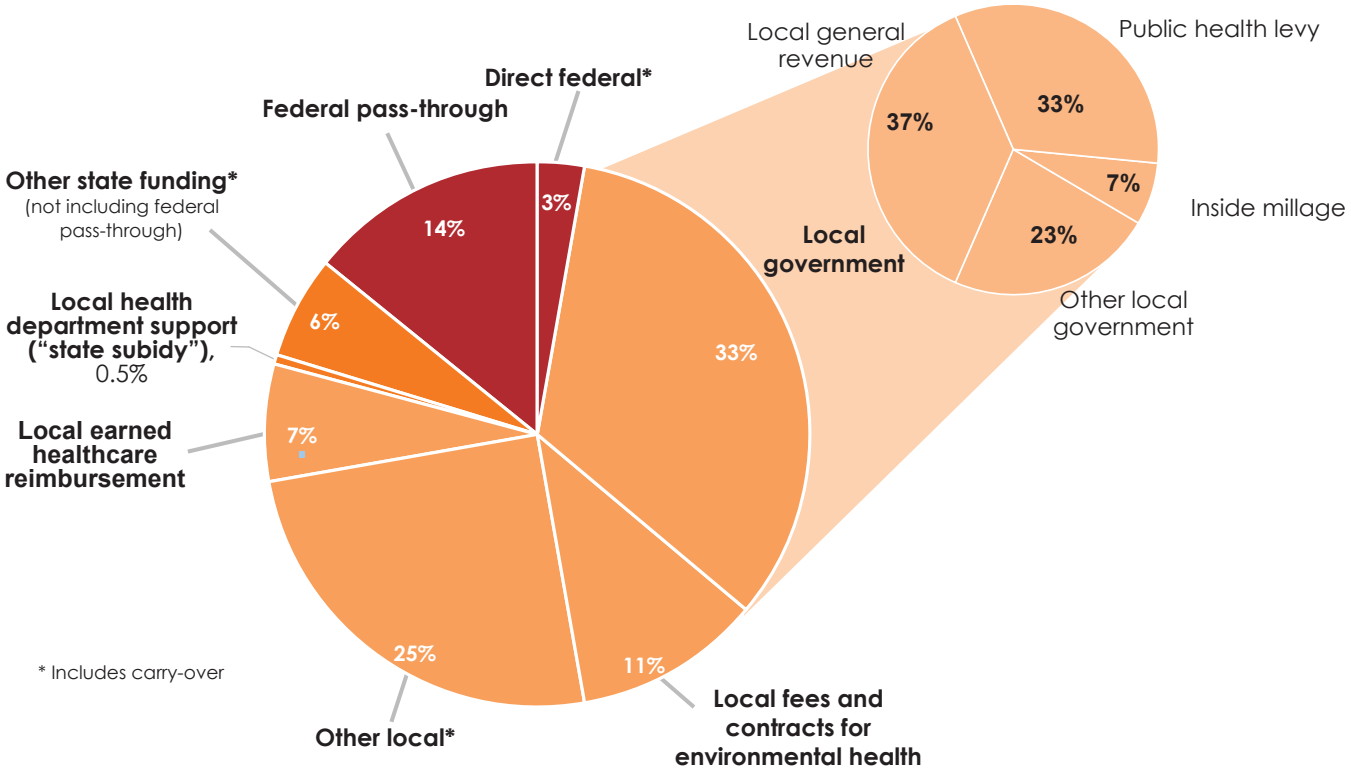
Many local health departments in Ohio are moving toward full PHAB accreditation and have already conducted CHAs and CHIPs (see Figure 2.1). As of Nov. 10, 2015, eight Ohio local health departments had received PHAB accreditation (see Figure 2.2).[7]

Local health department funding

About three-quarters of local health department funding comes from local sources (see Figure 2.3), with the largest amount coming from local government funding, at 33 percent in 2011. State-generated funding provides a much smaller portion of local health department revenue, at 6 percent in 2011. The level of financial resources available for local public health varies widely, reflecting the decentralized nature of Ohio's public health system. Within Ohio, annual per capita expenditures ranged from a low of $5 per person to a high of $221 per person in 2010.[8] Much of this variation is explained by the sources of local funds available and differences in the number and type of services provided by a local health department. For example, some local health departments run primary care clinics or offer home health, while others do not provide clinical services.

Ohio's local health departments spend less per person than local health departments in most states. In 2013, Ohio's median per capita local health department expenditure was $31, compared to $43 for the U.S. overall.[9] Similarly, Ohio's state public health agency funding is lower than most states. In fiscal year 2012-13, ODH's per capita funding was $14, compared to the U.S. average of $38 (see Figure 2.4).

Figure 2.3. **Ohio 2011 local health department revenue, by category** ($564,187,835 total)



Source: 2011 Annual Financial Report, provided by the Ohio Department of Health, March 2012

Figure 2.4. **State and local per capita public health spending: Ohio and U.S.**

State public health funding per capita
State public health budget funding per capita

Local public health funding per capita
Median annual per capita local health department expenditures

Source for state spending: Trust for America's Health as compiled by the Robert Wood Johnson Foundation DataHub, fiscal year 2012-2013
Source for local spending: National Association of County & City Health Officials, 2013

Ohio does not provide local health departments with any state funding designated specifically for the development and implementation of community health assessments and plans or PHAB accreditation. Similarly, ODH did not designate any specific funding for implementation of the 2012-2014 SHIP, although existing ODH grants support SHIP-aligned activities in some communities.

501(c)3 tax-exempt hospitals

To be recognized as tax-exempt under Section 501(c)(3) of the Internal Revenue Code (IRC), hospitals are required to conduct a community health needs assessment (CHNA) and adopt an implementation strategy (IS) every three years (see Appendix 2B for flowchart of a hospital's requirements under 501(c)(3)).[10]

This new requirement was a part of the Affordable Care Act (ACA) and went into effect for taxable years beginning after March 23, 2012. The Internal Revenue Service (IRS) published a final rule in December 2014, providing hospitals with additional guidance on how to comply with the ACA CHNA and IS requirements.[11]

As of 2013, 75.4 percent of hospitals in Ohio were classified as nonprofit compared to only 58.4 percent of hospitals nationally (see Figure 2.5).[12] Many hospitals have completed or are in the process of completing their second round of assessments and plans.

Hospital community benefit

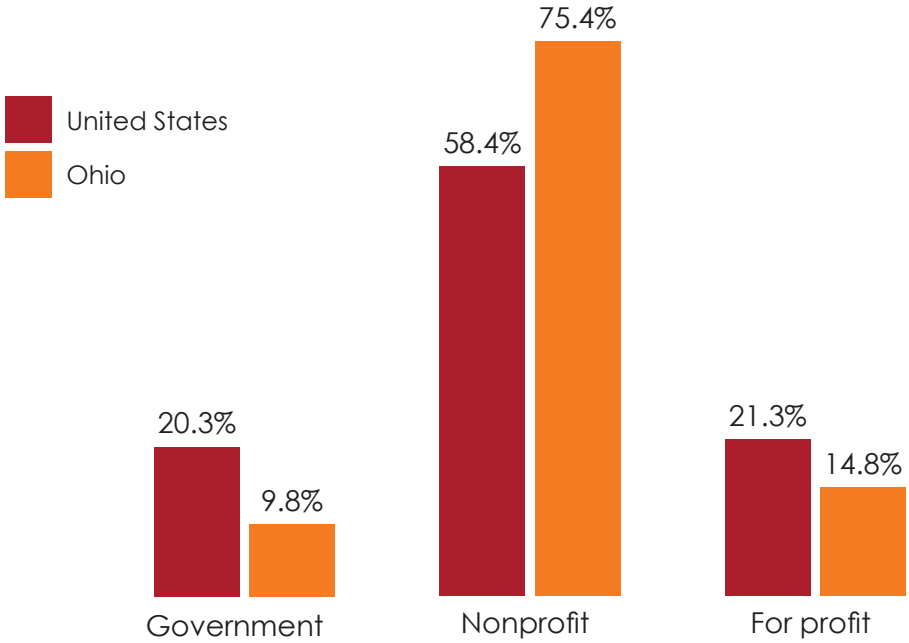
The IRS requires 501(c)(3) hospitals to justify their tax-exempt status by allocating a portion of their operating expenses towards the provision of community benefit – defined as initiatives or activities undertaken by hospitals to improve the health of the communities in which they serve. Hospitals are required to report on their community benefit expenditures to the IRS annually on Schedule H of their 990 tax form.

The IRS outlines seven categories of expenditures that are considered legitimate, reportable hospital community benefit (see Appendix 2C for detailed information on these community benefit categories):

- Financial assistance at cost or "charity care"
- Unreimbursed costs from Medicaid and other means-tested government programs
- Subsidized health services
- Community health improvement services and community benefit operations
- Health professions education
- Research
- Cash and in-kind contributions

The community health improvement services and cash and in-kind contributions categories of community benefit most directly align with a hospital's community health planning and health improvement activities. To report expenditures under the community health improvement services category, there must be an established community need for the activity. Community need can be demonstrated through several mechanisms, including a CHNA conducted by the hospital.[13] In addition, hospitals may report donations or grants to

Figure 2.5. **Hospitals by ownership type, 2013**



Source: 2013 data. "Hospitals by Ownership Type." The Henry J. Kaiser Family Foundation. Accessed December 2, 2015. http://kff.org/other/state-indicator/hospitals-by-ownership/

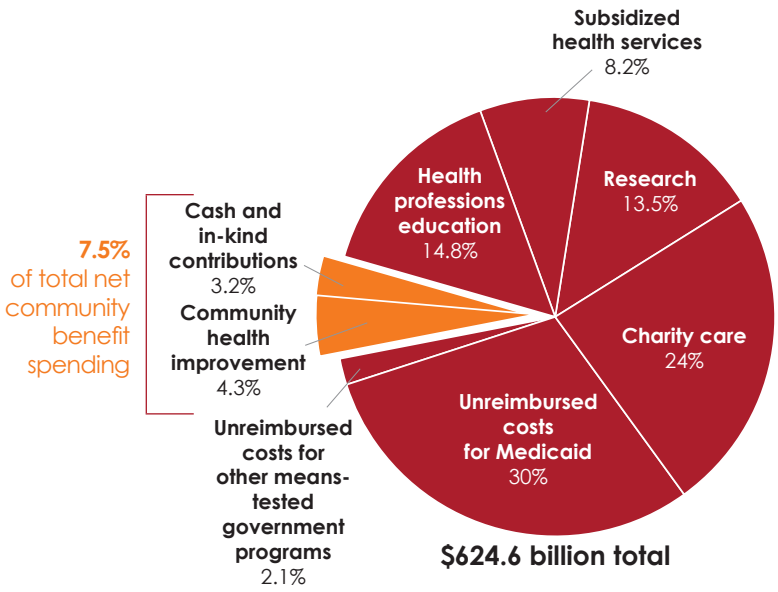
community groups for community health improvement activities under the cash and in-kind contributions category.

Separate from the seven community benefit reporting categories, the IRS also requires reporting on community building expenditures (see Appendix 2D for information on community building categories). Community building expenditures include activities that move beyond medical care to address the social determinants of health, such as physical improvements and housing, economic development and environmental improvements. The IRS indicated in 2012 that some hospital community building activities may also meet the definition of community benefit and be reported as legitimate community benefit expenditures under the community health improvement services category (see text box below for more information).

Hospital community benefit and community health planning requirements provide a unique opportunity to encourage greater investment in community-based health improvement activities.

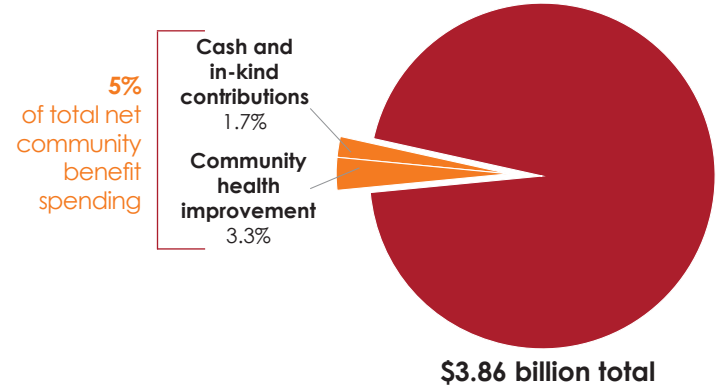
Historically, charity care and other forms of uncompensated direct patient care, such as unreimbursed Medicaid costs, made up the bulk of hospital community benefit activities and expenditures. An IRS report of Schedule H filings nationally found that 56.1 percent[14] of community benefit expenditures were for direct patient care and only 7.5 percent were allocated to community health improvement services and cash and in-kind contributions to community groups (see Figure 2.6). Based on 2012 schedule H filings, Ohio hospitals allocated 5.0 percent of community benefit expenditures towards community health improvement services and cash and in-kind contributions (see Figure 2.7).

Figure 2.6. **National distribution of hospital community benefit expenditures, 2011**



Source: Internal Revenue Service. "Report to Congress on Private Tax-Exempt, Taxable, and Government-Owned Hospitals." January 2015, Based on 2011 Schedule H data from 2,469 hospital filers.

Figure 2.7. **Ohio distribution of hospital community benefit expenditures, 2012**



Source: HPIO analysis of 2012 Schedule H data from 156 hospitals in Ohio.

Community building activities may be reported as hospital community benefit under the community health improvement services category if they meet the following requirements:

- ☑ Respond to an established community need
- ☑ Meet at least one community benefit objective, including improving access to health services, enhancing public health, advancing generalizable knowledge and relief of government burden to improve health
- ☑ Subsidized by the organization
- ☑ Do not generate an inpatient or outpatient bill
- ☑ Not provided for marketing purposes
- ☑ Not more beneficial to the organization than to the community
- ☑ Not required for licensure or accreditation
- ☑ Not restricted to individuals affiliated with the organization (such as employees and physicians)

Other entities
While this report focuses on community-level population health planning activities led by local health departments and 501(c)(3) tax-exempt hospitals, it is important to note that there are several other entities that conduct community-level assessments including: federally qualified health centers, local behavioral health boards, Family and Children First Councils, United Ways, banks and community action agencies. While the scope and purpose of these community assessments differ, they all aim to address the many factors that impact the overall health and wellbeing of the community (see Appendix 2E for a description of these different processes). Partnership and collaboration among all of these entities would likely lead to more effective and efficient use of resources and improved health outcomes.

Population health planning infrastructure challenges

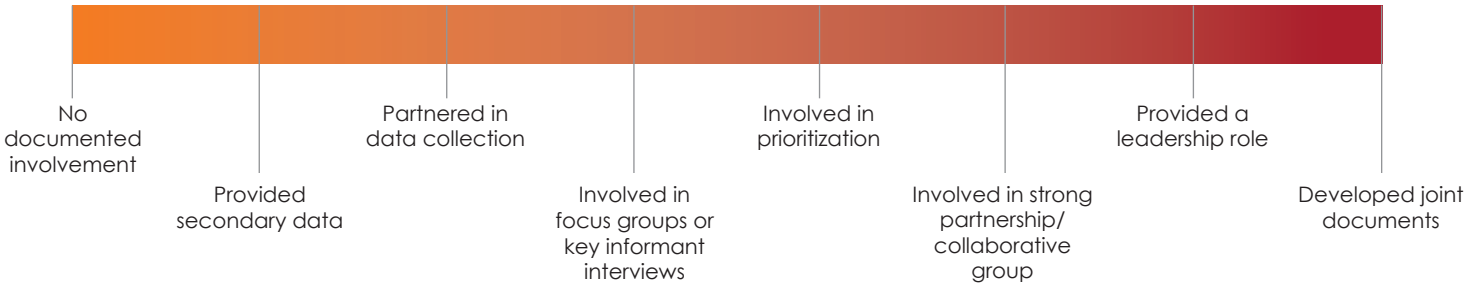
Requirements for the SHA and SHIP largely parallel assessment and planning requirements for local health departments and 501(c)(3) tax-exempt hospitals (refer to Appendix 2A). However, because some of these requirements do not align, coordination between these different processes can be challenging. As a result, there are missed opportunities at the state and local level to conduct population health planning in an integrated, meaningful and effective way.

Collaboration among local health departments and hospitals occurs on a continuum, ranging from no collaboration to development of joint assessment and plan documents (see Figure 2.8). The level of collaboration among and between local health departments and hospitals varies widely across the state.

HPIO facilitated discussion on population health planning infrastructure challenges with the Population Health Planning Advisory Group and Population Health Infrastructure Subgroup. Advisory group feedback is provided in Appendix 2F.

HPIO summarized key population health planning infrastructure challenges and contributing factors in Figure 2.9 based upon synthesis of advisory group member feedback, a brief literature review[15] and a study of local health department and hospital community health planning documents in Ohio completed in March 2015.[16]

Figure 2.8. **Continuum of collaboration between local health departments and hospitals**



Source: HPIO and the Ohio Research Association for Public Health Improvement analysis of local health department and hospital community health planning documents, March 2015. For more information, see HPIO's publication "Making the most of community health planning in Ohio: The role of hospitals and local health departments."

Figure 2.9. **Summary of key population health planning infrastructure challenges and contributing factors**

Current challenges Lack of …	**Contributing factors**
1. Actionable state health assessment (SHA) and state health improvement plan (SHIP)	**1a. Priorities:** The 2011 SHA did not highlight key challenges and the 2012-2014 SHIP had nine broad priorities. As a result, it was difficult for public health partners to come together around a manageable set of strategic priorities to improve the health of Ohioans. **1b. Objectives:** Not all objectives in the 2012-2014 SHIP were specific and measurable. **1c. Implementation:** The 2012-2014 SHIP did not include strong mechanisms to ensure implementation of SHIP strategies across the state, such as specification of backbone organizations with adequate capacity, dedicated funding sources, and recruitment of community partners to implement and/or fund SHIP strategies at the local level. **1d. Ongoing monitoring and communication:** Ongoing tracking of SHIP implementation and outcomes could be communicated more clearly and consistently to SHIP stakeholders, policymakers and the general public.
2. Alignment between state and community-level planning	**2a. Alignment requirements:** There is no requirement or formal guidance in Ohio that encourages local health departments and hospitals to align their community-level plans with the priorities and strategies outlined in the SHIP. **2b. Timeline:** Public Health Accreditation Board (PHAB) does not require that local health departments be on the same five-year assessment and planning cycle as their state health department. Under Internal Revenue Service (IRS) rules, hospitals are on a three-year cycle. See 3b. in this figure for more information on local health department and hospital assessment and planning timelines. **2c. Bidirectional communication:** There is no dependable mechanism ensuring that state and community-level health planning leaders in Ohio are consistently communicating with one another throughout their assessment and planning processes. **2d. Actionable SHA and SHIP:** See1a through 1d of this figure for contributing factors.
3. Alignment between local health departments and hospitals	**3a. Collaboration requirements:** PHAB and the IRS provide guidance encouraging local health departments and hospitals to collaborate on development of their assessments and plans. However, neither entity provides comprehensive operational guidance on what meaningful collaboration looks like. As a result, collaboration among local health departments and hospitals occurs on a continuum, ranging from no collaboration to development of joint assessment and plan documents (see Figure 2.8). The level of collaboration among and between local health departments and hospitals varies widely across the state. **3b. Timeline:** Local health departments and hospitals across the state are on different assessment and planning cycles. PHAB requires local health departments develop an assessment and plan at least every five years. However, PHAB does not require local health departments within a state to be on the same five-year cycle. The IRS requires tax-exempt hospitals to complete their assessment every three years. A hospital is required to adopt an implementation strategy within four and a half months of conducting a community health needs assessment. There is no requirement that hospitals align on the same three year cycle across the state. **3c. Definition of community:** Local health departments and hospitals serving similar geographic populations may not share a common definition of community. PHAB requires local health departments to develop assessments and plans for their community, defined as the health department's jurisdiction. Under the IRS, hospitals are left with broad discretion to define the geographical scope of "community" in their assessments and plans.
4. Efficient data collection and sharing	**4a. Population-level data:** Data, particularly survey data, is not always available for specific groups (such as racial and ethnic groups or age groups), rural counties or for sub-county geographies (such as zip-code or census tract). As a result, local health departments and hospitals replicate surveys across regions of the state to ensure adequate sample sizes and the ability to analyze data at a sub-population level for their communities. **4b. Clinical data:** Hospitals may be reluctant to share data with local health departments for a number of reasons including: lack of a strong relationship with the health department, proprietary data concerns and restrictions due to health information privacy laws, particularly for data disaggregated at a sub-county level.
5. Implementation of evidence-based community health improvement activities	**5a. Resources:** Resources may be inefficiently expended in a community to conduct multiple assessments and plans, leaving fewer resources for implementation of community health-improvement strategies. **5b. Identification of evidence-based strategies:** Local health departments and hospitals may not share common definitions of evidence-based programs and many struggle to identify and implement strategies based upon best available evidence. **5c. Worldview:** Local health departments are more likely to implement evidence-based strategies through a population health lens. Hospitals are more likely to implement evidence-based strategies through a population medicine lens. See page 15 for definition of population health.
6. Sustainable funding	**6a. Local health department funding:** Local health department funding for assessments and plans is often fragmented or inadequate. **6b. Hospital funding:** Healthcare system financing and payment has historically favored institutional clinical care over investment in community-based health improvement strategies. Lack of clarity on which community-based health improvement strategies count towards hospital community benefit has diffused incentives for hospitals to invest more in these strategies.
7. Tracking progress	**7a. Transparency requirements:** There is no publicly accessible central repository for local health department and hospital assessments and plans in the state. Local health departments voluntarily submit their assessments and plans to the Ohio Department of Health (ODH), but submission is not required and ODH does not provide the public with access to submitted documents. Hospitals are required by the IRS to post their assessments on their websites, but these are often difficult to find. Hospitals are not required to post implementation strategies. **7b. Evaluation requirements:** Evaluation models to track progress on implementation of state and community-level health plans vary widely across the state. PHAB requires local health departments to track progress towards the objectives and metrics outlined in their plans. The IRS requires hospital assessments include an evaluation of the impact of any actions taken since their immediately preceding assessment. Neither PHAB nor the IRS specifies an evaluation framework that must be embedded in local health department and hospital plans.

Recommendations for improving the state health assessment (SHA) and state health improvement plan (SHIP)

Upon review of the 2011 SHA and 2012-2014 SHIP, PHAB identified the following opportunities for improving future iterations of the SHA and SHIP:

- Increase engagement with and communication to the general public
- Increase use of specific, measurable objectives
- Include policy change strategies
- Specify organizations that accept responsibility for implementing SHIP priorities
- Demonstrate alignment between SHIP priorities and local and national priorities

HPIO developed initial recommendations for improving Ohio's SHA and SHIP, taking into consideration PHAB's comments and the SHA and SHIP challenges identified by HPIO and the Population Health Planning Advisory Group members (see item 1 in Figure 2.9). Initial recommendations were based upon PHAB Standards and Measures 1.5,[17] guidance from the Association of State and Territorial Health Officials (ASTHO)[18] and best practice examples from other states. HPIO then incorporated feedback from members of the advisory group.

The resulting final recommendations for improving Ohio's next SHA and SHIP align with PHAB requirements (see Appendix 2G), but also provide additional guidance and emphasize elements of particular importance to population health planning in Ohio.

Figure 2.10. **Summary of state health assessment (SHA) and state health improvement plan (SHIP) recommendations**

Cross-cutting recommendations for the SHA and SHIP	
1. Conceptual framework	The SHA and SHIP should be guided by a broad conceptual framework that includes the social determinants of health, health equity and a life-course perspective.
2. Leadership and cross-sector engagement	The SHA and SHIP development process should engage leadership from within the Ohio Department of Health and other state agencies and include input from sectors beyond health.
3. Fostering alignment with local assessments and plans	The SHA and SHIP should be designed to provide statewide leadership on population health goals and to foster alignment between state and local-level planning.
SHA recommendations	
4. Existing data	The SHA should build upon existing information about Ohio's health needs.
5. Metric selection	The SHA should select metrics based upon specific prioritization criteria, resulting in a set of metrics that the state will use to monitor progress on the SHIP and that local partners can use in their own assessments.
6. Communicating findings	The SHA should summarize and synthesize the findings in a compelling format that puts data into context and directly informs the SHIP.
SHIP recommendations	
7. Existing plans	The SHIP should build upon related state-level plans.
8. Prioritization process	The SHIP should select health priority areas based upon specific prioritization criteria, resulting in a set of priorities concise enough to drive targeted action to "move the needle" on a strategic set of health outcomes.
9. Objectives and evaluation	The SHIP should include measurable objectives, an evaluation framework and mechanisms for ongoing monitoring and communication of progress.
10. Evidence-based strategies	The SHIP should include evidence-based strategies that link primary care with community-based population health activities and address upstream social determinants of health.
11. Implementation and financing	The SHIP should specify how selected strategies will be implemented and financed.

Cross-cutting recommendations for the state health assessment (SHA) and state health improvement plan (SHIP)

Recommendation 1. Conceptual framework.
The SHA and SHIP should be guided by a broad conceptual framework that includes the social determinants of health, health equity and a life-course perspective.
The purpose of a conceptual framework is to present a common understanding of the factors that shape health and a vision for health improvement. A broad conceptual framework encompasses determinants of health needed to ensure that the:

- SHA includes data on the social, economic and physical environment
- SHIP includes partnerships with sectors beyond health (such as education and housing) and a "health in all policies" approach

A framework that incorporates health equity is needed to ensure that the SHA includes information about disparities, and that the SHIP identifies evidence-based strategies shown to be effective in reducing health inequities. Finally, a framework that emphasizes the life-course perspective will ensure that the SHA includes information about the unique needs of children, adolescents and older adults, and that SHIP strategies are designed to promote healthy growth and development throughout all stages of life.

Ohio should consider adopting existing conceptual frameworks to guide the SHA and SHIP such as:

- **HPIO Health Value Dashboard.** The *Dashboard* conceptual framework was developed by a multi-stakeholder group with the end goal of improving health value for Ohioans, equally weighting population health outcomes and healthcare costs. The *Dashboard* includes the social and economic environment, physical environment, prevention and public health, healthcare system and access as determinant domains. The *Dashboard* also includes health behaviors and equity measures. HPIO recommends modifying this framework to explicitly incorporate a life-course perspective and then using it to guide development of the SHA.
- **National Prevention Strategy.** This framework embodies a positive focus on health, rather than a negative focus on disease. For example, rather than identifying "obesity" as a priority, this model refers to "healthy eating" and "active living." It also includes "empowered people" and "elimination of health disparities" as strategic directions and incorporates the life-course perspective. HPIO recommends this, or a modified version, as the preferred framework to guide development of the SHIP. The National Prevention Strategy model aligns well with the *Dashboard* domains and provides useful categories for framing positive approaches to improving health.
- **Minnesota SHIP framework.** This framework includes a specific focus on early childhood and identifies nine education, social and economic outcomes that impact health. HPIO recommends that Ohio should refer to this framework in addition to the National Prevention Strategy, particularly when developing specific goals and objectives to address the social determinants of health.

See Appendix 2H for diagrams of these conceptual frameworks.

The SHA and SHIP life-course perspective should build from the goals developed by Ohio's Human Services Innovation initiative:

- Infants are born healthy
- Children are ready to learn
- Children succeed in school
- Youth successfully transition to adulthood
- Job seekers find meaningful work
- Workers support their families
- Families thrive in strong communities
- Ohioans special needs are met
- Retirees are safe and secure

The SHA and SHIP conceptual framework should also include pathways to connect clinical care — particularly patient-centered medical homes (PCMHs) — to upstream population health strategies. (See description of the "glide path" framework in Part Three of this report.)

It is important to note that there is a tension between having a SHA and SHIP that are too broad versus not broad enough. Advisory group members advocated for adopting a very broad conceptual framework that goes beyond "diseases of the month" and includes a wide range of sectors. On the other hand, the

previous SHIP was criticized for including too many priorities and "being all things to all people." One way to address this tension would be to adopt a conceptual framework that acknowledges a broad range of determinants and to then identify a concise set of "flagship" priorities for the SHIP. The broader conceptual framework could be used by local communities, who may want to select priorities that are outside the "flagship" priorities but are nonetheless outlined in the framework.

Recommendation 2. Leadership and cross-sector engagement. ***The SHA and SHIP development process should engage leadership from within ODH and other state agencies and include input from sectors beyond health.***

The SHA and SHIP steering committees should include high-level leadership from within ODH and other state agencies such as the Governor's Office of Health Transformation, Medicaid, Mental Health and Addiction Services, Aging and Job and Family Services. Stronger inter-agency connections at the state level encourage greater collaboration at the local level, such as partnerships between hospitals, local health departments and local behavioral health and aging organizations.

Partners from sectors beyond health, such as transportation, education and housing, should also be included through a multi-sector SHIP planning and implementation coalition. ODH needs to ensure that adequate staffing and "backbone support" is provided to facilitate recruitment and ongoing communication with the coalition and subcommittees focused on specific priorities.

Note that accredited health departments must demonstrate "participation of partners outside of the health department that represent state populations and state health challenges" in the SHA, and "participation by a wide range of community partners representing various sectors of the community" in the SHIP process (see PHAB measures in Appendix 2G).

Accredited health departments are also required to collect qualitative data, which provides another opportunity for community engagement. ODH should partner with community-based organizations to gather qualitative information, such as through focus groups or "town hall" forums, as a way to reach out to specific groups of Ohioans who may not otherwise have a direct voice in the SHA and SHIP process. Discussions with immigrants, people with disabilities or low-income parents, for example, could provide valuable information about health challenges, strengths and priorities, as well as factors that contribute to health inequities.

Recommendation 3. Fostering alignment with local assessments and plans. ***The SHA and SHIP should be designed to provide statewide leadership on population health goals and to foster alignment between state and local-level planning.***
Hospitals are required by the IRS to conduct community health assessments and plans every three years, while PHAB requires that ODH and local health departments conduct assessments and plans at least every five years. In order to facilitate alignment between the state and local levels, and collaboration between hospitals and health departments, HPIO recommends that all partners transition to a three-year cycle. ODH will conduct a comprehensive SHA and SHIP in 2016, and should then update the SHA and SHIP in 2019. Continuity can be maintained between the 2016 and 2019 assessments and plans. The 2019 SHIP, in particular, should not need to change substantially from the 2016 document, although all PHAB-required components must still be included in the 2019 SHA and SHIP.

The SHA and SHIP should serve as prominent sources of information about Ohio's population health priorities in a way that is useful to hospitals, local health departments and others involved in community-level health improvement planning. Strong participation from hospital and local health department representatives during the SHA and SHIP development process will be critical for ensuring that the priorities, core metrics and evidence-based strategies identified in the SHIP are relevant to local communities.

State health assessment (SHA) recommendations

Recommendation 4. Existing data. ***The SHA should build upon existing information about Ohio's health needs.***

Rather than "starting from scratch," the SHA should incorporate information from some or all of the following sources:

- **Network of Care** (secondary data website)
- **2014 HPIO Health Value Dashboard** (second edition to be released January 2017)
- **Ohio Medicaid Assessment Survey** (2015 and previous years)
- SIM Population Health Diagnostic (McKinsey, 2015)
- **Ohio Health Issues Poll**
- Topic-specific reports for Ohio, such as the **Impact of Chronic Disease in Ohio** (ODH, 2015)

HPIO recommends that the SHA use and build upon the metrics and data included in the HPIO *Health Value Dashboard*. See Appendix 2I for a potential timeline and strategy for aligning the SHA with the *Dashboard*.

The SHA should include a crosswalk that illustrates the overlaps and differences between Network of Care, the HPIO *Health Value Dashboard* and the Ohio Medicaid Assessment Survey. It may also be helpful to include a crosswalk outlining the commonalities and differences for the Ohio Medicaid Assessment Survey and other commonly used surveys, such as the Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), National Survey of Children's Health (NSCH) and the Ohio Healthy Youth Environments Survey (OHYES).

In addition, the SHA should use an existing planning model, such as Mobilizing for Action through Planning and Partnerships (MAPP), Association for Community Health Improvement (ACHI) Toolkit or the Catholic Health Association of the United States (CHA) Assessment Guide.

Recommendation 5. Metric selection. ***The SHA should select metrics based upon specific prioritization criteria, resulting in a set of metrics that the state will use to monitor progress on the SHIP and that local partners can use in their own assessments.***

When selecting the metrics to include in the SHA, the SHA steering committee should:

- Identify a set of decision criteria to guide selection of metrics to include in the SHA. (Examples of criteria are included in Appendix 2J.1)
- Select metrics that measure the health determinants and outcomes outlined in the conceptual framework and align with the resources listed in recommendation four.
- Select metrics that are likely to be useful for monitoring progress toward SHIP goals and objectives.

The SHA should include a set of metrics that is comprehensive enough to reflect a broad view of health determinants, yet concise enough to be presented in an actionable format. The categories and terms used in the SHA should provide a typology of health issues that can be used by local communities. (See Figure 3.1 in Part Three for examples of health priority categories.)

Recommendation 6. Communicating findings. ***The SHA should summarize and synthesize the findings in a compelling format that puts data into context and directly informs the SHIP.***

The SHA should include an executive summary that summarizes key findings and identifies overall themes. The report should put data in context through the use of benchmarks (e.g., Healthy People 2020 goals), trends and/or comparisons to other states or the U.S. overall. Information about disparities should be displayed in a compelling way (see Appendix 2K for examples) and the narrative should explore reasons for disparities. Data should be updated on a regular basis to allow for ongoing monitoring using the Network of Care website.

Note that to achieve PHAB accreditation, health departments must communicate assessment findings to the public (see Appendix 2G).

State health improvement plan (SHIP) recommendations

Recommendation 7. Existing plans. ***The SHIP should build upon related state-level plans.***

SHIP planners should turn to existing statewide plans for potential priorities, metrics, objectives and strategies to include in the next SHIP. Examples include the 2015-2016 SHIP Addendum, the Ohio Infant Mortality Reduction Plan 2015-2020, Ohio's Plan to Prevent and Reduce Chronic Disease 2014-2018, The Ohio Comprehensive Cancer Control Plan 2015-2020 and the Ohio Adolescent Health Partnership Strategic Plan 2013-2020. The chronic disease and cancer control plans, in particular, include several useful examples of Specific Measurable Achievable Realistic and Time-bound (SMART) objectives.

Recommendation 8. Prioritization process. ***The SHIP should select priority health areas based upon specific prioritization criteria, resulting in a set of priorities concise enough to drive targeted action to "move the needle" on a strategic set of health outcomes.***

When selecting priorities to include in the SHIP, planners should:

- Identify a set of decision criteria to guide selection of priorities. (Examples of criteria are included in Appendix 2J.2)
- Be open and iterative during the prioritization process, allowing for input from a wide range

of stakeholders.
- Consider priorities identified by local communities through their hospital and local health department assessments and improvement plans ("bottom up" approach to identifying priorities) and include hospital and health department representatives in the prioritization process.
- Consider priorities that align with national priorities, such as the National Prevention Strategy or Healthy People 2020 Leading Health Indicators.
- Identify priorities that are relevant to all stages of the life course.

The resulting set of priorities should be concise enough to drive targeted action to "move the needle" on a strategic set of health outcomes. The SHIP may need to elevate a small number of "flagship" or universal priorities that apply to all or most areas of the state, while acknowledging a broader range of additional priorities that vary widely by location. The categories and terms used for the SHIP priorities should provide a typology of health issues that can be used by local communities and should directly align with metrics in the SHA. (See Figure 3.1 in Part Three for examples of health priority categories.)

HPIO recommends also taking into consideration categories from:
- **County Health Rankings and Roadmaps**
- **HPIO Health Value Dashboard**
- **Healthy People 2020 topics and objectives**
- **National Prevention Strategy**

Recommendation 9. Objectives and evaluation. ***The SHIP should include measurable objectives, an evaluation framework and mechanisms for ongoing monitoring and communication of progress.***

The SHIP should include SMART objectives for each priority. The evaluation framework should include:
- List of process and outcome metrics that will be used to assess progress on each objective (see Figures 3.4 and 3.6 in Part Three for examples of population-level outcome metrics)
- Data sources to be used for each metric and a description of data availability (including ability to report outcomes by race/ethnicity, income level, insurance status, age, sex, disability status or sub-state geography)
- Process evaluation components to:
  - Describe the number, type and county location of organizations that implement SHIP strategies, including the number of local health department CHIPs and hospital ISs that select SHIP priorities, metrics and strategies
  - Estimate the number of Ohioans reached by SHIP strategies
  - Assess the extent to which evidence-based strategies are implemented as intended
- Evaluation and reporting timeline
- Description of resource needs and capacity to conduct the process and outcome evaluation

Progress toward process and outcome objectives should be monitored and reported to the public and other stakeholders on a regular basis. The existing Network of Care Ohio SHIP website may provide a good starting place for ODH to develop a concise, at-a-glance dashboard format for reporting SHIP outcomes.

Recommendation 10. Evidence-based strategies. ***The SHIP should include evidence-based strategies that link primary care with community-based population health activities and address upstream social determinants of health.***

An evidence-based strategy is defined as a program or policy that has been evaluated and demonstrated to be effective in achieving the desired outcome based upon the best-available research evidence, rather than upon personal belief or anecdotal evidence. SHIP planners should use the following sources of best-available evidence for population health strategies:
- **The Guide to Community Preventive Services** (Community Guide)
- **What Works for Health**
- Other systematic reviews and evidence registries listed in Figure 3.12 in Part Three of this report and as described in the **HPIO Guide to Evidence-Based Prevention**

Strategies should be selected using specific criteria (see Appendix 2J.3 for examples) and should include a range of strategies that:
- Link clinical and community settings, including ways to connect primary care with community-based prevention programs
- Address upstream social determinants of health, including housing, transportation, education, income/employment, etc.
- Involve policy, system or environmental change

- Are designed to decrease health disparities and achieve health equity
- Promote health at each stage of life
- Address the strengths, needs and empowerment of individuals, families and communities

In order to align the SHIP with the roll-out of the PCMH model, the SHIP should include a strategic set of clinical-community linkage activities that will help PCMH practices and patients achieve positive outcomes on a prioritized sub-set of the PCMH quality measures (see Figure 3.3). Part Three of this report provides specific examples of ways to connect PCMH practices with community-based resources that help patients with basic needs and behavior change.

Recommendation 11. Implementation and financing. ***The SHIP should specify how the strategies will be implemented and financed.***

SHIP planners should identify responsible entities and funding sources for each strategy. The SHIP should identify state-level "backbone" organizations that accept leadership and accountability for each priority area, along with dedicated funding sources (e.g., ODH grants) or other financing mechanisms (e.g., Medicaid reimbursement, hospital community benefit, pay for success, etc.). In some cases the appropriate backbone organization may be ODH, although other organizations or agencies could also serve as backbones for SHIP priorities.

The SHIP dissemination plan should include ways to engage trusted messengers to recruit additional community partners to implement and/or fund SHIP strategies at the local level, including private philanthropy and sectors beyond health.

A backbone organization, also referred to as a "community integrator," is an entity with the capacity to bring partners together to define, measure and achieve a common goal. Backbone organizations must have adequate staffing to support project management, administration, data analysis, communications and other coordination functions. See HPIO publication, "**Beyond medical care fact sheet: Community integrators and backbone organizations.**"

Recommendations for improving Ohio's population health planning infrastructure

HPIO facilitated development of a set of recommendations for improving Ohio's population health planning infrastructure, taking into consideration the key challenges and contributing factors identified by Population Health Advisory Group and Infrastructure Subgroup members in Figure 2.9.

The recommendations are based on best practices identified through literature review, examples from other states (refer to second Population Health Advisory Group **meeting two materials**)[19] and group member feedback. Of the states reviewed, New York provided the most comprehensive population health planning model, particularly around state and local-level assessment and plan alignment, as well as local health department and hospital collaboration (for more information on New York's approach to community health planning, see **https://www.health.ny.gov/prevention/prevention_agenda/**). The recommendations for improving Ohio's population health planning infrastructure reflect many of the elements incorporated in the New York model and identified as best practices in literature.[20]

Overall goals for the population health planning infrastructure recommendations

Members of the Infrastructure Subgroup, consisting primarily of local health department and hospital representatives, came to consensus on a set of overarching goals for the population health planning infrastructure recommendations:

1. Improve the health of Ohioans by deploying a strategic set of evidence-based, upstream population heath activities at the scale needed to measurably improve population health outcomes.
2. Develop a more efficient and effective way to do high-quality community health assessment and improvement planning in Ohio that:
   a. Results in widespread implementation and evaluation of evidence-based strategies
   b. Helps nonprofit hospitals and local health departments to meet IRS and PHAB requirements
   c. Balances local needs and innovation with statewide alignment and coordination
   d. Increases and supports collaboration between hospitals and local health departments, and with other community partners

Key assumptions and considerations

Based upon subgroup member input, HPIO outlined key assumptions and considerations for development of the recommendations for improving Ohio's population health planning infrastructure:

1. State health assessment (SHA)and state health improvement plan (SHIP) will be:
   a. Guided by a broad conceptual framework that includes the social determinants of health, health equity, and a life-course perspective
   b. Developed through meaningful community leader input and engagement, including local health departments, hospitals and input from sectors outside of public health and health care
   c. Informed by local-level assessments, planning documents and other existing information about Ohio's health needs
   d. Actionable documents that can be used as a go-to source for priorities, metrics, objectives and evidence-based strategies
   e. Updated every three years on a timeline that allows for alignment with local community health plans
2. More strategic allocation of resources is needed to implement population health activities at the scale needed to improve population health outcomes.
3. Hospitals and local health departments may choose to identify priorities in common with their entire service area or county, as well as priorities that address localized health needs (such as by city, zip code, neighborhood or special population or age group).
4. Community health assessment and planning collaboration should occur at least at the county level and in some cases may be more effective across multiple counties.
5. Provision of tools (e.g. templates, checklists) and other forms of technical assistance to communities will support and strengthen the population health planning infrastructure.
6. Additional guidance or requirements around community-level health planning will not conflict with federal and national requirements and standards.
7. Some communities are further along

in collaborating and aligning on their plans and assessments and should be provided with opportunities to spread best practices to other communities.

8. Improved population health planning will provide hospitals and local health departments with a streamlined approach to more effectively and efficiently target and amplify resources to address the health needs of their community, while also meeting IRS and PHAB requirements.
9. Improved population health planning supports the transition to value-based payment models and delivery system reform.
10. Standardizing certain elements of the population health planning infrastructure may be phased in over time.
11. A system for tracking community-level progress on population health outcomes for SHIP core metrics will be developed. ODH will compile and share existing secondary data at least at the county level for the priorities and core metrics identified in the SHIP.

Recommendations

The final recommendations to improve Ohio's population health planning infrastructure are organized under four domains:

1. State and local level assessment and plan alignment
2. Local health department and hospital plan alignment
3. Funding
4. Transparency and accessibility

Recommendations are provided for a set of core components under each of these four domains. Recommendations indicate that the state either requires or issues guidance regarding each core component of population health planning (see Figure 2.11 for the full set of recommendations). The proposed timeline for implementation of these recommendations is outlined in Figure 2.12.

Figure 2.11. **Recommendations to improve Ohio's population health planning infrastructure**

	Where we are today	Recommendation
1. State health assessment (SHA) and state health improvement plan (SHIP) and local level (local health department and hospital) assessment and plan alignment		
1a. Health priorities	• Limited intentional alignment of local health department and hospital plan health priorities with the SHIP	State **issues guidance** encouraging local health departments and tax-exempt hospitals to address at least two health priorities in their plans from a menu of priorities identified in the SHIP (referred to hereinafter as SHIP-aligned priorities). *Guidance issued by July 2016*
1b. Measures (metrics, indicators)	• Not all SHIP objectives are specific and measurable • Very limited intentional alignment of local health department and hospital assessment and plan metrics with the SHIP	State **issues guidance** encouraging local health departments and tax-exempt hospitals to include at least one core metric from the SHA and SHIP in their assessments and plans for each SHIP-aligned priority. *Guidance issued by July 2016*
1c. Evidence-based strategies	• No common definition of evidence-based strategies • Limited or unknown use of evidence-based strategies to address population-level health outcomes	State **issues guidance** encouraging local health departments and tax-exempt hospitals to select evidence-based strategies from a menu of strategies in the SHIP to address SHIP-aligned priorities. *Guidance issued by July 2016*
2. Local health department and hospital alignment		
2a. Collaboration on assessments and plans	• Significant variation across and within counties along collaboration continuum (See Figure 2.8) • Collaboration more common in assessment than implementation phase	State **issues guidance** encouraging local health departments and tax-exempt hospitals in the same counties or with shared populations to partner on assessments and plans through a common: • Conceptual framework • Process template or checklist • Set of metrics (including metrics tracking racial and ethnic disparities) • Health prioritization criteria • Set of health priorities • Set of SMART objectives • Set of evidence-based strategies that can be implemented in community-based and clinical settings • Evaluation framework • Accountability plan • Exchange of data and information *Guidance issued by July 2016*

Figure 2.11. **continued**

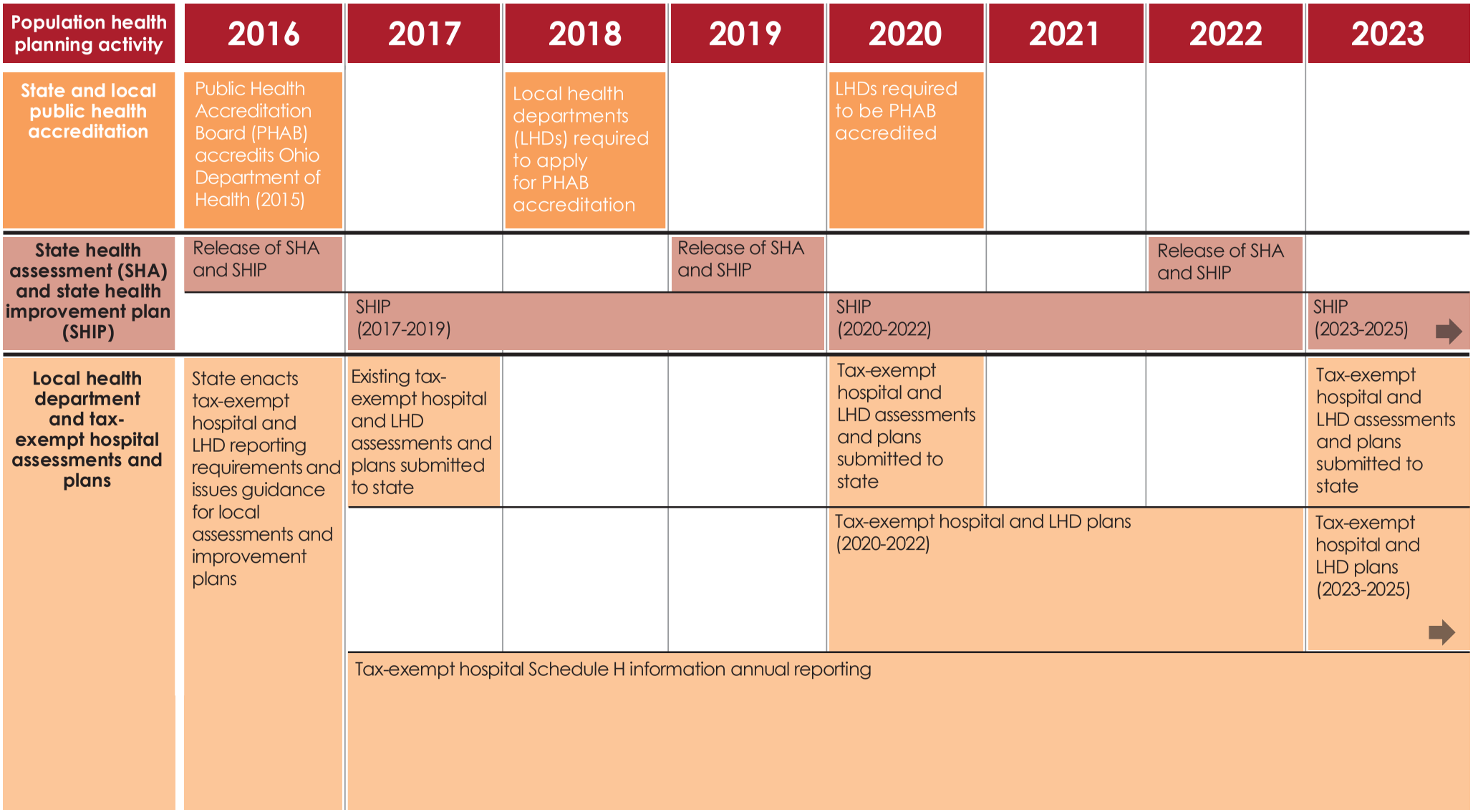
	Where we are today	Recommendation
2b. Timeline	• Hospitals are on three-year cycle (as required by the Internal Revenue Service), with many starting in 2012 on a rolling basis that varies widely across the state • Most local health departments are on five-year cycles (maximum as required by the Public Health Accreditation Board) on a rolling basis that varies widely across the state	State **requires** local health departments and tax-exempt hospitals to align with a three-year timeline for assessments and plans. Local health department and hospital plans covering years 2020-2022 and their related assessments must be submitted to the state in 2020 and every three years thereafter (in 2023, 2026, etc.). *Requirement issued by July 2016, effective in 2020 per subsequent guidance*
3. Funding		
3a. State funding for county-level assessments and plans	• Local health departments develop assessments and plans for their jurisdiction; hospitals develop plans for their "community" • Assessments and plans for local health departments and hospitals can cover a geographic area that is smaller than a county	To defray the cost of transitioning to a three-year assessment and planning cycle, the state will **seek additional funding** for local health departments that choose to collaborate on one county-level assessment and plan. Local health departments can pool together this additional funding to support development of multi-county collaborative assessments and plans. *Funding and disbursement methodology identified by July 2016*
3b. Hospital community benefit	• Hospitals are required to comply with federal IRS hospital community benefit rules and regulations • Ohio has not added additional requirements or guidance	State **issues guidance** encouraging tax-exempt hospitals to allocate a minimum portion of their total community benefit expenditures to activities that most directly support community health planning objectives, including community health improvement services and cash and in-kind contributions. *Guidance issued by July 2016*
4. Transparency and accessibility		
4a. Assessments and plans	• No central repository of all assessments or plans • Local health departments submit their assessments and plans to the Ohio Department of Health on a voluntary basis (information is not easily accessible to the public) and many voluntarily post documents on their own websites • Hospitals are required by the IRS to post assessments on their websites and some hospitals post plans to their website, but this is not required by the IRS	• State **requires** local health departments and tax-exempt hospitals submit their assessments and plans to the state. • State provides online repository of all assessments and plans. *Requirement issued by July 2016, effective in 2017 and every three years thereafter*
4b. Schedule H	• Schedule H data is not compiled by the state; data is not easily accessible format for the public or state policymakers	• State **requires** tax-exempt hospitals to submit to the state their Schedule H and corresponding attachments, including reporting on each category of expenditures in Part I, Line 7(a)-(k)* and Part II of the Schedule H on an annual basis. (Government hospitals with "dual status" as a 501(c)(3) must submit equivalent information). • State provides online repository of Schedule H and equivalent information. *Requirement issued by July 1, 2016, effective in 2017*

***Note:** Schedule H Part I, Line 7: (a) financial assistance at cost, (b) Medicaid, (c) costs of other means-tested government programs, (d) financial assistance and means-tested government programs, (e) community health improvement services and community benefit operations, (f) Health professions education, (g) subsidized health services, (h) research, (i) cash and in-kind contributions, (j) total other benefits, (k) total add lines 7d and 7j.

Terminology key

Assessment: Hospital community health needs assessment; local health department community health assessment
Plan: Hospital implementation strategy; local health department community health improvement plan
Tax-exempt hospital: All nonprofit and government-owned hospitals that are recognized as a tax-exempt charitable organization under §501(c)(3) of the Internal Revenue Code and are required to comply with the Internal Revenue Service community health needs assessment requirements; 79 Fed. Reg. 78954 (Dec. 31, 2014) See Appendix 2B for flowchart of a hospital's requirements under 501(c)(3)
SMART objective: An objective statement that is specific, measurable, achievable, realistic and tme-bound
Example: Decrease the prevalence of cigarette smoking among adults (ages 18+) by 3.3 percentage points from 2012 to 2020 (data source: BRFSS)

Figure 2.12. **Population health planning infrastructure recommendations timeline**



Assessment = Tax-exempt hospital community health needs assessment; local health department community health assessment
Plan = Tax-exempt hospital implementation strategy; local health department community health improvement plan
Tax-exempt hospitals = All nonprofit and government hospitals recognized as tax-exempt charitable organizations under section 501(c)3 of the Internal Revenue Code and that are required to comply with the Internal Revenue Service community health needs assessment requirements; 79 Fed. Reg. 78954 (Dec. 31, 2014)

Tools and technical assistance

There was also consensus among subgroup members that local health departments and hospitals could benefit from additional tools and technical assistance to support the development of higher-quality assessments and plans. Taking into account this feedback, HPIO identified the following opportunity areas for the provision of technical assistance:

- Collaboration, trust building and collective impact among community partners
- Authentic community member engagement and facilitation
- Primary and secondary data collection, quantitative and qualitative analysis and presentation (including technical assistance on power analysis and adequate sample sizes)
- Health prioritization process
- Identification of evidence-based strategies
- Developing SMART objectives
- Identifying and aligning population health measures with clinical measures
- Evaluation and ongoing monitoring

HPIO also provided recommendations for tools that can help state and community-level planners:

- Regularly-updated list of potential facilitators and neutral conveners in Ohio for assessment and planning processes
- Regularly-updated public list of stakeholders charged with leading their respective organization's community health planning processes (i.e. identifying the hospital and local health department liaisons)
- Map that illustrates "community" as geographically defined by local health department and hospital assessments and plans
- Map that identifies priorities, strategies and objectives selected at a county-level or sub-county level
- Learning communities that provide opportunities for peer-to-peer sharing with others who are leading assessments and plans

Appendix 2L provides a compilation of existing tools that can be used to inform the development of local health department and hospital assessments and plans.

Setting a minimum community benefit target

As outlined in the recommendations for improving Ohio's population health planning infrastructure (see Figure 2.11, recommendation 3b), Ohio has an opportunity to encourage 501(c)(3) tax-exempt hospitals to invest more of their community benefit expenditures in activities that most directly support community health planning objectives, particularly in the community health improvement services and cash and in-kind contributions categories. Ohio is in a good position to maximize this opportunity for the following reasons:

- **Declining uninsured rate.** Ohio's decision to extend Medicaid eligibility to adults up to 138 percent of the federal poverty line, along with other provisions of the ACA, has reduced the number of people who are uninsured in the state. From 2012 to 2015, Ohio's adult uninsured rate dropped from 14 percent to 7 percent.[21] The Ohio Department of Medicaid has also estimated significant reductions in uncompensated care costs for Ohio's hospitals as a result of Medicaid expansion (see Figure 2.13).[22]
- **Significant resources.** Ohio 501(c)(3) hospitals already spent a total of $3.86 billion towards net community benefit activities in 2012, pre Medicaid-eligibility expansion, accounting for 6.46 percent of total hospital expenditures on average.[23]
- **Broad reach.** As of 2013, 75.4 percent of hospitals in Ohio were classified as nonprofit, compared to only 58.4 percent of hospitals nationally.[24] Although12 of Ohio's 88 counties do not have a nonprofit hospital located within their borders, all but four counties were included in the areas covered by nonprofit hospital CHNAs.[25]

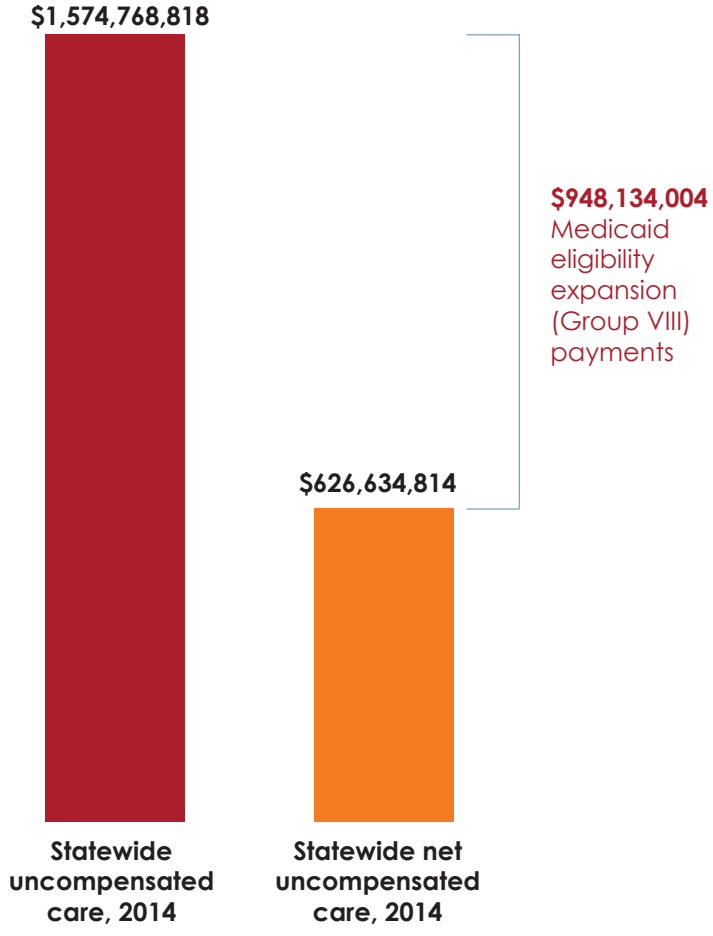
It is difficult to determine the full extent to which reductions in uncompensated care will impact the amount of total net hospital community benefit expenditures provided by hospitals in Ohio. However, to provide a baseline for discussion and to further inform the population health planning infrastructure recommendation outlined in 3b, HPIO developed four scenarios to demonstrate possible thresholds for allocating a minimum portion of hospital community benefit dollars to community health improvement services and cash and in-kind contributions.

Scenario one (see Figure 2.14) applies the national percentage of community health improvement services and cash and in-kind contributions (7.5 percent, see Figure 2.6) to Ohio's total net hospital community benefit expenditure amount as reported in 2012, and carries forward that amount to future years. Scenario's two through four (see Figure 2.15) carry forward the community health improvement services and cash and in-kind contribution amounts as reported by Ohio hospitals in 2012 (see Figure 2.8), and adds an additional allocation based upon a set percentage of the Medicaid expansion payments, ranging from 5 percent to 20 percent.

HPIO acknowledges that more recent data and further analysis is critical to ensuring that guidance issued by the state around recommendation 3b achieves the underlying objective of increasing investment in community based health improvement activities while mitigating unintended negative consequences. It is also important to note that:

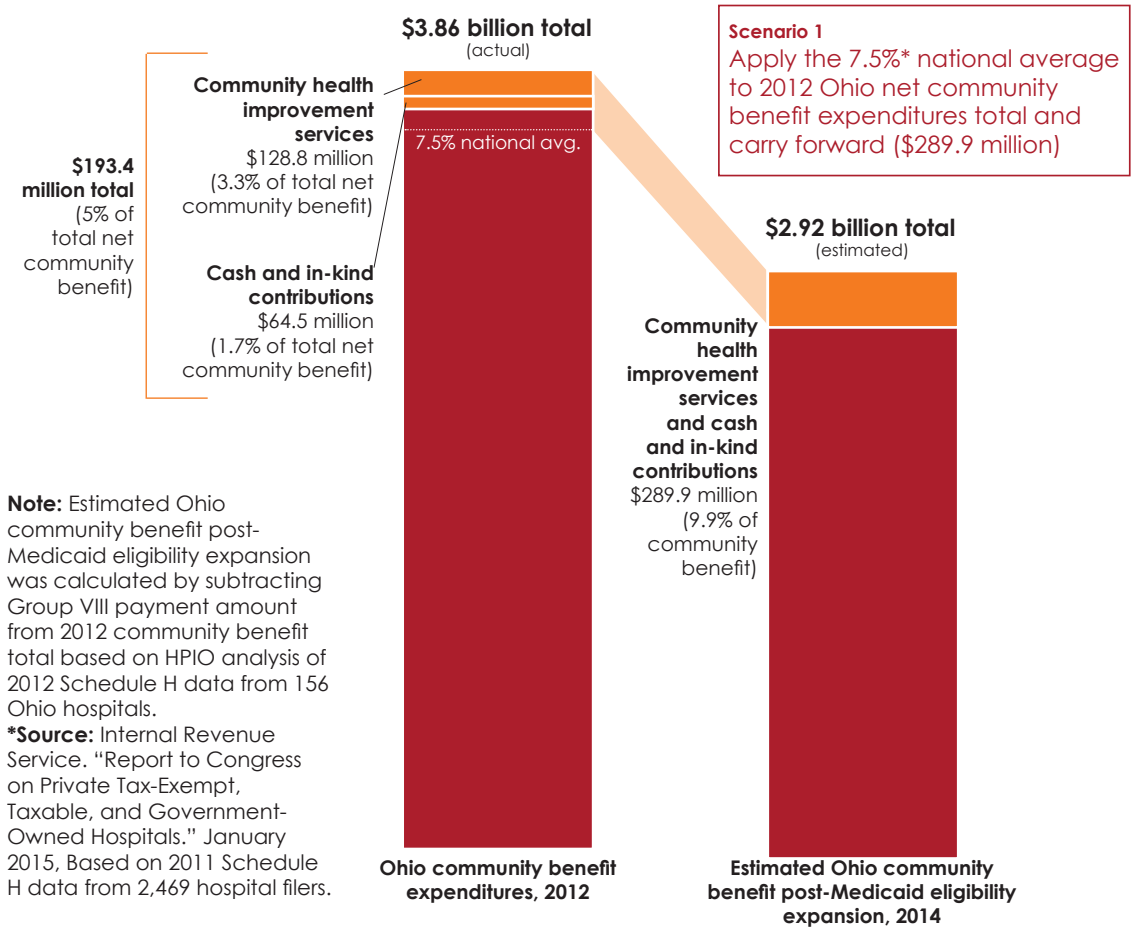
- Guidance around a community benefit threshold for community health improvement services and cash and in-kind contributions does not negate the significant contributions hospitals provide in the form of other community benefit categories (see Appendix 2C).
- The scenarios outlined in this section are based on the assumption that total net community benefit expenditures will decrease post-Medicaid eligibility expansion. However, hospitals may maintain or increase their total net community benefit expenditures in future years to preserve their federal tax-exempt status.

Figure 2.13. **Reduction in uncompensated care due to Medicaid eligibility expansion payments in Ohio**



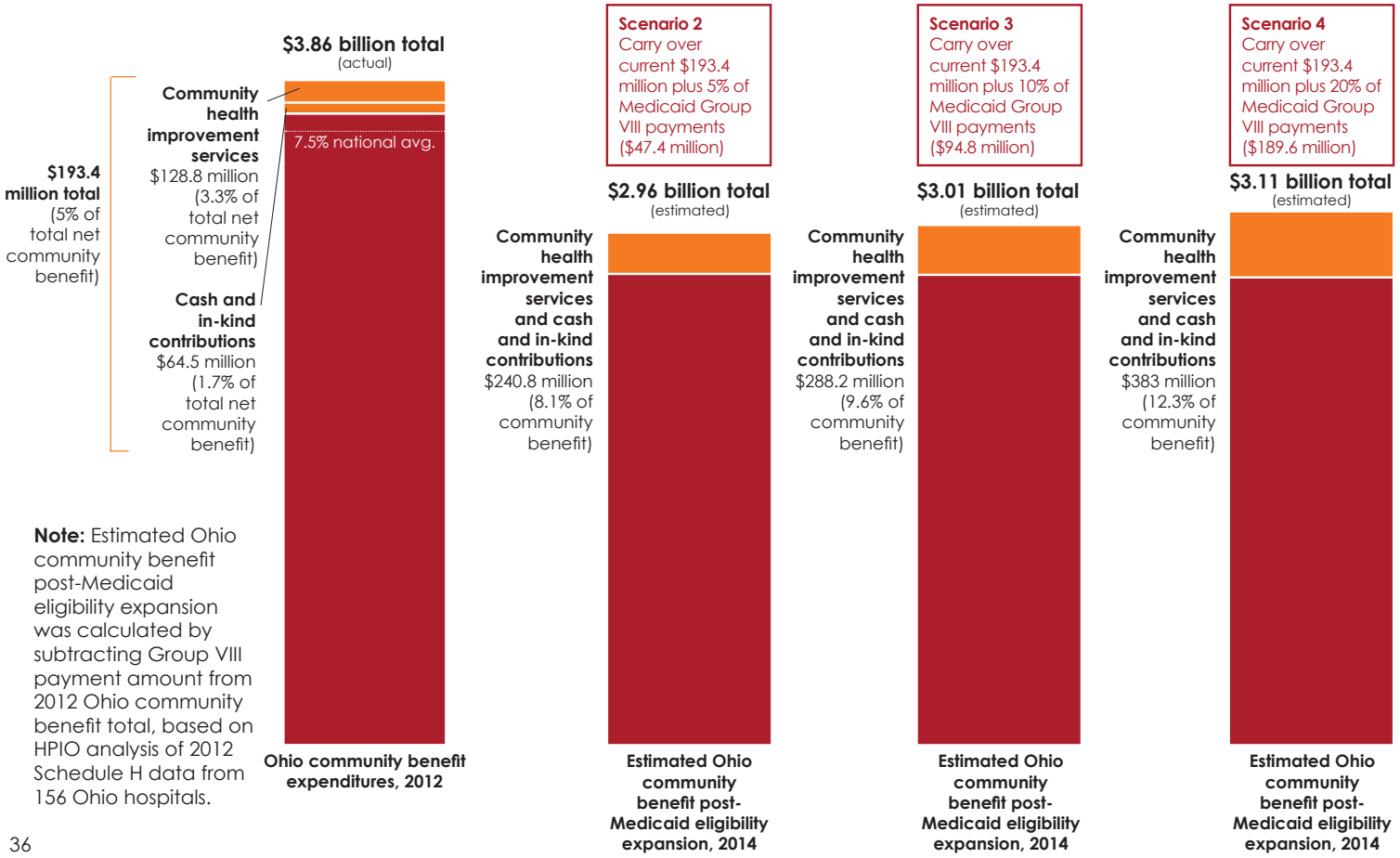
Source: Ohio Medicaid

Figure 2.14. **Community benefit expenditures Scenario 1: Based on national benchmark**



Note: Estimated Ohio community benefit post-Medicaid eligibility expansion was calculated by subtracting Group VIII payment amount from 2012 community benefit total based on HPIO analysis of 2012 Schedule H data from 156 Ohio hospitals.
***Source:** Internal Revenue Service. "Report to Congress on Private Tax-Exempt, Taxable, and Government-Owned Hospitals." January 2015, Based on 2011 Schedule H data from 2,469 hospital filers.

Figure 2.15. **Community benefit expenditures Scenarios 2-4: Based on allocation of a set percentage of Medicaid eligibility expansion payment**



Note: Estimated Ohio community benefit post-Medicaid eligibility expansion was calculated by subtracting Group VIII payment amount from 2012 Ohio community benefit total, based on HPIO analysis of 2012 Schedule H data from 156 Ohio hospitals.

3 Population health priority areas, alignment with patient-centered medical home (PCMH) model and evidence-based strategies

Population health priority areas

As discussed in Part Two (see page 16), several state and local entities have conducted health assessments and identified population health priorities over the past five years (see Appendix 3A). The resulting assessment and plan documents provide useful information about the types of health issues that statewide collaboratives and local communities recognize as most important to improve population health in Ohio.

HPIO compiled and reviewed health priorities identified in 290 state and community-level health planning documents:

- **10 state-level health assessment/ improvement plans** (listed in Appendix 3A)
- **110 local health department community health assessments (CHAs) and community health improvement plans (CHIPs)** (review conducted by the Ohio Research Association for Public Health Improvement [RAPHI], housed at Case Western Reserve University)[26]
- **170 hospital community health needs assessments (CHNAs) and implementation strategies (ISs)** (review conducted by HPIO)[27]

There is a great deal of variability in how the state and community-level assessments and plans categorize health priority areas. For example, hospital plans are more likely to focus on specific medical conditions, such as asthma and diabetes, while local health department plans are more likely to emphasize risk factors, such as tobacco use or physical inactivity. Some plans go beyond health outcomes and prioritize broader community conditions, such as access to healthy food, or healthcare system conditions, such as access or quality.

To analyze and synthesize the findings on health priorities, HPIO and RAPHI identified 36 health issue categories across four domains: health conditions, health behaviors, community conditions and health system conditions (see Figure 3.1).

The percentage of documents identifying a health need category as a priority was calculated across state-level, local health department and hospital documents separately (percentages listed in Appendix 3B). To identify the top 10 health priority

Figure 3.1. **Health priority categories**

Health conditions	Health behaviors
• Heart disease • Diabetes • Asthma/Chronic Obstructive Pulmonary Disease (COPD) • Obesity • Cancer • Infectious diseases • Infant mortality/low birth weight • Oral health • Substance abuse treatment • Mental health • Under-immunization	• Chronic disease (management) • Tobacco use • Physical activity • Nutrition • Substance abuse • Emotional health • Youth development/school health • Sexual and reproductive health • Injury protection • Family violence
Community conditions	**Health system conditions**
• Built environment (place) • Food environment • Active living environment • Social determinants of health/health equity • Community partnership	• Under-insurance • Access to medical care • Access to behavioral health care • Access to dental care • Bridging public health and medicine • Quality improvement • Hospital/clinical infrastructure • Health information technology • Workforce development • Funding/financing/cost of services

Source: HPIO and Research Association for Public Health Improvement (RAPHI) analysis of local health department and hospital community health planning documents, March 2015. For more information, see HPIO's publication "Making the most of community health planning in Ohio: The role of hospitals and local health departments."

categories across all 290 state and local-level documents, HPIO equally weighted the health priority category percentages for documents developed at the state-level and by local health departments and hospitals. Figure 3.2. lists the top 10 health priorities from the state and local level, focusing on the health conditions and health behaviors categories.

Figure 3.2. **Top 10 population health priorities for Ohio**

Health priority	Percent of documents that include health priority (state-level, local health department, and hospital documents weighted equally)
1. Obesity	56.0%
2. Physical activity	49.5%
3. Nutrition	47.0%
4. Substance abuse treatment/prevention	44.7%/33.5%
5. Infant mortality	39.9%
6. Tobacco use	38.1%
7. Mental health	37.2%
8. Diabetes	32.9%
9. Cancer	32.0%
10. Heart disease	29.4%

Source: HPIO and the Ohio Research Association for Public Health Improvement (RAPHI) analysis of 290 state and local-level population health planning documents, conducted in 2014-2015.

The PCMH design team referred to these top 10 population health priorities as they were selecting the clinical quality measures developed as part of the PCMH model. As a result, there is strong alignment between the population health priorities identified by existing state and local plans, and the clinical metrics that will be used to determine outcome-based payments for PCMH practices (see Figure 3.3).

There are two exceptions to this alignment. First, local and state-level stakeholders identified substance abuse as a top 10 population health priority, but the PCMH quality measures do not currently include a substance abuse metric because none of the participating commercial payers or Medicaid managed care plans indicated that they are currently tracking a nationally-recognized clinical metric for drug or alcohol use. A measure of initiation and engagement of alcohol and other drug dependence treatment may be added in wave two of PCMH quality measure development. Second, asthma is included in the PCMH clinical quality measures, but was not identified as one of the top 10 population health priorities.

Metrics and baseline data

This section includes lists of population-level and clinical metrics recommended for use in population health assessment and planning. Population-level metrics describe health-related characteristics of all people living within a geographic area, such as all Ohioans, or all people within a subgroup, such as low-income Ohioans or people with disabilities. Data for population-level metrics is typically collected through surveys of geographically-defined groups or vital statistics records gathered by public health agencies. Patient-level clinical metrics describe characteristics such as healthcare utilization, appropriateness of care, quality and clinical outcomes. Data for these metrics is typically generated through healthcare utilization encounters or payment, such as from an electronic health record or medical claims submitted to a health insurance plan.

Figure 3.3. **Alignment between Ohio's top 10 health priorities and patient-centered medical home (PCMH) quality measures**

Ohio's top 10 health priorities	PCMH quality measures
Obesity **Physical activity** **Nutrition**	Adult body mass index (BMI) (adult)
	Weight assessment and counseling for nutrition and physical activity (pediatric)
	Well-child visits in first 15 months of life (pediatric)
	Well-child visits in 3rd, 4th, 5th and 6th years of life (pediatric)
	Adolescent well-care visit (pediatric)
Tobacco use	Tobacco use screening and cessation intervention (adult)
Infant mortality	Timeliness of prenatal care (adult)
	Postpartum care (adult)
	Live births weighing less than 2,500 grams (pediatric)
Mental health	Antidepressant medication management (adult)*
	Follow up after hospitalization for mental illness (adult and pediatric)*
Substance abuse	None*
Diabetes	Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%) (adult)*
Cancer	Breast cancer screening (adult)
Heart disease	Controlling high blood pressure (adult)
	Statin therapy for patients with cardiovascular disease (adult)
NA	Medication management for people with asthma (adult and pediatric)

*To be finalized in 2016

Source: Governor's Office of Health Transformation, preliminary as of Jan. 4, 2016

These metrics are cross-referenced with Healthy People 2020 objectives and the National Quality Forum (NQF) measures, two prominent sources of nationally-recognized metrics. Led by the U.S. Department of Health and Human Services, Healthy People 2020 identifies nationwide health improvement priorities and sets targets for population-level objectives. The NQF is a private not-for-profit organization that endorses consensus standards for clinical performance measurement.

Population-level health outcome and behavior metrics

Figure 3.4 provides a list of population-level metrics for assessing health outcomes and health-related behaviors. HPIO selected these metrics because they align with the HPIO *Health Value Dashboard*, were recommended by the Center for Medicare and Medicaid Innovation (CMMI) for State Innovation Model (SIM) population health planning, and/or otherwise contribute important information about the prevalence of health conditions related to Ohio's top 10 health priority areas.

Figure 3.5 provides a list of clinical metrics for assessing healthcare quality and clinical outcomes related to the top 10 population health priorities. The table includes the Ohio PCMH clinical quality measures, as well as additional measures that HPIO recommends for consideration in future phases of PCMH model development. While acknowledging the current limitations of nationally-recognized measures, HPIO recommends a transition away from process measures and toward more outcome-based measures as they become available and as payers and providers increase their capacity to track outcomes.

Figure 3.4. **Brief inventory of recommended population-level metrics that align with Ohio's top 10 population health priority areas**

Metric (source)	HPIO Health Value Dashboard	CMMI-suggested SIM population level measure*	Healthy People 2020 objective identifier
Obesity, physical activity, nutrition			
Youth obesity. Percent of high school students who are obese (YRBSS)			NA
Adult obesity. Percent of adults who are obese (BRFSS)			NWS 9
Adult insufficient physical activity. Percent of adults not meeting physical activity guidelines (BRFSS)			PA 2.4
Access to exercise opportunities. Percent of individuals in a county who live reasonably close to a location for physical activity (OneSource Global Business Browser and U.S. Census Bureau) `			NA
Alternative commute modes. Percent of trips to work via bicycle, walking or mass transit (combined) (U.S. Census Bureau, ACS)			NA
Safe Routes to School programs. Percent of schools that have a completed school travel plan (Ohio Department of Transportation)			NA
Complete Streets policies. Number of communities that have adopted complete streets policies (Smart Growth America; National Complete Streets Coalition)			NA
Fruit and vegetable consumption. Median intake of fruits and vegetables (times per day) (BRFSS)			NA
WIC at farmers markets. Percent of farmers markets that accept WIC coupons (CDC State Indicators Report on Fruits and Vegetables 2013)			NA
Healthy food access. Percent of population with limited access to healthy food, defined as the percent of low- income individuals (<200% FPG) living more than 10 miles from a grocery store in rural areas and more than 1 mile in non-rural areas (U.S. Department of Agriculture)			NA
Food insecurity. Percent of households with limited or uncertain access to adequate food (U.S. Census Bureau, CPS)			NWS 13
Tobacco use			
Adult smoking. Percent of population age 18 and older that are current smokers (BRFSS)			TU 1.1
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 (YRBS)			TU 2.1
Quit attempts. Percent of adult smokers who have made a quit attempt in the past year (BRFSS)			TU 4.1
Cigarette tax. State cigarette excise tax rate (CDC, as compiled by RWJF DataHub)			TU 17.1
Tobacco prevention spending. Tobacco prevention and control spending, as percent of the CDC-recommended level (ALA)			NA
Children exposed to secondhand smoke. Percent of children who live in a home where someone uses tobacco or smokes inside the home (NSCH)			TU 11.1 (ages 3-11), TU 11.2 (ages 12-17)
Infant mortality			
Infant mortality. Infant deaths per 1,000 live births (Vital Statistics)			MICH 1.3
Prenatal care. Percent of women who completed a pregnancy in the last 12 months and who received prenatal care in the first trimester (Vital Statistics)			MICH 10.1
Safe sleep. Percent of infants most often laid on his or her back to sleep (CDC Pregnancy Risk Assessment Monitoring System)			MICH 20
Teen birth rate. Rate of births per 1,000 females 15-19 years of age (Vital Statistics)			FP 8
Low birth weight. Percent of live births <2,500 g (KIDS COUNT Data Center)			MICH 8.1
Preterm birth. Percent of live births that are preterm (<37 weeks of gestation) (Vital Statistics)			MICH 9.1
Mental health			
Adult poor mental health. Average number of days in past 30 where mental health was poor (BRFSS)			NA
Youth depressive episodes. Percent of adolescents who have had at least one major depressive episode (NSDUH)			MHMD 4.1
Suicide deaths. Suicide deaths per 100,000 population (Vital Statistics)			NA
Unmet need for mental health. Percent of adults ages 18 and older with past year mental illness who reported perceived need for treatment/counseling that was not received (NSDUH)			MHMD 9.1
Mental illness hospitalization follow-up. Percent of Medicaid enrollees ages 6 and older who received follow-up after hospitalization for mental illness within 30 days of discharge (ODMHAS)			NA
Substance abuse			
Drug overdose deaths. Drug overdose deaths per 100,000 population (Vital Statistics)			SA 12
Sales of opioid pain relievers. Kilograms of opioid pain relievers sold per 100,000 population (DEA)			NA
Unmet need for illicit drug use treatment. Percent of individuals ages 12 and older needing but not receiving treatment for illicit drug use in the past year (NSDUH)			SA 8.1

Figure 3.4. **continued**

Metric (source)	HPIO Health Value Dashboard	CMMI-suggested SIM population level measure*	Healthy People 2020 objective identifier
Substance use disorder treatment retention. Percent of individuals ages 12 and older with an intake assessment who received one outpatient index service within a week and two additional outpatient index services within 30 days of intake (ODMHAS)			NA
Alcohol dependence or abuse. Percent of individuals aged 12+ with past-year alcohol dependence or abuse (NSDUH)			NA
Drug dependence or abuse. Percent of individuals aged 12+ with past-year illicit drug dependence or abuse (NSDUH)			NA
Adult binge drinking. Percent of adults who report binge drinking in the past month (BRFSS)			SA 14.3
Diabetes			
Adult diabetes prevalence. Percent of adults diagnosed with diabetes (BRFSS)			NA
Diabetes A1c measurements. Percent of adults ages 19 and older with diagnosed diabetes who received 2 or more hemoglobin A1c measurements in the last year (BRFSS)			NA
Cancer			
Cancer early stage diagnosis: All. Percent of all cancer cases diagnosed at an early stage (OCISS)			NA
Cancer early stage diagnosis: Female breast cancer. Percent of all female breast cancer cases diagnosed at an early stage (OCISS)			NA
Cancer early stage diagnosis: Colon and rectal cancer. Percent of all colon and rectal cancer cases diagnosed at an early stage (OCISS)			NA
Colorectal cancer screening. Percent of adult ages 50-75 who reported colorectal test use, by test type (up-to-date with CRC screening; FOBT within 1 year; sigmoidoscopy within 5 years with FOBT within 3 years; colonoscopy within 10 years) (BRFSS)			C 16
Cancer incidence. Incidence of breast, cervical, lung and colorectal cancer per 100,000 population, age adjusted (WONDER/Robert Wood Johnson Foundation DataHub)			NA
Heart disease			
Cardiovascular disease mortality. Heart-related deaths per 100,000 population (Vital Statistics)			HDS 2
Heart failure readmissions for Medicare beneficiaries. Percent of Medicare beneficiaries discharged from the hospital with a principal diagnosis of heart failure who were readmitted for any cause within 30 days after the index admission date (CMS)			NA
Blood pressure/hypertension medication. Percent of adults with high blood pressure/hypertension taking prescribed medications to lower their blood pressure (BRFSS)			HDS 11
Heart disease prevalence. Estimated prevalence of adults ever diagnosed with heart disease (BRFSS)			NA
Hypertension prevalence. Estimated prevalence of adults ever diagnosed with hypertension (BRFSS)			HDS 5.1
Child health/ Asthma**			
Adult asthma prevalence. Estimated prevalence of adults who currently have asthma (BRFSS)			NA
Child asthma prevalence. Estimated prevalence of children age 0-17 ever diagnosed with asthma (BRFSS)			NA
Asthma hospitalizations. Hospitalizations for asthma per 10,000 children and adults aged 5-64 years. (NHDS)			RD 2.2
Outdoor air quality. Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.2) (EPA)			NA
Children exposed to secondhand smoke. Percent of children who live in a home where someone uses tobacco or smokes inside the home (NSCH)			TU 11.1 (ages 3-11), TU 11.2 (ages 12-17)
Severe housing problems. Percent of households that have one or more of the following problems: 1) housing unit lacks complete kitchen facilities, 2) housing unit lacks complete plumbing facilities, 3) household is severely overcrowded, 4) monthly housing costs, including utilities, exceed 50% of monthly income (HUD)			NA

*Metric is same or similar to core or additional population health measures suggested by Center for Medicare and Medicaid Innovation (CMMI). This matrix includes all CMMI population health measures for the Ohio priority health areas.
**Child health/asthma was not specifically included in Ohio's population health priority areas, but has been added to the patient-centered medical home quality metrics.

- ACS: American Community Survey
- ALA: American Lung Association
- BRFSS: Behavioral Risk Factor Surveillance System
- CDC: Centers of Disease Control and Prevention
- CMMI: Center for Medicare and Medicaid Innovation
- CMS: Centers for Medicare & Medicaid Services
- CPS: Current Population Survey
- DEA: Drug Enforcement Agency
- EPA: Environmental Protection Agency
- HUD: U.S. Department of Housing and Urban Development
- NHDS: National Hospital Discharge Survey
- NSCH: National Survey of Children's Health
- NSDUH: National Survey on Drug Use and Health
- OCISS: Ohio Cancer Incidence Surveillance System
- ODMHAS: Ohio Department of Mental Health and Addiction Services
- SIM: State Innovation Model
- WONDER: Wide-ranging Online Data for Epidemiologic Research
- YRBSS: Youth Risk Behavior Surveillance System

Healthy People 2020 acronyms:

- NA: Not Applicable
- NWS: Nutrition and Weight Status
- PA: Physical Activity
- TU: Tobacco Use
- MICH: Maternal, Infant and Child Health
- FP: Family Planning
- MHMD: Mental Health and Mental Disorders
- SA: Substance Abuse
- C: Cancer
- HDS: Heart Disease and Stroke
- RD: Respiratory Diseases

Figure 3.5. **Brief inventory of recommended clinical metrics that align with Ohio's population health priority areas**

Metric (measure developer)	Patient-centered medical home (PCMH) quality measure	HPIO recommended for future phases	National Quality Forum (NQF) #
Obesity, physical activity, nutrition			
Adult body mass index (BMI). The percentage of adults 18–74 years of age who had an outpatient visit and whose BMI was documented in the past two years (HEDIS)	■		NA
Adult BMI screening and follow-up. Percent of patients aged 18 years and older with a BMI documented during the current encounter or the previous six months, and when BMI is outside of normal parameters, a follow-up plan is documented during the encounter or the previous six months (CMS)		■	0421
Weight assessment and counseling for nutrition and physical activity for children/adolescents. Percent of patients 3-17 years of age who had an outpatient visit with a primary care provider (PCP) or an OB/GYN and who had evidence of the following during the measurement year: BMI percentile documentation, counseling for nutrition, counseling for physical activity (HEDIS)	■		0024
Well-child visits in the first 15 months of life. Percent of children 15 months old who had the recommended number of well-child visits with a PCP during their first 15 months of life (HEDIS)	■		1392
Well-child visits in the 3rd, 4th, 5th and 6th years of life. Percent of children 3-6 years of age who had one or more well-child visits with a PCP during the measurement year (NCQA)	■		1516
Adolescent well-care visit. Percent of members 12-21 years old who had at least one PCP well-care visit (HEDIS)	■		NA
Tobacco use			
Tobacco use assessment and tobacco cessation intervention. Percent of patients aged 18 years and older who were screened for tobacco use at least once during the two-year measurement period and who received cessation counseling intervention if identified as a tobacco user (HEDIS)	■		0028
Tobacco use and quitting help among adolescents. Percent of adolescents 12 to 20 years of age with a primary care visit during the measurement year for whom tobacco use status was documented and received help with quitting if identified as a tobacco user (NCQA)		■	NA
Infant mortality			
Timeliness of prenatal care. Percent of deliveries that received a prenatal care visit as a patient of the organization in the first trimester or within 42 days of enrollment in Medicaid/CHIP (HEDIS)	■		1517 (rate 1)
Postpartum care. Percent of deliveries that had a postpartum visit on or between 21 and 56 days after delivery (HEDIS)	■		1517 (rate 2)
Live births weighing less than 2,500 grams. Percent of live births that weighed less than 2,500 grams (CDC)	■		NA
Mental health			
Screening for clinical depression and follow-up plan. Percent of patients aged 12 years and older screened for clinical depression using an age appropriate standardized tool and follow-up plan documented (CMS)		■	0418
Depression remission at twelve months. Adult patients age 18 and older with major depression or dysthymia and an initial Patient Health Questionnaire (PHQ-9) score > 9 who demonstrate remission at twelve months defined as a PHQ-9 score less than 5 (MNCM)		■	0710
Follow up after hospitalization for mental illness.* Percent of discharges for children ages 6 to 20 who were hospitalized for treatment of selected mental illness diagnoses and who had an outpatient visit, an intensive outpatient encounter or partial hospitalization with a mental health practitioner (HEDIS)	■		0576
Anti-depressant medication management.* The percentage of members 18 years of age and older with a diagnosis of major depression and were newly treated with antidepressant medication, and who remained on an antidepressant medication treatment (NCQA)	■		0105
Substance abuse			
Substance use disorder treatment retention. At least one clinical encounter within the first 14 days post assessment and two additional encounters within the 30-day period (Washington Circle/ ODMHAS)		■	NA
Unhealthy alcohol use: screening. Percent of patients aged 18 years and older who were screened for unhealthy alcohol use at least once within 24 months using a systematic screening method (PCPI)		■	2152
Initiation and engagement of alcohol and other drug dependence treatment. Percent of Medicaid enrollees age 18 and older with a new episode of alcohol or other drug dependence who initiated treatment through an inpatient alcohol or other drug (AOD) admission, outpatient visit, intensive outpatient encounter, or partial hospitalization within 14 days of the diagnosis, or initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit (HEDIS)		■	0004

Figure 3.5. **continued**

Metric (measure developer)	Patient-centered medical home (PCMH) quality measure	HPIO recommended for future phases	National Quality Forum (NQF) #
Diabetes			
Comprehensive diabetes care: Hemoglobin A1c (HbA1c) poor control (>9.0%).* The percentage of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent HbA1c level during the measurement year was greater than 9.0% (poor control) or was missing a result, or if an HbA1c test was not done during the measurement year (NCQA)	■		0059
Screening for prediabetes and follow up. Percent of overweight or obese patients aged 40 to 70 years who had appropriate screening for abnormal blood glucose as part of cardiovascular risk assessment and were appropriately referred to intensive behavioral counseling interventions to promote a healthful diet and physical activity (consistent with USPSTF recommendation)		■	NA
Cancer			
Breast cancer screening. Percent of women 50-74 years of age who had a mammogram to screen for breast cancer (NCQA)	■		2372
Colorectal cancer screening. Percent of patients 50-75 years of age who had appropriate screening for colorectal cancer (NCQA)		■	0034
Heart disease			
Controlling high blood pressure. Percent of patients 18 to 85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90) during the measurement year (NCQA)	■		0018
Statin therapy for patients with cardiovascular disease. Percent of males 21-75 and females 40-75 who were identified as having cardiovascular disease and were dispensed a moderate intensity statin for at least 80% of treatment period (NCQA)	■		NA
Heart failure readmission for Medicare beneficiaries. Hospital-level risk-standardized readmission rate — unplanned readmission for any cause within 30 days of the discharge date — for patients 18+ years-old discharged from the hospital with a principal diagnosis of heart failure (CMS)		■	0330
Screening for high blood pressure and follow-up documented. Percent of patients aged 18 years and older seen during the reporting period who were screened for high blood pressure and a recommended follow-up plan is documented based on the current blood pressure reading as indicated (PQRS)		■	NA
Child health/ Asthma			
Medication management for people with asthma. Percent of members 5-64 years of age during the measurement year who were identified as having persistent asthma and were dispensed appropriate medications that they remained on during the treatment period (NCQA/HEDIS)	■		1799

*To be finalized in 2016

Source for PCMH quality measures: Governor's Office of Health Transformation, preliminary as of Jan. 4, 2016

Abbreviations
- CDC: Centers of Disease Control and Prevention
- CMS: Centers for Medicare and Medicaid Services
- HEDIS: Healthcare Effectiveness Data and Information Set
- MNCM: Minnesota Community Measurement
- NCQA: National Committee for Quality Assurance
- ODMHAS: Ohio Department of Mental Health and Addiction Services
- PCPI: Physician Consortium Performance Improvement
- PQRS: Physician Quality Reporting System
- USPSTF: U.S. Preventive Services Task Force

Recommended metrics to assess health equity and the social determinants of health

Whenever possible, data on population-level metrics should be reported by race/ethnicity and by an indicator of socio-economic status, such as educational attainment, income level, poverty status and/or Medicaid status. For some analyses, it may also be important to report data by sex, age group, disability status and geography (e.g., county or zip code).

Population health assessment and planning should also include metrics that describe the social and economic environment, such as those listed in Figure 3.6. These social and economic factors are cross-cutting and impact all of the top 10 health priority areas.

Figure 3.6. **Brief inventory of recommended population-level social and economic environment metrics**

Social and economic environment metrics (primary source)	HPIO Health Value Dashboard	Healthy People 2020 objective identifier
Education		
Fourth-grade reading. Percent of 4th graders identified as proficient by a national assessment (NAEP)		NA
High school graduation. Percent of incoming 9th graders who graduate in 4 years from a high school with a regular degree (NCES)		AH 5.1
Preschool enrollment. Percent of 3 and 4 year-olds enrolled in preschool (U.S. Census Bureau, ACS)		NA
Education attainment. Percent of adults over age 25 with a bachelor's degree or higher (U.S. Census Bureau, ACS)		NA
Employment and poverty		
Child poverty. Percent of persons under age 18 who live in households at or below the poverty threshold (U.S. Census Bureau, CPS)		SDOH 3.2
Adult poverty. Percent of persons age 18+ who live in households at or below the poverty threshold (U.S. Census Bureau, CPS)		NA
Unemployment. Annual average unemployment rate, ages 16 and older (BLS)		NA
Family and social support		
Social-emotional support. Percent of adults without social-emotional support (BRFSS)		NA
Social capital and cohesion. Composite measure that includes connections with neighbors, supportive neighborhoods, voter turnout and volunteerism (NHSPI)		NA
Teen birth rate. Rate of births per 1,000 females 15-19 years of age (Vital Statistics)		FP 8
Single-parent households. Percent of children living in single-parent households (U.S. Census Bureau, ACS)		NA
Trauma, toxic stress and violence		
Violent crime. Violent crime rate per 100,000 residents (NIBRS)		NA
Child abuse and neglect. Rate of child maltreatment victims per 1,000 children in population (ACF)		NA
Adverse childhood experiences. Percent of children who have experienced two or more adverse experiences (NSCH)		NA
Equity		
Income inequality. Gini coefficient: extent of inequality in the distribution of income (U.S. Census Bureau, ACS)		NA
Residential segregation. Black-White dissimilarity index (American Community Project, Brown University)		NA

Abbreviations

- ACF: Administration for Children and Families
- ACS: American Community Survey
- BLS: Bureau of Labor Statistics
- BRFSS: Behavioral Risk Factor Surveillance System
- CPS: Current Population Survey
- NAEP: National Assessment of Education Progress
- NCES: National Center for Education Statistics
- NHSPI: National Health Security Preparedness Index
- NIBRS: National Incident-Based Reporting System
- NSCH: National Survey of Children's Health
- NA: Not Applicable

Healthy People 2020 acronyms

- AH: Adolescent Health
- SDOH: Social Determinants of Health
- FP: Family Planning

In addition to population-level data on the social determinants of health, it is critical that patient-level clinical data be linked to accurate information about a patient's race, ethnicity, sex, age, primary language and disability status. As Ohio's health information technology infrastructure is further developed, these fields should be incorporated into EHRs and quality monitoring systems.

The U.S. Department of Health and Human Services provides implementation guidance on data collection standards for race, ethnicity, sex, primary language and disability status (see Appendix 3C). HPIO recommends that these categories be included in any information technology infrastructure that is built to support PCMH practices.

Baseline outcome data for population health priority areas

Baseline data on Ohio's top population health priorities is critical to evaluating the impact of population health efforts. Figure 3.7 summarizes most recently available prevalence data, briefly describes groups of Ohioans who are disproportionately affected by the priority health problems, and provides links to more detailed data by race/ethnicity, income level, geography and other characteristics. The 2016 SHA should build upon this data to provide a more comprehensive description of baseline conditions for a targeted set of health priority areas.

Figure 3.7. **Baseline data on population health priority areas**

Ohio prevalence		Ohio disparities	
Population-level metric (compilation source, year data were collected)	**Percent or rate**	**Groups disproportionately affected**	**Link to data by race/ethnicity, income level, geography, etc.**
Obesity			
Youth obesity. Percent of Ohio high school students who are obese (ODH CD, *Health Value Dashboard*, 2013)	13%	Black youth and males	ODH CD
Adult obesity. Percent of Ohio adults who are obese (ODH CD, 2012)	30%	Black, Hispanic, multi-racial and low-income	ODH CD
Physical activity			
Youth insufficient physical inactivity. Percent of Ohio high school students who did not participate in at least 60 minutes of physical activity on at last one of the last seven days (ODH CD, 2013)	13%	Black youth and females	ODH CD
Adult insufficient physical inactivity. Percent of Ohio high school students not meeting physical activity guidelines (*Dashboard*, 2013)	81%	Low-income and older adults	ODH CD
Nutrition			
Food insecurity. Percent of households with limited or uncertain access to adequate food (*Dashboard*, 2010)	16%	Geographic variation	CHR
Low fruit consumption. Percent of Ohio adults who consumed less than one serving of fruits per day (ODH CD, 2012)	43%	Low-income, low educational attainment, male	ODH CD
Low vegetable consumption. Percent of Ohio adults who consumed less than one serving of vegetables per day (ODH CD, 2012)	27%	Black, low-income, low educational attainment, male, young adult (18-24)	ODH CD
Tobacco use			
Adult smoking. Percent of adults who are current smokers (*Dashboard*, 2013)	23%	Low-income, low educational attainment	ODH CD
Youth all-tobacco use. Percent of high-school students who used tobacco in the past 30 days (*Dashboard*, 2013)	22%	Male (specific to cigarette smoking), racial disparities vary based on type of tobacco (cigars, cigarettes, chew, etc.)	ODH CD

Figure 3.7. **Continued**

Ohio prevalence		Ohio disparities	
Population-level metric (compilation source, year data were collected)	**Percent or rate**	**Groups disproportionately affected**	**Link to data by race/ethnicity, income level, geography, etc.**
Infant mortality			
Infant mortality. Infant deaths per 1,000 live births (ODH, 2014)	6.8	Black, low-income, low educational attainment, geographic variation	ODH IM
Low birth weight. Percentage of births in which the newborn weighed less than 2,500 grams (NOC, 2010)	9%	Geographic variation	NOC
Preterm births. Percent of live births that are preterm (<37 weeks of gestation) (NOC, 2006-2012)	13%	Geographic variation, mother <18 years old or ≥35 years old	NOC
Mental health			
Adult poor mental health days. Average number of days in the past 30 where person indicated their mental health was poor (*Dashboard*, 2012)	4.1	Geographic variation	NOC and CHR
Youth depressive episodes. Percent of adolescents who have had at least one major depressive episode (BHB, 2013)	10%	Female, multi-racial	NSDUH
Substance abuse			
Overdose deaths. Drug overdose deaths per 100,000 population (*Dashboard*, 2008-2010)	14	Geographic variation	CHR
Alcohol dependence or abuse. Percent of individuals aged 12+ with past-year alcohol dependence or abuse (BHB, 2012-2013)	6%	Age 18-25	SEOW
Drug dependence or abuse. Percent of individuals aged 12+ with past-year illicit drug dependence or abuse (BHB, 2012-2013)	3%	Age 18-25	SEOW
Adult binge drinking. Percent of adults who report binge drinking in the past month (*Dashboard*, 2012)	18%	Hispanic, college graduate, age 18-24, geographic variation	ODH CD (heavy alcohol use), RWJF DH, and CHR
Diabetes			
Adult diabetes. Percent of adults who have been diagnosed with diabetes (OHD CD, *Dashboard*, 2012)	12%	Black, low-income, low educational attainment, older	ODH CD
Cancer			
Cancer incidence. Incidence of breast, cervical, lung and colorectal cancer per 100,000 population, age adjusted (RWJF, 2012)	174	Black, low-income, low educational attainment, older	ODH CD and RWJF DH
Heart disease			
Heart disease. Estimated prevalence of adults ever diagnosed with heart disease (ODH CD, 2012)	8%	Male, low-income, low educational attainment, older	ODH CD
Hypertension. Estimated prevalence of adults ever diagnosed with hypertension (ODH CD, 2011)	33%	Black, low-income, low educational attainment, older	ODH CD
Asthma			
Adult asthma. Estimated prevalence of adults who currently have asthma (ODH CD, 2012)	11%	Black, female, low-income, low educational attainment	ODH CD
Child asthma. Estimated prevalence of children age 0-17 ever diagnosed with asthma (ODH CD, 2012)	12%	NA	ODH CD

Abbreviations

- BHB: NSDUH State Behavioral Health Barometer
- CHR: County Health Rankings
- NOC: Network of Care
- NSDUH: National Survey on Drug Use and Health
- ODH CD: Ohio Department of Health, The Impact of Chronic Disease in Ohio: 2015
- ODH IM: Ohio Department of Health, Ohio Infant Mortality Reduction Plan 2015-2020
- RWJF DH: Robert Wood Johnson Foundation DataHub
- SEOW: State Epidemiological Outcomes Workgroup

Aligning population health strategies and patient-centered medical home (PCMH) model design

Ohio's PCMH care delivery model

A **description of the PCMH care delivery model** is posted on the Governor's Office of Health Transformation website.

Role of primary care in population health

The PCMH model has traditionally been focused on improving care coordination and disease management for those who already have chronic conditions, such as type 2 diabetes or heart disease. Within the Ohio PCMH model's vision for a fully "transformed PCMH," however, practices can also play an important role in helping healthy patients stay well and intervening with patients at risk for chronic conditions in time to prevent disease progression. Many existing community-based organizations are well positioned to partner with primary care providers to achieve these goals.

There are two general types of community-based resources that can support a PCMH's efforts to prevent health problems and help patients stay well:

- Social services that assist with basic needs, such as food, shelter and transportation
- Prevention programs that support behavior change, such as tobacco cessation, parenting education and health coaching on nutrition and physical activity

Strong connections between primary care providers and community-based resources are critical for improving population health. For example, improving disease management for those who already have type 2 diabetes does not change the total number of people who have type 2 diabetes. That is, improved A1c control among patients with diabetes does not impact the population-level prevalence of diabetes among Ohio adults. However, evidence suggests that more widespread screening for prediabetes and referral to community-based diabetes prevention programs (DPPs) would likely reduce the population-level prevalence of diabetes in Ohio. Similarly, patients who lack adequate access to food are at increased risk for diabetes. Connecting patients to SNAP benefits (Supplemental Nutrition Assistance Program), food pantries and farmers' market coupons can reduce the risk of nutrition-related diseases.

Social services and behavior-change programs, however, are not enough to sustain widespread population health improvement. Community conditions and the overall social, economic and physical environment also greatly impact a patient's health. A person with prediabetes who is motivated to become more physically active as a result of participating in a DPP, for example, may struggle to reach their goals if they lack a safe and affordable place to walk or exercise. A wide range of partners is therefore needed to advocate for, plan and implement upstream changes that support improved health, such as building sidewalks and crosswalks that make it safe for older adults to walk to a grocery store.

Glide path framework for connecting primary care with upstream population health activities

HPIO developed a "glide path" framework (see Figure 3.8) to describe connections between primary care and community-based resources and the broader community and environmental conditions that impact health. This framework emerged from Population Health Planning Advisory Group discussions about the social determinants of health, health equity and the challenges of bridging health care and public health.

Advisory group members reviewed "funnel" diagrams that illustrate upstream determinants and downstream impacts of specific health conditions (see example in Appendix 3D) and emphasized the importance of drawing structural connections between primary care and upstream activities that support primary care providers' efforts to help their patients achieve optimal health. Advisory group members noted that these upstream-to-downstream structural connections in the glide path framework should be applicable to any medical condition or health priority, and must acknowledge cross-cutting social determinants of health, such as poverty and racism.

The glide path framework:

- Provides examples for how to operationalize the "potential community connectivity activities" component of the Ohio PCMH care delivery model
- Guides alignment between the PCMH model, the state health improvement plan and population health planning by nonprofit hospitals and local health departments

Similar to the social-ecological model,[28] the glide path describes the role of community conditions (such as nurturing school environments/positive school climate), and the broader social, economic and physical environment that shapes those community conditions (such as educational attainment, residential segregation and air pollution). More importantly, the glide path framework describes the types of activities and partners needed to make improvements at each of these levels.

The glide path also complements the **Health Impact Pyramid**, a framework that describes different types of public health interventions and emphasizes the critical importance of addressing socioeconomic factors to improve health[29] (see Appendix 3E). The glide path differs from the Health Impact Pyramid in two key ways. First, the pyramid focuses on public health interventions, while the glide path centers on primary care and pathways to connect primary care with community-based prevention resources, including public health organizations and sectors beyond public health. Second, socio-economic factors are positioned at the top of the glide path diagram to illustrate upstream determinants, contrasted with downstream consequences. The pyramid does not refer to the upstream/downstream concept and places socio-economic factors at the base of the pyramid.

Direct connections for PCMH practices

Figure 3.9 provides examples of ways to connect PCMH practices with community-based resources that help patients with basics needs and behavior change (levels A and B on the glide path framework). Many of these programs and initiatives are being implemented in Ohio communities, although none are being implemented with primary care providers in a universal way across the state. Most of these activities are not covered by health insurance plans. Sustainable financing for these services would broaden their reach to more Ohioans.

Figure 3.8. **"Glide path" framework to connect primary care with upstream population health activities**

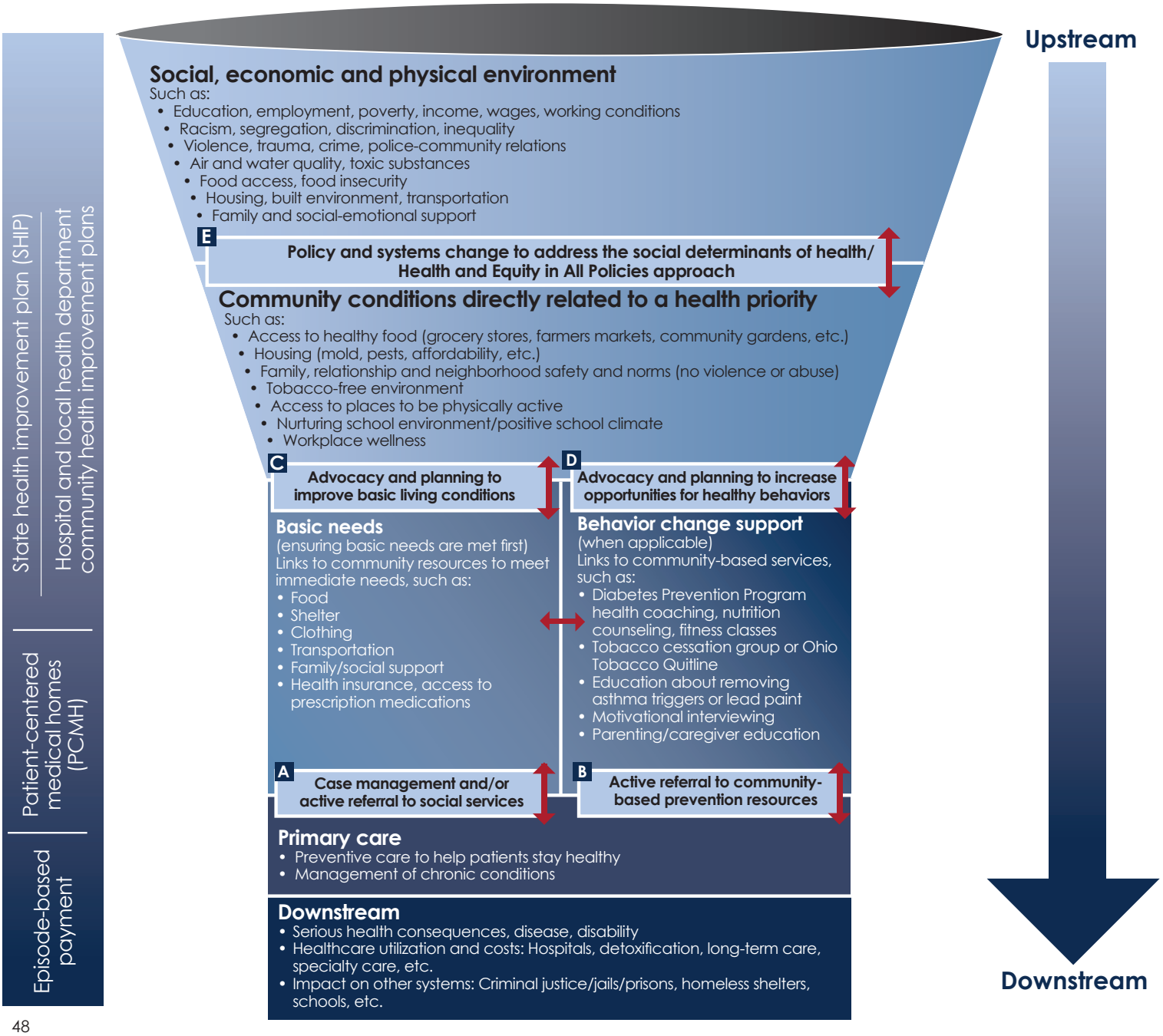


Figure 3.9. **Examples of ways to connect patient-centered medical homes with community-based resources that help patients with basics needs and behavior change**

Model or program examples	Ohio implementation examples/status	Level on glide path framework	
		A Basic needs	B Behavior change support
Medical-legal partnerships Healthcare providers screen patient families for problems that can be improved through legal assistance, including food insecurity; poor housing conditions, evictions and foreclosure; public benefits; domestic violence; consumer debt; and inadequate special education services.	• The **Cincinnati Child Health-Law Partnership (Child HeLP)** is led by Cincinnati Children's Hospital and the Legal Aid Society of Greater Cincinnati. Similar projects are currently underway at several other hospitals and health centers in Ohio (listed on the **National Center for Medical-Legal Partnership website**). • The Ohio Medical-Legal Partnership Task Force includes representatives from all areas of the state.		
Pathways HUB model Model of care coordination and linking at-risk patients to needed social services. Information from AHRQ provided **here**.	• The Pathways Community HUB model was developed in Ohio and first implemented by the **Community Health Access Project (CHAP)**. The model has gained national recognition and HUBs that follow the national model can be certified. • The Hospital Council of Northwest Ohio runs the **Northwest Ohio Pathways HUB**, one of three nationally certified Pathways Community HUBs in the U.S.. This HUB serves pregnant women and adults with chronic disease and contracts with Medicaid managed care organizations and other funders for payment of outcomes. • Additional HUBs are operating or are in development in other Ohio communities, including Cincinnati, Summit County, Columbus and Youngstown. The Ohio Commission on Minority Health is funding the HUBs in Columbus and Youngstown to specifically address infant mortality. • The HUB model is one way to make community health workers available in a community (see community health workers row).		
Health Leads College student advocates staff a **Health Leads** Desks in clinic waiting rooms. Providers write "prescriptions" for basic resources like food, housing and heating assistance and link patients to social services through a client and resource database.	• **ENCompass**, a student group at The Ohio State University, has implemented a version of the Health Leads model at two primary care clinics in Columbus. • In 2016, University Hospitals/Rainbow Babies and Children's Hospital will begin implementing Health Leads at the UH Rainbow Center for Women and Children, a large urban primary care practice in Cleveland. • Using a similar model tailored specifically to address food insecurity, ProMedica HealthCare Systems in northwest Ohio is providing patients with "food prescriptions" that can be filled at "food pharmacies" and connections to community resources to meet ongoing healthy food needs.		
Diabetes Prevention Program (DPP) and P-STAT (Prevent Diabetes- Screen Test Act Today) toolkit DPP is an **evidence-based** program shown to reduce the incidence of type 2 diabetes among individuals with prediabetes.** Participants learn about healthy eating, physical activity and other behavior changes from a trained lifestyle coach over the course of 16 one-hour sessions. Follow-up sessions provide added support to help participants maintain their progress over time. **P-STAT**, developed by the American Medical Association in partnership with the Centers for Disease Control and Prevention (CDC), is a toolkit designed to help primary care providers identify patients with prediabetes and refer eligible patients to community-based or online DPPs.	• The CDC provides a registry of DPP programs that meet a specific set of criteria, including standardized curricula, participant eligibility, staff training and capacity. This registry, which includes several Ohio sites, is posted **online**. • Several regional YMCAs offer DPP throughout Ohio. A list of these programs, referred to as YDPP, is posted **online**. • Two health insurance plans in Ohio (United Health Care and HealthSpan) include YDPP as a covered benefit. Under the HealthSpan agreement brokered by the Ohio Alliance of YMCAs, medical providers refer patients to their local YDPP. YMCA program coordinators work closely with HealthSpan medical professionals to ensure the referral system thrives and stays visible to medical providers. • Increasing the number of DPP participants is an objective in the State Health Improvement Plan (SHIP) Addendum and in Ohio's Plan to Prevent and Reduce Chronic Disease. • According to the SHIP Addendum, there were 2,591 DPP participants in Ohio as of 2015. • According to 2015 data from Ohio Department of Health (ODH), 65% of Ohioans live within a 30-minute drive of a CDC-recognized DPP; 37% live within a 15-minute drive of a DPP. • ODH (in partnership with the Association of Community Health Centers, the Ohio Association of Family Physicians, and the Ohio Alliance of YMCAs) is currently working with the CDC and the American Medical Association to host a PSTAT training in Ohio in spring 2016.		

Figure 3.9. **Continued**

Model or program examples	Ohio implementation examples/status	Level on glide path framework	
		A Basic needs	B Behavior change support
Ohio Tobacco Quit Line Quitlines are an **evidence-based** strategy for reducing tobacco use.	• ODH manages the contract with the Quit Line vendor, National Jewish Health. With grants from the CDC, ODH funds the Ohio Tobacco Quit Line for certain groups of Ohioans, including the uninsured, Medicaid fee-for-service enrollees, some Medicaid managed care plan enrollees and pregnant women. Utilization of Ohio's Quit Line is much lower than most other states. According to ODH, there were 638 Medicaid recipients enrolled in the Quit Line in SFY14 (FFS and managed care). The Ohio Tobacco Quit Line has quit rates slightly exceeding industry standards. • Increasing the number of Ohio tobacco users who are covered/ eligible to receive services from the Quit Line and the number of Medicaid recipients enrolled in the Quit Line are objectives in the SHIP Addendum.		
Other community-based tobacco cessation programs Some hospitals, health departments and other community-based organizations offer tobacco cessation classes or one-on-one counseling. Some are offered by certified Tobacco Treatment Specialists.	• The SHIP Addendum includes an objective to increase to 55 the number of Ohio counties with available community tobacco cessation services (e.g., tobacco treatment specialists, cessation groups, etc.). In 2014, 41 counties had community-based cessation services, often provided by hospitals or local health departments. ODH maintains a list of available programs **online**. • Pharmacists and other community-based providers are also available to provide cessation counseling, such as through the **CVS "Start to Stop" cessation program**.		
Steady U (Matter of Balance and Tai Chi senior fall-prevention programs) and STEADI (Stopping Elderly Accidents, Deaths and Injuries) risk assessment tool A Matter of Balance classes teach practical strategies to reduce the fear of falling and increase activity levels. Participants meet in small groups in community settings once a week for 8 weeks, where they set realistic goals, change their environment to reduce risk factors and exercise to increase strength and balance. Tai Chi: Moving for Better Balance classes teach Tai chi, to help improve balance and movement control. STEADI is an assessment tool developed by the CDC for use by healthcare providers to identify patients at risk for falls.	• Steady U, which includes A Matter of Balance and Tai Chi classes, is a fall-prevention program developed by the Ohio Department of Aging. Classes are offered through area agencies on aging, senior centers, local aging network providers and health departments. Information is posted **online**. • The SHIP Addendum includes objectives to increase the number of counties offering Matter of Balance trainings and number of Tai Chi master trainers and classes offered. The SHIP Addendum also includes an objective to increase the number of primary care offices utilizing STEADI.		
Healthy U chronic disease self-management programs, including Diabetes Self-Management Education (SMEP) Community-based workshops for adults living with type 2 diabetes.	• Healthy U, which includes several chronic disease self-management classes, is a program developed by the Ohio Department of Aging. Classes are offered through area agencies on aging, senior centers, local aging network providers and health departments. Information is posted **online**. • The SHIP Addendum includes an objective to increase by 5 percent the number of participants in SMEP (from baseline of 43,990).		
Screening, Brief Intervention and Referral for Treatment (SBIRT) SBIRT is an **evidence-based practice** used to identify, reduce and prevent problematic use, abuse and dependence on alcohol and illicit drugs. The screening is conducted by a healthcare provider using a standardized tool. (See **SAMHSA SBIRT resource page** for details.)	The **Ohio Department of Mental Health and Addiction Services** and the **Universal Health Care Action Network Ohio (UHCAN Ohio)** are spreading the use of SBIRT in Ohio.		

Figure 3.9. **Continued**

Model or program examples	Ohio implementation examples/status	Level on glide path framework	
		A Basic needs	B Behavior change support
Building Mental Wellness Developed by the American Academy of Pediatrics, this model equips healthcare providers with the skills and knowledge needed to identify, address, and follow-up on children's emotional, developmental or behavioral health issues.	The American Academy of Pediatrics Ohio Chapter is leading a **Building Mental Wellness Learning Collaborative** that involves online learning modules and in-person workshops at locations around the state.		
Community health workers Community health workers provide a range of services, including outreach, education, referral and follow-up, case management, advocacy, and home visiting services. They typically work as part of a multi-disciplinary team and come from the communities they serve.	• There are several community health worker certificate programs in Ohio that are approved by the Ohio Board of Nursing. • In 2014 Ohio Medicaid provided funding through the Government Resource Center to five universities throughout Ohio to train and certify Community Health Workers to be licensed by the Ohio Board of Nursing. This funding was renewed for 2015 and is expected to be continued in 2016.		
Bi-directional electronic referral systems Online referral management system designed to "close the loop" on referrals from healthcare providers to community-based resources.	Clinisync (Ohio Health Information Partnership) has developed a bidirectional referral system, which is being used by the Columbus-area Medical Neighborhood Referral Infrastructure project described below.		
Medical neighborhood model A model that describes the PCMH and connections to other healthcare providers and to community-based social service and public health organizations. See **AHRQ white paper** for details.	Led by the Healthcare Collaborative of Greater Columbus, the **Medical Neighborhood Referral Infrastructure** project is implementing a cloud-based, shared referral infrastructure among healthcare providers, social service agencies and other healthcare stakeholders. Primary care and social service organizations have begun to use the CliniSync referral tool to send and receive referrals to improve care coordination in Greater Columbus.		
2-1-1 Free information hotline for information about social services and other resources.	• Available in most Ohio counties. Currently, 91% of Ohio's population lives in an area served by a 2-1-1 call center. • Ohio United Ways are supporting partners of 2-1-1.		

*Medical-legal partnerships also advocate for improved living conditions (level C on glide path diagram).
** Diabetes Prevention Program Research Group. "Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metaformin." New England Journal of Medicine. February 7, 2002.
Note: Some Medicaid managed care plans have developed their own programs for connecting patients with community-based resources. See the **CareSource Life Services** and **Molina Community Connector** programs for examples.

Upstream partners: Role of public health and cross-sector collaboration

Figure 3.10 provides examples of partners involved in connecting the various levels of the glide path framework. Public health plays a strong role in coordinating or leading many of these activities, particularly at levels B, C and D on the glide path. Local health departments, for example, often coordinate wellness coalitions that lead efforts to reduce tobacco use or partner with school districts on substance abuse prevention, farm-to-school projects or Safe Routes to School programs. Increasingly, local health departments are also getting involved in policy and systems changes to address the social determinants of health (level E on the glide path). For example, the Health Improvement Plan-Cuyahoga, led in part by the county health department, identifies "eliminating structural racism" as a goal and is exploring strategies to address wages, paid sick and family leave, predatory lending and criminal justice reform.

At the higher levels of the glide path (C through E), sectors beyond health are responsible for many of the decisions that impact health. Coordinating strategies with these sectors can be enhanced through:

- **Health and Equity in All Policies:** A collaborative approach to incorporating health considerations into decision-making across sectors and policy areas, including the use of Health Impact Assessments to identify ways that policy decisions in sectors such as education, criminal justice and housing may affect population health outcomes
- **Community integrators or backbone organizations:** A distinct entity with the capacity to bring partners together to define, measure and achieve common goals[30]

The next SHIP should identify specific activities related to each priority area at each level of the glide path, including clinical-community linkages and strategies to address the broader social determinants of health (see pages 28-29). Similarly, local health departments and hospitals should include PCMH practices in their community health assessment and planning processes. The questions listed in the text box could be used to guide development of stronger connections between primary care and upstream population health partners.

Questions to prompt community-clinical linkages and alignment with population health planning

1. **PCMH provider to patient:** What do you need to stay healthy, recover or manage your condition?
2. **Patient to PCMH provider:** What programs and services are available in my community to help me stay healthy, recover or manage my condition?
3. **PCMH provider to community organizations:** What resources do you have to help my patients meet their needs and how can they get connected? What is your current capacity?
4. **Community organizations to PCMH providers:** What are your patients' biggest strengths, needs and challenges? How can we help?
5. **Health improvement planning groups (SHIP, local health departments, nonprofit hospitals):** What are the community conditions and characteristics of the broader social, economic and physical environment that are promoting or harming health? What evidence-based policies and programs are available to address these issues? What partners do we need to implement these policies and programs?

Paying for clinical-community linkages and upstream population health

Figure 3.11 describes how upstream and downstream population health activities are most commonly funded, as well as innovative financing mechanisms to support a fully transformed health system. Health insurance coverage typically pays for primary care and downstream healthcare activities. Within the traditional fee-for-service payment model, there is little incentive for primary care providers to connect with community-based resources.

As healthcare payment in Ohio transitions to more value-based arrangements, providers will have increased incentives to partner with community-based programs that help patients achieve good health outcomes. The availability and capacity of upstream organizations, however, is limited in some communities because of fragmented or inadequate resources. Funding mechanisms, such as hospital community benefit (see page 20), block grants/single instrument grants to local health departments,[31] wellness trusts and health insurance reimbursement for community-based prevention activities provide additional opportunities to support upstream activities in a more sustainable way. See HPIO's **Beyond medical care: Emerging policy opportunities to advance prevention and improve health value in Ohio** for more information.

Figure 3.10. **Examples of partners involved in connecting primary care with upstream population health activities**

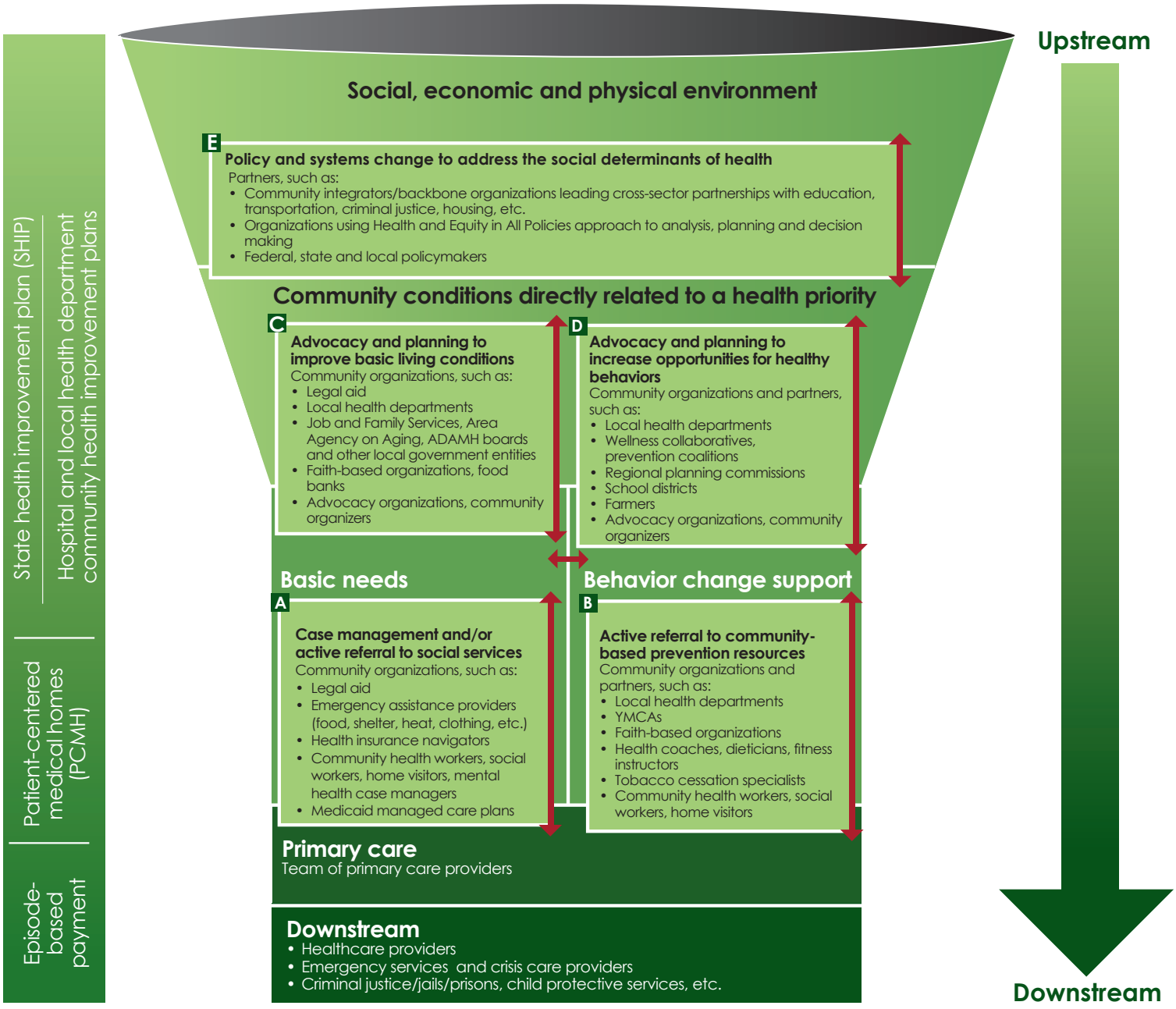
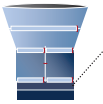
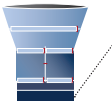


Figure 3.11. **Paying for clinical-community linkages: Current and potential funding sources and financing mechanisms to connect downstream and upstream population health activities**

Level of connection on glide path framework		Examples of funding sources, financing mechanisms and payment models	
		Most common	**Transformed**
	Policy and systems change to address the social determinants of health	• Public funding for systems outside of health care (education, transportation, regional planning, housing, etc.) • Philanthropy	• Braided and blended funding across agencies and sectors with shared accountability for outcomes • Community development financial institution-funded projects that support population health • Public and/or private funding to support cross-sector backbone organizations • Community building investments from tax-exempt hospitals • Pay-for-success financing/ social impact bonds • Block grants or single-instrument grant awards that allow for flexibility in addressing needs across sectors or silos • Wellness trusts • Philanthropy
	Advocacy and planning to increase opportunities for healthy behaviors	• Limited public funding mostly administered through grants to community-based organizations and local health departments • Philanthropy	• Community benefit investments from tax-exempt hospitals • Block grants or single-instrument grant awards that allow for flexibility in addressing needs across sectors or silos • Wellness trusts • Philanthropy
	Advocacy and planning to improve basic living conditions		
	Active referral to community-based prevention resources	• Care coordination fee from payer to primary care provider, or service is not covered by payer • Philanthropy	• Enhanced per member per month (PMPM) payment • Gain sharing and outcome-based payment • Reimbursement for community-based prevention programs • Philanthropy
	Case management and/or active referral to social services		
	Primary care	Fee-for-service payments from Medicaid, Medicare, commercial insurance plans and consumers	• Enhanced PMPM • Gain sharing and outcome-based payment • Global payment
	Downstream	• Fee-for-service payments from Medicaid, Medicare, commercial insurance plans and consumers • Hospital community benefit spending on charity care • Public funding for emergency services, criminal justice/ prisons, disability services, child protection services, etc.	• Episode-based payments • Global payment • Reduced hospital spending on charity care • Reduced public spending on emergency services, criminal justice/prisons, disability services, child protection services, etc. • Reinvest savings in levels C, D and E

Recommendations for connecting primary care with upstream population health strategies

As a result of this population health planning project, the Governor's Office of Health Transformation (OHT) made several improvements to the "potential community connectivity activities" component of the **PCMH care delivery model**, and prioritized PCMH clinical quality measures that aligned with the top 10 population health areas (see Figure 3.2). As the Ohio PCMH model is rolled out and further refined, HPIO identifies the following opportunities to increase the impact of primary care on population health.

OHT:

1. Monitor implementation of the "community connectivity" activities from the PCMH care delivery model.
2. Identify opportunities to increase connections between PCMH practices and community-based social service and prevention programs through the types of activities described in Figure 3.10.
3. Include more outcome, rather than process, measures in future phases of PCMH quality metric selection, especially as new nationally recognized measures emerge.
4. Create stronger incentives for healthcare purchasers, payers and providers to pay for effective community-based social service and prevention programs, and the infrastructure and personnel needed to connect PCMH patients with these resources.
5. Explore ways to quantify savings at the primary care and downstream levels brought about by upstream activities and reallocate those savings into population health activities that improve community conditions and the broader social, economic and physical environment.
6. Partner with ODH to ensure alignment between statewide PCMH implementation and the SHIP.

ODH:

7. Include a strategic set of clinical-community linkage activities in the SHIP that will help PCMH practices and patients to achieve positive outcomes on a prioritized sub-set of the PCMH quality measures (see Figure 3.3).

Local health departments and nonprofit hospitals:

8. Include representatives from PCMH practices in community health prioritization and planning processes and/or include aggregate PCMH data in community health assessments (such as patient priorities identified in patient satisfaction surveys, or clinical utilization or outcome data).
9. Partner with local PCMH practices to implement and evaluate clinical-community linkage activities (in alignment with the SHIP).

Evidence-based strategies

Guidance for identifying evidence-based population health strategies

HPIO recommends that Ohio use the systematic reviews and evidence registries listed in Figure 3.12 to identify strategies to address population health priority areas. These online sources compile, review and summarize the best-available evidence on the effectiveness of population health strategies, including clinical-community linkage activities, community-based prevention programs and upstream strategies to address the broader social determinants of health.

The sources listed on the next page primarily focus on the effectiveness of strategies in achieving desired population health outcomes, such as decreased tobacco use or increased high school graduation rates. Most provide limited information about the costs of the interventions or the impact on healthcare costs.

HPIO recommends that Ohio population health planners consult additional tools that provide cost data for selected population health strategies. **Community Health Advisor**,[32] for example, is an interactive tool that generates national, state and county-level estimates of the impact of implementing interventions recommended by **The Community Guide** on medical costs and health outcomes. This tool currently covers tobacco use and physical activity. Additional topics are to be added in the future.

Ohio can also learn from other states that have conducted cost-benefit analyses of population health interventions. In Washington, the state legislature has directed the Washington State

Figure 3.12. **Recommended systematic reviews and evidence registries**

Systematic review or evidence registry	Sponsoring organization	Strategies to address the social, economic and physical environment	Community-based prevention programs	Clinical preventive services
The Community Guide*	U.S. Centers for Disease Control and Prevention (CDC)	■	■	
What Works for Health	University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation	■	■	■
Community Health Improvement Navigator	U.S. Centers for Disease Control and Prevention (CDC)	■	■	■
U.S. Preventive Services Task Force (USPSTF) Recommendations*	Agency for Healthcare Research and Quality (AHRQ)			■
AHRQ Health Care Innovations	Agency for Healthcare Research and Quality (AHRQ)			■
Cochrane Reviews*	Cochrane Collaboration			■
National Registry of Evidence-based Programs and Practices (NREPP)	Substance Abuse and Mental Health Services Administration (SAMHSA)		■	■
Research-tested Intervention Programs (RTIPs)	National Cancer Institute (NCI)		■	■
Campbell Library Systematic Reviews*	Campbell Collaboration Library	■		
Public Health Law Research-Evidence Briefs	Temple University and the Robert Wood Johnson Foundation	■		
Promising Practices Network	RAND Corporation	■		
What Works Clearinghouse	Institute for Education Sciences, U.S. Department of Education	■		

*Systematic review (comprehensive literature reviews that appraise and synthesize empirical evidence)

Institute for Public Policy (WSIPP) to conduct **benefit-cost analyses** of a wide range of health and human services programs. As a result, WSIPP provides the legislature with concise, actionable information comparing the benefit-to-cost ratio of publicly-funded programs. The Massachusetts Department of Public Health **analyzed** healthcare costs for 13 population health priority areas (most of which overlap with Ohio's top 10 priorities) and the potential savings to the healthcare system estimated to result from implementation of specific evidence-based interventions.[33]

Brief inventory of evidence-based strategies

HPIO consulted The Community Guide and conducted a search of the **What Works for Health (WWFH)** evidence registry to identify an initial list of strategies to address Ohio's top population health priorities (see Appendix 3F.1). What Works for Health is comprehensive in terms of the topics addressed and the types of interventions included (clinical and community-based). What Works for Health includes interventions that are recommended by The Community Guide, plus additional interventions that have not yet been reviewed for The Community Guide. For these reasons, the What Works for Health database is a useful place for population health planners to begin to search for strategies.

ODH will need to identify a more manageable set of strategies for the SHIP than what is listed in Appendix 3F.1. SHIP planners should further prioritize strategies using criteria such as the strength of evidence, potential reach, readiness and feasibility. Appendix 2J.3 includes additional guidance on strategy selection.

Appendix

Part One Appendices

Appendix 1A. **Population health convened group meeting attendance**

Appendix 1A.1. **Population Health Planning Advisory Group, 2015**

Advisory group members			Oct. 1	Oct. 13	Nov. 3	Nov. 17
Allan	Terry	Cuyahoga County Board of Health	y	n	y	y
Aly	Reem	HPIO	y	y	y	y
Applegate	Mary	Ohio Department of Medicaid	n	y	y	y
Baker	Todd	Ohio State Medical Association	y	y*	y	y
Beck	Andrew	Cincinnati Children's Hospital	y	y	y	y
Bickford	Beth	Association of Ohio Health Commissioners	y	y	y	y
Bollig Dorn	Sarah	HPIO	y	y	y	y
Cannon	Jessie	Nationwide Children's Hospital	n	y	y	y
Curry	Marie	Community Legal Aid Services	y	y	n	y
Durfee	Sarah	Ohio Public Employees Retirement System	y	y	y	y
Falcone	Robert	Ohio Hospital Association	y	y	y	y
Goon	Anne	Henry County Health Department	y	y	y	y
Gullett	Heidi	Health Improvement Partnership-Cuyahoga	y	y	y	y
Himes	Lance	Ohio Department of Health	y	n	y	y
Hodges	Richard	Ohio Department of Health	y	y	y	n
Hoyt	Karin	Ohio Department of Medicaid	n	y	y	y
James	Tamara	AARP Ohio	y	n	y	n
Juenger	Monica	Governor's Office of Health Transformation	y	y	y	y
Keller	Kate	Interact for Health	y	y	y	y
Kilinc	Afet	Aetna Better Health of Ohio	y	y	y	n
Levine	Cathy	Universal Health Care Action Network Ohio	-	-	y	y
Long	Teresa	Columbus Public Health	y	y	y	n
Michener	Melissa	CareSource	n	y	n	n
Misak	Jim	MetroHealth	y	y	y	y
Mitchell	Jodi	Health Action Council	-	y	y	y
Moody	Greg	Governor's Office of Health Transformation	y	y	y	y
Motter	Miranda	Ohio Association of Health Plans	n	y	y	n
Robinson	Brandi	Ohio Department of Health	y	y	y	y
Rohling McGee	Amy	HPIO	y	y	y	y
Sims	Reina	Ohio Commission on Minority Health	y	y	n	y
Spicer	Ann	Ohio Academy of Family Physicians	n	n	y	y
Stevens	Amy	HPIO	y	y	y	y
Taylor	Robyn	Ohio Department of Health Office of Health Equity	y	n	y	y
Thackeray	Jonathan	Ohio Department of Medicaid	y	y	y	y
Tobias	Barb	Health Collaborative, University of Cincinnati	y	y	n	y

Appendix 1A.1. **Continued**

Advisory group members (cont.)			Oct. 1	Oct. 13	Nov. 3	Nov. 17
Waldron	Rich	Medical Mutual of Ohio	y	y*	y*	y
Wapner	Andrew	Ohio Department of Health	y	y	y	n
Wasowski	Krista	Medina County Health Department	y	y	y	y
Weaver	Greg	Senders Pediatrics	y	y	y	y
Whitlock	J.D.	Mercy Health	y	y	y	y
Wills	Jon	Ohio Osteopathic Association	y	y	y	y
Wirtz	Hubert	The Ohio Council of Behavioral Health and Family Services Providers	y	y*	n	y
Wymyslo	Ted	Ohio Association of Community Health Centers	n	y	y	y
Infrastructure subgroup attendees						
Adams	Jim	Canton City Health District	-	y	-	y
Burden	Wally	Pike County General Health District	-	-	-	y
Cranciun	Kirsten	The Center for Health Affairs	-	y	y	y
Deangelo	Aly	Ohio Hospital Association	y	y	y	y
Everett	Ryan	Ohio Hospital Association	-	y	-	y
Gartland	Heidi	University Hospitals	-	y	-	y
Hamilton	Corey	Zanesville-Muskingum County Health Dept.	-	y	-	y
Ingram	Tim	Hamilton County Public Health	-	y	-	-
Klingler	Jeff	Central Ohio Hospital Council	-	y	-	-
Larson	Marty	Greater Dayton Areas Hospital Association	-	y	-	-
Moore	Deanna	The Center for Health Affairs	-	y	-	-
Ruma	Jan	Hospital Council of Northwest Ohio	-	y	y	-
Schultz	Jessica	Mercy St. Vincent	-	y	-	-
Thompson	Terri	ProMedica Health Systems	-	y	-	-
Ward	Britney	Hospital Council of Northwest Ohio	-	-	y	y
Other attendees						
Akah	Hailey	HPIO	y	-	-	-
Ackerman	Susan	Joint Medicaid Oversight Committee	-	-	y	-
Baker	Carrie	Ohio Children's Hospital Association	-	y	y	-
Clarke	Sophie	McKinsey & Company	-	-	-	y
Christopher	Roni	Mercy Health	-	-	-	y
Dye	James	American Cancer Society	-	-	y	-
Hollingshead	Larry	Board of Countryside YMCA, Atrium Medical Center, Premier Health System & Premier Health Group	-	-	y	-
Hutzler	Kyle	McKinsey & Company	y	-	-	-
Kincaid	Sarah	Nationwide Children's Hospital	-	-	y	y
Kumar	Adi	McKinsey & Company	-	y	y	-
Leprai	Chiara	McKinsey & Company	-	-	-	y
Peterson	Sarah	Rep. Barbara Sear's office	-	-	y	y
Saladonis	Melissa	Cincinnati Children's Hospital Medical Center	-	-	y	y
Vath	Kyle	Mercy Health	-	y	-	-
Winn	Bryony	McKinsey & Company	y	-	-	-
Wiselogel	Nick	HPIO	y	-	y	y
Wright	Celia	HPIO	y	y	y	y

*Substitute representative participated in meeting

Appendix 1A.2. **Population Health Infrastructure Subgroup, 2015**

Advisory group members			Oct. 19	Nov. 10
Adams	Jim	Canton City Health District	y	y
Allan	Terry	Cuyahoga County Board of Health	y	y
Aly	Reem	HPIO	y	y
Anim	Dora	Greater Cincinnati Health Council	y	y
Bickford	Beth	Association of Ohio Health Commissioners	y	n
Bollig Dorn	Sarah	HPIO	y	y
Branum	Melissa	Greene County Combined Health District	y	y
Burden	Wally	Pike County General Health District	y	n
Cranciun	Kirsten	The Center for Health Affairs	y	y
Deangelo	Aly	Ohio Hospital Association	y	y
Everett	Ryan	Ohio Hospital Association	y	y
Gartland	Heidi	University Hospitals	y	y
Goon	Anne	Henry County Health Department	y	y
Hamilton	Corey	Zanesville-Muskingum County Health Dept.	y	y
Himes	Lance	Ohio Department of Health	y	y
Ingram	Tim	Hamilton County Public Health	y	y
Juenger	Monica	Office of Health Transformation	n	y
Klingler	Jeff	Central Ohio Hospital Council	y	y
Long	Teresa	Columbus Public Health	y	y
Moody	Greg	Office of Health Transformation	n	y
Orcena	Jason	Union County Health Department	y	y
Rohling McGee	Amy	HPIO	n	y
Robinson	Brandi	Ohio Department of Health	y	y
Ruma	Jan	Hospital Council of Northwest Ohio	y	y
Schultz	Jessica	Mercy St. Vincent	y	y
Solley	Charlie	Akron Children's Hospital	y	y
Stevens	Amy	HPIO	y	y
Thompson	Terri	ProMedica Health Systems	y	y
Wapner	Andrew	Ohio Department of Health	n	y
Ward	Britney	Hospital Council of Northwest Ohio	y	y
Wasowski	Krista	Medina County Health Department	y	y
Other attendees				
Akah	Hailey	HPIO	y	-
Baker	Carrie	Ohio Children's Hospital Association	-	y
Borgemenke	Scott	Ohio Hospital Association	-	y
Bucci	Dan	University Hospitals	y	-
Gullett	Heidi	Health Improvement Partnership-Cuyahoga	y	-
Goldberg	Janet	HPIO	y	-
Hoyt	Karin	Ohio Department of Medicaid	-	y
Wiselogel	Nick	HPIO	-	y
Wright	Celia	HPIO	-	y

Part Two Appendices

Appendix 2A. **Population health planning requirements for the Ohio Department of Health (ODH), local health departments and 501(c)(3) tax-exempt hospitals**

Requirement	ODH	Local health departments	Hospitals
	Public Health Accreditation Board (PHAB)		Internal Revenue Service (IRS)
Assessment	State health assessment (SHA) must: • describe the state's health and demographics of the population, • identify areas of health improvement • identify the factors that contribute to the health challenges • identify existing state resources that can be mobilized to address state health challenges	Community health assessment (CHA) must: • describe the health and demographics of the population • identify areas for health improvement, • identify contributing factors that impact health outcomes • identify community assets and resources that can be mobilized to improve population health	Community health needs assessment (CHNA) must: • identify significant health needs of the community • prioritize those health needs • identify resources potentially available to address those health needs
Definition of "community"	Community is defined as the state of Ohio.	Community is defined as the jurisdiction served by the local health department.	In defining community, hospitals may take into account the geographic area served by the hospital, target population(s) served and principal functions of the hospital facility (for example, a focus on a particular specialty area or targeted disease). A hospital may not define its community to exclude medically underserved, low-income or minority populations who live in the geographic areas from which the hospital draws its patients and a hospital must take into account all patients without regard to ability to pay.
Timeline	SHAs and state health improvement plans (SHIPs) must be completed at least every five years.	CHAs and community health improvement plans (CHIPs) must be completed at least every five years.	CHNAs and implementation strategies (ISs) must be completed every three years, effective for taxable years beginning after March 23, 2012. Hospitals must provide information annually to the IRS on how they are addressing the significant health needs identified in their CHNAs.
Collaboration and partnership	The process of SHA and SHIP development must include participation of partners outside of ODH and documentation of the following must be provided: • a wide range of state partners that represent a variety of state populations and health challenges • partner representation from two or more populations that are at a higher health risk or have poorer health outcomes than other populations • regular meetings or communications with partners • the collaborative process used to identify health issues, collect data and information and identify existing state assets and resources to address health issues	Partnerships with other organizations outside of the health department are required in conducting the CHA and CHIP and documentation of the following must be provided: • partners outside of the local health department that represent community populations and a variety of state and local community sectors • partner representation from two or more populations that are at a higher health risk or have poorer health outcomes than other populations • regular meetings or communications with partners • the collaborative process used to identify health issues, collect data and information and identify existing local assets and resources to address health issues	CHNAs must include input from persons who represent the broad interests of the community including: • those with special knowledge or expertise in public health • members of underserved, low-income and minority populations CHNAs may be conducted in collaboration with other organizations including governmental departments (such as state or local health departments) and nonprofit organizations.
Solicitation of input and feedback	Preliminary findings of the SHA must be distributed to the population at large and population input must be sought.	Preliminary findings of the CHA must be distributed to the community at large and community input must be sought.	Hospitals must solicit and take into account written comments received on their most recently conducted CHNA and implementation strategy.
Use of model or template	No specific model or template is required.	While no specific model or template is required, PHAB has identified national and state-based models and resources that can be used to guide the collaborative planning and implementation process for the CHA and CHIP.	No specific model or template is required.

Appendix 2A. **Continued**

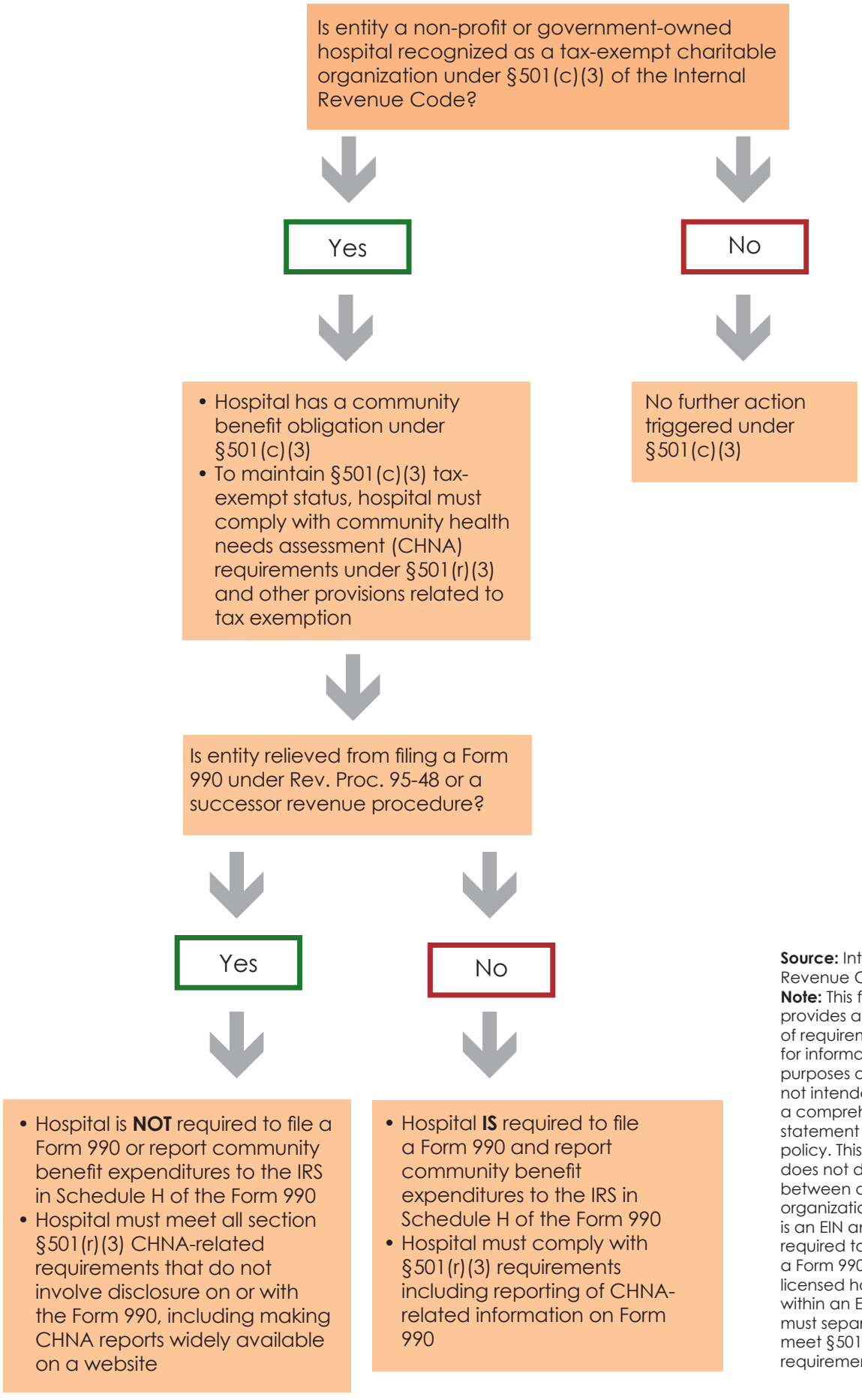
Requirement	ODH	Local health departments	Hospitals
Data collection	ODH must gather information, collect data, conduct community dialogues and/or identify assets specific to populations and/or geographic areas in the state where health inequities and poorer health indicators were identified in the SHA. This includes the use of: • qualitative and quantitative data • primary and secondary data Requires ongoing monitoring, refreshing and adding of data and data analysis. Data analysis is expected to understand health inequities and the factors that create them.	Evidence that comprehensive, broad-based data and information from a variety of sources were used to create the health assessment is required. This includes the use of: • qualitative and quantitative data • primary and secondary data Requires ongoing monitoring, refreshing, and adding of data and data analysis. Data analysis is expected to be neighborhood or community specific in order to understand health inequities and the factors that create them.	Hospitals must describe their method of data collection and analysis or cite external sources.
Public availability and accessibility	ODH must document how it informs partners, stakeholders, other agencies, associations and organizations of the availability of the SHA and how it communities the SHA findings to the public.	Local health departments must document how they inform partners, stakeholders, other agencies, associations and organizations of the availability of the CHA and how it communicates the CHA findings to the public.	CHNA report must be made widely available to the public and must be: • posted on a website • made available as a paper copy upon request and without charge
Prioritization process	ODH must have a process to set health priorities.	Local health departments must have a process to set health priorities. Many of the suggested models/templates in the PHAB guidance contain a process for prioritization.	Hospitals may use any criteria to prioritize the significant health needs identified in the CHNA, including, but not limited to: • the burden, scope, severity, or urgency of the health need • the estimated feasibility and effectiveness of possible interventions • the health disparities associated with the need • the importance the community places on addressing the need
Multiple determinants of health	SHA must include a description of factors that contribute to the state populations' health challenges, including multiple determinants of health and social determinants of health.	CHA must include a discussion of the contributing causes of the health challenges of the community including the social determinants of health.	Health needs of a community identified in the CHNA may include the need to address financial and other barriers to accessing care, to prevent illness, to ensure adequate nutrition or to address social, behavioral and environmental factors that influence health in the community.
Implementation	The SHIP must be developed collaboratively and should describe how ODH and the state's population will work together to improve the health of the state. The SHIP must include: • desired measurable outcomes or indicators of health improvement and priorities for action, which includes statewide health priorities, measurable objectives, improvement strategies and activities with time-framed targets that were determined in the planning process; improvement strategies can be evidence-based, practice-based, promising practices or may be innovative to meet the needs of the community health priorities • policy changes needed to accomplish the identified health objectives, which must include those that are adopted to alleviate the identified causes of health inequity • designation of individuals and organizations that have accepted responsibility for implementing strategies outlined in the SHIP	The CHIP must be developed collaboratively and should describe how the health department and the community it serves will work together to improve the health of the population of the jurisdiction that the health department serves. The CHIP must include: • desired measurable outcomes or indicators of health improvement and priorities for action, which includes community health priorities, measurable objectives and improvement strategies and activities with time-framed targets that were determined in the community planning process; improvement strategies can be evidence-based, practice-based, promising practices or may be innovative to meet the needs of the community health priorities • policy changes needed to accomplish the identified health objectives, which must include those that are adopted to alleviate the identified causes of health inequity • designation of individuals and organizations that have accepted responsibility for implementing strategies outlined in the CHIP	The IS must be a written plan that: • describes the actions the hospital facility intends to take to address the identified health need and the anticipated impact of the hospitals actions • identifies the resources the hospital facility plans to commit to address the health need • describes planned collaboration between the hospital and other organizations in addressing the health need • identifies why a hospital does not intend to address an identified health need

Appendix 2A. **Continued**

Requirement	ODH	Local health departments	Hospitals
Alignment with state and national priorities	ODH must demonstrate that it considered both local health department health improvement priorities and national priorities, such as Healthy People 2020 and the National Prevention Strategy.	Local health departments must demonstrate that they considered both national and state health improvement priorities where they have been established such as Healthy People 2020 and the National Prevention Strategy.	No mention in the hospital requirements.
Evaluation	ODH must provide a tracking process of actions taken toward the implementation of the SHIP, as well as documentation of areas of the plan implemented by ODH and/or its partners. This also includes tracking the status of the effort or results of actions that have been taken.	Local health departments must provide a tracking process of actions taken toward the implementation of the CHIP, as well as documentation of areas of the plan implemented by the local health department and/or its partners. This also includes tracking the status of the effort or results of actions that have been taken. Local health departments must provide an annual report on the progress made in implementing strategies in the CHIP and must document that the health improvement plan has been reviewed and revised as necessary based on the report.	The CHNA must include an evaluation of the impact of any actions that were taken, since the hospital finished conducting its immediately preceding CHNA, to address the significant health needs identified in the hospital facility's prior CHNA(s).

Note: This figure provides an overview of PHAB and IRS requirements for informational purposes only and is not intended to be a comprehensive statement of law or policy.
Source: Public Health Accreditation Board. "Standards & Measures." December 2013. http://www.phaboard. org/wp-content/uploads/SM-Version-1.5-Board-adopted-FINAL-01-24-2014.docx.pdf. See also Internal Revenue Service. Rules and Regulations. "Additional Requirements for Charitable Hospitals; Community Health Needs Assessments for Charitable Hospitals; Requirement of a Section 4959 Excise Tax Return and Time for Filing the Return." Federal Register 79, no. 250 (December 31, 2014): 78954. http://www.gpo. gov/fdsys/pkg/FR-2014-12-31/pdf/2014-30525.pdf

Appendix 2B. **Flowchart for determining nonprofit and government-owned hospital community health planning and related requirements**



Source: Internal Revenue Code
Note: This figure provides an overview of requirements for informational purposes only and is not intended to be a comprehensive statement of law or policy. This figure also does not distinguish between a hospital organization that is an EIN and is required to fill out a Form 990 and licensed hospitals within an EIN which must separately meet §501(r)(3) requirements.

Appendix 2C. **Internal Revenue Service Schedule H community benefit reporting categories**

Category	Summary definition as described in instructions for Schedule H
Financial assistance at cost or "charity care"	Includes free or discounted health services provided to persons who meet the organization's criteria for financial assistance and are unable to pay for all or a portion of the services
Medicaid and other means-tested government programs	Hospital unreimbursed costs related to state Medicaid programs and other government health programs for which eligibility depends on the recipient's income or asset level, such as the State Children's Health Insurance Program (SCHIP).
Subsidized health services	Includes clinical services provided despite a financial loss to the organization. The financial loss is measured after removing losses associated with bad debt, financial assistance, Medicaid and other means-tested government programs. In order to qualify as a subsidized health service, the organization must provide the service because it meets an identified community need. A service meets an identified community need if it is reasonable to conclude that, if the organization no longer offered the service, the service would be: • unavailable in the community, • the community's capacity to provide the service would be below the community's need or • the service would become the responsibility of government or another tax-exempt organization.
Community health improvement services and community benefit operations	Community health improvement services include activities or programs, subsidized by the health care organization, carried out or supported for the express purpose of improving community health. Such services do not generate inpatient or outpatient revenue, although there may be a nominal patient fee or sliding scale fee for these services. Community benefit operations includes activities associated with conducting CHNAs, community benefit program administration and the organization's activities associated with fundraising or grant-writing for community benefit programs.
Health professions education	Includes educational programs that result in a degree, certificate or training necessary to be licensed to practice as a health professional, as required by state law, or continuing education necessary to retain state license or certification by a board in the individual's health profession specialty. It does not include education or training programs available exclusively to the organization's employees and medical staff or scholarships provided to those individuals. However, it does include education programs if the primary purpose of such programs is to educate health professionals in the broader community.
Research	Any study or investigation intended to generate increased generalizable knowledge made available to the public.
Cash and in-kind contributions	Contributions made by the organization to healthcare entities and other community groups restricted, in writing, to one or more of the community benefit activities described in Part 1 of Schedule H.

Source: Internal Revenue Service. "2014 Instructions for Schedule H (Form 990)." https://www.irs.gov/pub/irs-pdf/i990sh.pdf

Appendix 2D. **Internal Revenue Service Schedule H community building reporting categories**

Category	Summary definition as described in instructions for Schedule H
Physical improvements	Includes the provision or rehabilitation of housing for vulnerable populations, such as removing building materials that harm the health of the residents, neighborhood improvement or revitalization projects, provision of housing for vulnerable patients upon discharge from an inpatient facility, housing for low-income seniors and the development or maintenance of parks and playgrounds to promote physical activity.
Economic development	Includes assisting small business development in neighborhoods with vulnerable populations and creating new employment opportunities in areas with high rates of joblessness.
Community support	Includes child care and mentoring programs for vulnerable populations or neighborhoods, neighborhood support groups, violence prevention programs and disaster readiness and public health emergency activities, such as community disease surveillance or readiness training beyond what is required by accrediting bodies or government entities.
Environmental improvements	Includes activities to address environmental hazards that affect community health, such as alleviation of water or air pollution, safe removal or treatment of garbage or other waste products and other activities to protect the community from environmental hazards.
Leadership development and training for community members	Includes training in conflict resolution; civic, cultural, or language skills and medical interpreter skills for community residents.
Coalition building	Includes participation in community coalitions and other collaborative efforts with the community to address health and safety issues.
Community health improvement advocacy	Includes efforts to support policies and programs to safeguard or improve public health, access to health care services, housing, the environment and transportation.
Workforce development	Includes recruitment of physicians and other health professionals to medical shortage areas or other areas designated as underserved and collaboration with educational institutions to train and recruit health professionals needed in the community.
Other	Refers to community building activities that protect or improve the community's health or safety that are not described in the categories listed above.

Source: Internal Revenue Service. "2014 Instructions for Schedule H (Form 990)." https://www.irs.gov/pub/irs-pdf/i990sh.pdf

Appendix 2E. **Other entities required to conduct community assessments and plans**

Organization	Local behavioral health boards (Alcohol, Drug Addiction and Mental Health board [ADAMH], Community Mental Health board [CMH], and Alcohol and Drug Addiction Services board [ADAS])	Family and Children First Councils (FCFCs)	Federally Qualified Health Centers (FQHCs)	United Ways	Community action agencies	Depository institutions (state member banks, state nonmember banks, national banks, savings associations)
Name	Community plans	Shared plan	Needs assessment and planning	Community assessment or community needs assessment	Comprehensive community needs assessment	Community Reinvestment Act (CRA) performance context
Requirement (required or optional)	Required by and reported to the Ohio Department of Mental Health and Addiction Services (MHAS)	Required by state statute (HB 289, 2006). Reported to county's board of county commissioners and the Ohio FCFC Council	Required by Section 330 of the Public Health Service Act to receive FQHC status and grants from the Bureau of Primary Health Care under the Health Resources and Services Administration	No specific requirement. However, United Way members are required to conduct and submit to United Way Worldwide a community-driven self-assessment of their community impact work, financial management and organizational governance and decision making, every three years.	Not required, but used to increase competitiveness in applying for grants	Required by the CRA for depository institutions that meet or exceed the asset size thresholds for both of the last two calendar years
Purpose (objective of plan)	Community plans serve as a guide for board funding/ budget advocacy by defining local need, what gaps exist in meeting that need and how additional funds would be used to close those gaps. Plans also help develop learning communities and gather local data to successfully obtain Block Grant Funds from the Substance Abuse and Mental Health Services Administration (SAMHSA) and other funding streams.	County FCFCs shared plan model is intended to align local plans to address priorities, evaluate services, fill service gaps where possible and develop new approaches to achieve better results for families and children.	To receive grants, the FQHC must demonstrate need in a population or area through an assessment defining the target population and the service needs that the health center should be prepared to meet.	Community needs assessments are used to help identify emerging needs, gaps in service and programming and funding priorities. They may address a variety of issues including income, education, health, nutrition, child and family development, housing and more.	Used to identify and address problems facing the community including issues around income, education, health, nutrition, child and family development and housing.	The CRA is intended to encourage depository institutions to help meet the credit needs of the communities in which they operate, including low- and moderate-income neighborhoods.

Appendix 2E. **Continued**

Organization	Local behavioral health boards (Alcohol, Drug Addiction and Mental Health board [ADAMH], Community Mental Health board [CMH], and Alcohol and Drug Addiction Services board [ADAS])	Family and children first councils (FCFCs)	Federally qualified health centers (FQHCs)	United Ways	Community action agencies	Depository institutions (state member banks, state nonmember banks, national banks, savings associations)
Definition of community	The jurisdiction of individual ADAMH boards, CMH boards and ADAS boards varies by organization. Responsibility ranges from serving the needs of a single county to serving several.	County FCFCs help to coordinate services for children and families who are in need of services from more than one youth-serving program. Each FCFC's jurisdiction lies within its respective county.	The breadth of community covered by an individual FQHC varies per organization. Centers must be located in a high need community, designated a Medically Underserved Area/Population by the U.S. Department of Health and Human Services. Centers specify the targeted area and population scope of project and review it regularly.	Jurisdictions usually include county and multi-county regional areas.	Community action agencies define their communities as broad geographic areas, ranging from multi-county regions and MSAs to more targeted municipalities or inner city areas. The central focus is in low-income communities.	The CRA "assessment areas" include one or more metropolitan statistical areas or one or more contiguous political subdivisions, like counties, cities or towns. The location of main offices, branches, ATMs and loan origin geolocations is also a factor. Areas may not arbitrarily exclude low- or moderate-income geographies.
Timeline (current frequency of occurrence)	Every 2 years	Annual	At application for FQHC status and periodically as needed (e.g. when redefining service area)	May vary by local office	Every three years	Annual data reporting
Key components	Community Plans include: • description of the economic, social and demographic factors in a community that will influence service delivery • challenges and opportunities impacting consumers, providers and the community • description of capacity development targets for treatment and recovery support services and prevention services	Shared Plans should: • identify local priorities • evaluate and prioritize services • fill service gaps • invent new approaches to produce better results for children and families • highlight local interagency efforts • align local plans rather than undergoing individual planning	Plan must include: • a description of the need for health services in the center catchment area • a demonstration that the area or the population group to be served has a shortage of personal health services • a demonstration that the center will be located so to provide services to the greatest number of individuals residing in the catchment area or included in the population group	Guidelines and tools vary by local office. May address issues such as: • income • education • health • nutrition • child and family development • housing	Basic components of the assessment include: • demographics • education • income • health care • employment • housing • nutrition	"Performance context" describes the type of information an examiner must review in order to assess institution performance. This includes institutional and community data relevant to the social determinants of health, such as: • institutional loan-to-deposit ratio • loans to borrowers of different incomes • community demographics • community credit need • community economic trends

Appendix 2E. **Continued**

Organization	Local behavioral health boards (Alcohol, Drug Addiction and Mental Health board [ADAMH], Community Mental Health board [CMH], and Alcohol and Drug Addiction Services board [ADAS])	Family and Children First Councils (FCFCs)	Federally Qualified Health Centers (FQHCs)	United Ways	Community action agencies	Depository institutions (state member banks, state nonmember banks, national banks, savings associations)
Example	ADAMH of Franklin County Community Plan	Knox County FCFC Shared Plan	Clinic and Community Profile template	United Way of Delaware County Community Needs Assessment	Sample report from the Comprehensive Community Needs Assessment Tool	Reports can be accessed by institution and state here. Huntington example, by Ohio county.
Number of entities in Ohio	51 boards	88 councils	36 FQHCs	70 local United Way chapters	50 Community Action Agencies	—

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Appendix 2F. **Summary of advisory group feedback on population health planning infrastructure challenges and opportunities for improvement**

Population Health Planning Advisory Group 10.1.15

Identified population health planning challenges:

- **Limited resources** for assessment, particularly among rural hospitals and small local health departments. Implementation requires sustainable funding.
- Lack of **data disaggregated** by subpopulation (racial/cultural, age, gender) and for sub-county geographic areas (zip-code, census tract)
- Local behavioral health planning entities (e.g. mental health boards) are not usually embedded in the planning processes of hospitals and local health departments, despite behavioral health driving many comorbidities.
- **Data sharing** with relevant sectors outside public health and health care (for example, local school districts) can be difficult. There is no standardized information exchange across sectors.
- Hospitals have a **different worldview** than local health departments, with hospitals focusing on the patient population.
- Healthcare **market competition** can stifle collaboration, especially in some healthcare markets that are very competitive.

Identified opportunities for improvement:

- Use a **common framework** that is not disease-focused and includes a set of outcomes to track. Examples include:
  - Ohio's Plan to Prevent and Address Chronic Disease includes a range of activities in four core focus areas (environmental approaches, health system interventions, community-clinical linkages and data and surveillance)
  - HPIO Health Value Dashboard's conceptual framework includes seven domains (population health outcomes, healthcare costs, healthcare system performance, public health and prevention, access, and social, economic and physical environments)
- Increase **collaboration** and provide **guidance** on how to collaborate. The current number of assessments and plans is overwhelming and confusing.
- Pay more attention to **measurement and outcomes**, despite the difficulties of evaluating population health strategies. Services provided by community providers may be highly successful in the long-term, but are difficult to measure in the short-term. It is challenging to determine desired outcome(s), especially for distal outcomes.
- Go beyond medical care and address the **social determinants of health**.
- Ensure that all parts of the health system are included in planning, including behavioral health.
- Ensure that each community uses a good **consumer engagement** strategy that is more meaningful than a focus group and a survey.

Infrastructure Subgroup 10.19.15

Identified opportunities for improvement:

- More collaboration around implementation strategies
- Better and more frequent community health data collection
- Better use of evidence-based practices
- Greater clarity around community benefit definition

Characteristics of an ideal population health planning infrastructure:

- Consistent data elements, standards and measures
- Collaboration with critical community partners
- Funding flexibility
- Clear roles and responsibilities
- Transparency
- Health improvements across the life course
- Deliberate focus on disparities
- Common definition of community

General consensus across both groups

There was general consensus that Ohio's population planning infrastructure is lacking the characteristics of an ideal infrastructure, although some characteristics exist in certain areas of the state to varying degrees.

Appendix 2G. **Key Public Health Accreditation Board (PHAB) standards and measures for the state health assessment and state health improvement plan**

State health assessment requirements

1. **1.1.1S (1):** The state health department must document that the process for the development of a state level community health assessment includes participation of partners outside of the health department that represent state populations and state health challenges.
2. **1.1.1S (2):** The health department must document that the partnership meets and communicates on a regular basis to consider new data sources, review newly collected data, consider assets and resources that are changing, and conduct additional data analysis.
3. **1.1.1S (3):** The state health department must document the collaborative process used to identify and collect data and information, identify health issues, and identify existing state assets and resources to address health issues.
4. **1.1.2S (1):** The state health department must document the identification and description of the state's health and areas of health improvement, the factors that contribute to the health challenges, and the existing state resources that can be mobilized to address them. The state's community health assessment must include: Qualitative and quantitative data; primary and secondary data; description of demographics of the population; description of health issues, distribution and inequities; discussion of contributing causes of health challenges; and listing or description of state assets and resources that can be mobilized to address health issues.
5. **1.1.2S (2):** The health department must document that the preliminary findings of the state level community health assessment were distributed to the population at large and that their input was sought.
6. **1.1.2S (3):** The health department must document the gathering of information, collection of data, conduct of community dialogues, and/or identification of assets specific to populations and/or geographic areas in the state where health inequities and poorer health indicators were identified in the community health assessment.
7. **1.1.3A (1):** Health departments must document how it informs partners, stakeholders, other agencies, associations, and organizations of the availability of the community health assessment.
8. **1.1.3A (2):** Health departments must document how it communicates the community health assessment findings to the public.

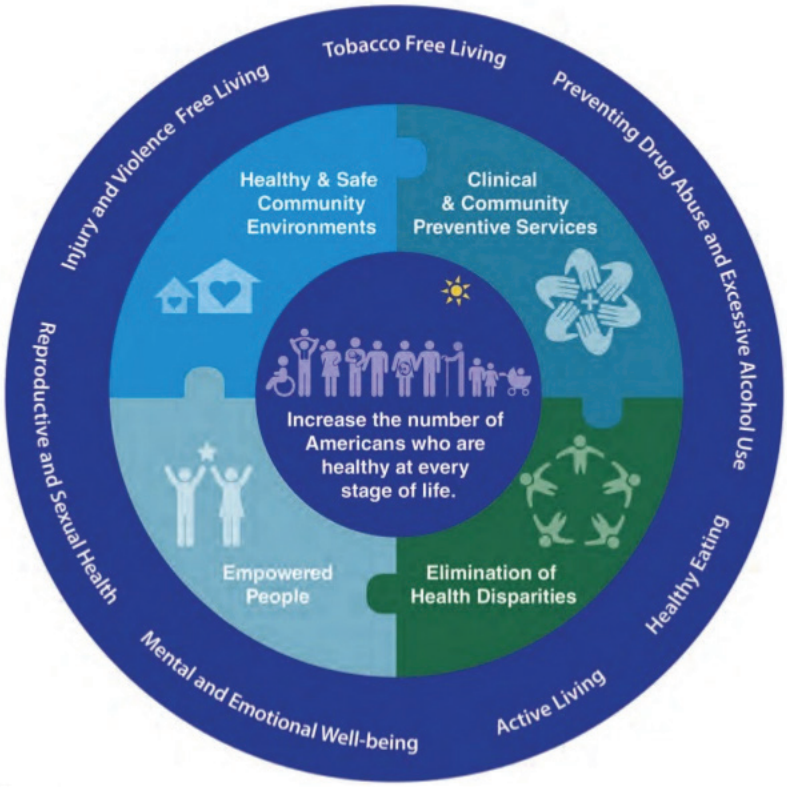
State health improvement plan requirements

9. **5.2.1S (1):** The state health department must document the collaborative state health improvement planning process. The process must include: Participation by a wide range of community partners representing various sectors of the community; data and information from the state health assessment; stakeholder identification of issues and themes; assets and resources; and, description of the prioritization process.
10. **5.2.2S (1):** The state health department must provide a state health improvement plan that includes: statewide health priorities, measurable objectives, improvement strategies, and activities with time-framed targets; policy changes needed to accomplish the identified health objectives; designation of individuals and organizations that have accepted responsibility for implementing strategies outlined in the plan; consideration of local health department health improvement priorities and national priorities, such as the National Prevention Strategy and Healthy People 2020.
11. **5.2.3A (1):** The health department must provide a tracking process of actions taken toward the implementation of the community health improvement plan.
12. **5.2.3A (2):** The health department must document areas of the plan that were implemented by the health department and/or its partners.
13. **5.2.4A (1):** The health department must provide an annual report on the progress made in implementing strategies in the community health improvement plan.
14. **5.2.4A (2):** The health department must document that the health improvement plan has been reviewed and revised as necessary based on the report required in 1 above.

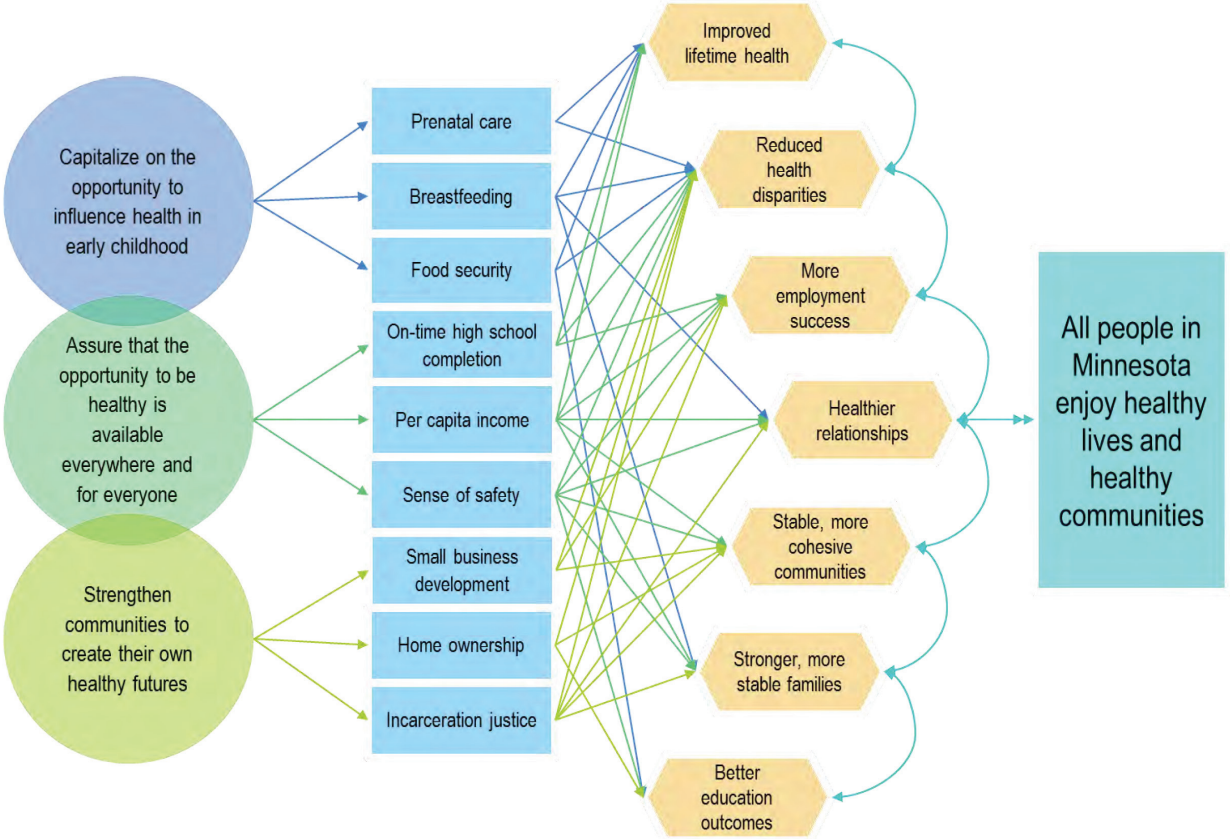
Source: PHAB Standards and Measures Version 1.5

Appendix 2H. **Conceptual framework examples for the state health assessment (SHA) and state health improvement plan (SHIP)**

2H.1. **National Prevention Strategy framework**

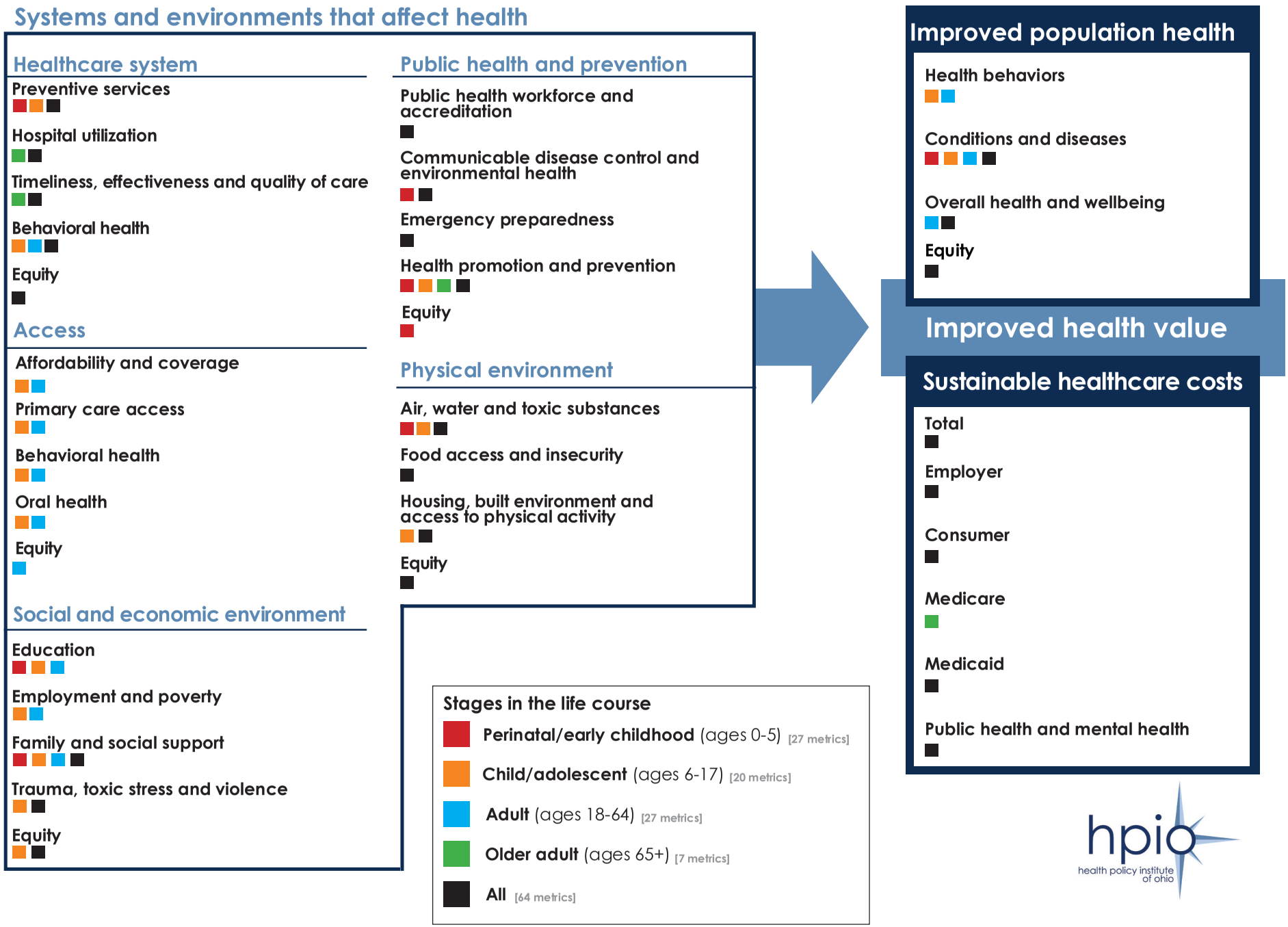


2H.2. **Minnesota state health improvement plan framework**



Source: Healthy Minnesota 2020: Statewide health improvement framework, Minnesota Department of Health, 2012

2H.3. **HPIO *Health Value Dashboard* conceptual framework**



Appendix 2I. **Potential strategy for aligning Ohio's state health assessment (SHA) with the HPIO Health Value Dashboard**

2I.1 **Alignment timeline**

	2014	2015	2016	2017	2018	2019	2020
HPIO *Dashboard*	Release 2014 *Dashboard* (Dec.)			Release 2017 *Dashboard* (Jan.)		Release 2019 *Dashboard* (Jan.)	
Ohio Department of Health (ODH) state health assessment (SHA)/ state health improvement plan (SHIP)	Initial Public Health Accreditation Board (PHAB) application	• Revised PHAB application • SHIP addendum	Complete SHA • Compile updated Ohio data for *Dashboard* metrics • Include additional material required by PHAB • Include deeper dive on disparities for *Dashboard* metrics Complete SHIP			Update SHA and SHIP	PHAB renewal application (5-year cycle)
Partnership process			Convene subgroup of HPIO Health Measurement Advisory Group to inform the SHA process	Develop process and timeline for aligning release of *Dashboard* with the next full iteration of the SHA			

2I.2 **Public Health Accreditation Board (PHAB) state health assessment (SHA) requirements and HPIO *Health Value Dashboard* crosswalk**

Category	PHAB Standard and Measure	2014 *Dashboard*	Gaps
Collaborative process	1.1.1.1. Participation of partners outside the health department	HPIO's Health Measurement Advisory Group (HMAG) represents large number of partners outside Ohio Department of Health (ODH) (HPIO has documentation)	
	1.1.1.2. Partnership meets and communicates on regular basis	HMAG met regularly in 2013-2014 and will meet regularly in 2016 (HPIO has documentation)	Ongoing meetings and communication in 2016 involving ODH SHA staff
	1.1.1.3. Documentation of collaborative process used to identify and collect data, identify health issues, and identify existing state assets and resources	HPIO can document collaborative process to identify metrics and compile data for *Dashboard*, and identifying health issues	*Dashboard* does not include existing state assets and resources. ODH would need to add this
Data collection and analysis	1.1.2.1a. Must use qualitative and quantitative data, and primary and secondary data.	Does not include any qualitative data, some of the data is primary for ODH (e.g., vital stats)	ODH would need to add qualitative component and possibly additional primary data collection
	1.1.2.1b. Description of demographics of the state population	Does not include basic demographic characteristics	ODH would need to add
	1.1.2.1c. Description of health issues, including health inequities	Has very minimal narrative description; health disparities are described for selected metrics	ODH would need to add narrative description of health issues and additional analysis of health inequities
	1.1.2.1d. Discussion of contributing causes of health challenges	Includes data on many contributing causes, but has very limited narrative discussion of this	ODH would need to add narrative discussion of contributing causes, but could use the *Dashboard* determinant domains to frame this
	1.1.2.1e. Description of state assets and resources	Does not include this	ODH would need to add
Stakeholder and community review and input	1.1.2.2. Must distribute preliminary health assessment findings with population at large and seek input	Process did not include this step	ODH would need to add
	1.1.2.3. Must document "the gathering of information, collection of data, conduct of community dialogues, and/or identification of assets specific to populations and/or geographic areas in the state where health inequities and poorer health indicators were identified in the community health assessment."	Process did not include this step	ODH would need to add, HMAG could be one of the stakeholder groups
Accessibility of SHA to agencies, organizations and general public	1.1.3.1. Inform partners of availability of SHA	HPIO disseminated widely to various partners	

Appendix 2J. **Examples of criteria for selecting metrics**

2J.1 **Metric selection prioritization criteria**

HPIO Health Value Dashboard prioritization criteria

- **State-level:** Statewide data are available for Ohio and other states. State data is consistent across states (allowing for state rankings, if appropriate).
- **Sub-state geography:** Data are available at the regional, county, city or other geographic level within Ohio.
- **Ability to track disparities:** Data are available for sub-categories such as race/ethnicity, income level, age or gender.
- **Availability and consistency:** There is a high probability that data for this metric will continue to be gathered in the future and will be provided in a relatively consistent format across time periods.
- **Timeliness:** Data for this metric is released on a regular basis (at least yearly or every other year).
- **Source integrity:** The metric is nationally recognized as a valid and reliable indicator and the data are provided by a reputable national organization or state or federal agency.
- **Data quality:** The data are complete and accurate. The data collection method is the best available for the construct being measured (e.g., biometric, self-report, administrative).
- **Alignment:** Aligns with an existing requirement, performance measure, program evaluation indicator, or other measures currently being compiled by a state or federal agency (e.g., Ohio Department of Health, Governor's Office of Health Transformation, Ohio Department of Education, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality), national organization (e.g. Catalyst for Payment Reform), or regional project (e.g., Health Collaborative, AccessHealth Columbus, Better Health Greater Cleveland). Does not add data collection burden to stakeholders.
- **Benchmarks:** Benchmark values have been established for the metric by a reputable state or national organization or agency (e.g., Healthy People 2020).
- **Face value:** The metric is easily understood by the public and policymakers.
- **Relevance:** The metric addresses an important health-related issue that affects a significant number of Ohioans.

2J.2. **Criteria for prioritizing population health issues for the state health improvement plan and other population health plans**

Criteria	Description	Information sources
Nature of the problem*		
1. Magnitude of the health problem	Number or percent of Ohioans affected	• State health assessment (Ohio Department of Health [ODH]): Prevalence data and leading causes of death • *Health Value Dashboard* (HPIO) • Topic-specific reports, such as Impact of Chronic Disease in Ohio (ODH)
2. Severity of the health problem	Risk of morbidity and mortality associated with the problem	• State health assessment (ODH): Years of potential life lost by cause of death • Leading "actual" causes of death** • Stakeholder expertise
3. Magnitude of health disparities and impact on vulnerable populations	• Size of gap between racial/ethnic groups and income/poverty status groups • Impact on children, families living in poverty, people with disabilities, etc.	• State health assessment (ODH): Disparities and inequities data and analysis • Topic-specific reports, such as Impact of Chronic Disease in Ohio (ODH)
4. Ohio's performance relative to benchmarks or other states	Extent to which Ohio is doing much worse than national benchmarks, other states or the U.S. overall	• *Health Value Dashboard* (HPIO) • Network of Care (Ohio performance on Healthy People 2020 targets)
5. Trends	Extent to which the problem has been getting worse in recent years	• State health assessment (ODH): Trend data • *Health Value Dashboard* (HPIO)
Impact on healthcare costs and employment		
6. Impact on healthcare costs—total cost	Contribution of the health problem to healthcare costs for all payers—total cost	• Chronic Disease Cost Calculator (Centers for Disease Control and Prevention [CDC]) • Primary care claims data report (McKinsey & Company/ Governor's Office of Health Transformation [OHT]) • Topic-specific sources
7. Impact on healthcare costs—per-person treated	Contribution of the health problem to healthcare costs for all payers—per person treated	• Chronic Disease Cost Calculator (CDC) • Primary care claims data report (McKinsey & Company/OHT) • Topic-specific sources
8. Impact on employment and productivity	Impact of the health problem on a person's ability to get and keep a job, on workplace productivity and school absenteeism/ability to learn in school	• Chronic Disease Cost Calculator: Absenteeism costs (CDC) • Topic-specific sources • Stakeholder expertise
Potential for impact*		
9. Preventability of disease or condition	Disease or condition is largely caused by behaviors, community environments and/or other modifiable factors (rather than genetics or biological characteristics) that can be addressed by prevention programs or policies	• Stakeholder expertise • Leading "actual" causes of death**
10. Availability of evidence-based strategies	• Existence of population health strategies • Strength of evidence for available strategies	• CDC Community Guide, What Works for Health and other systematic reviews and evidence registries (see pages 55-56) • Stakeholder expertise
11. Potential strategies are cross-cutting or have co-benefits	Existing evidence-based strategies to address this health problem would also address other health problems (e.g., healthy eating and active living strategies impact obesity, diabetes, heart disease, mental health, etc.)	• Analysis of upstream determinants, including community conditions and the broader social, economic and environment • Stakeholder expertise
12. Opportunity to add value	• There is a need for increased activity and/or alignment on this issue at the statewide level • There is a gap in leadership or collective impact	• State health assessment (ODH): Description of current assets and resources • Stakeholder expertise
13. Ability to track progress	• Progress on the issue can be tracked using existing population-level indicators • Statewide data is or will be available within appropriate planning and evaluation timeframe	• Healthy People 2020 • *Health Value Dashboard* • Network of Care • Topic-specific sources
Opportunity for clinical-community linkages		
14. Alignment with Ohio's SIM PCMH model	• Relevance to patient-centered medical home (PCMH) clinical quality measures • Relevance of issue to health priorities identified in PCMH patient satisfaction surveys	• Ohio PCMH Primary Care Delivery Model • Ohio PCMH clinical quality measures (see Figure 3.5) • Population health priorities identified through PCMH patient satisfaction surveys (aggregate data; see Transparency component of Care Delivery Model)
15. Availability of strategies to connect primary care with community-based prevention activities	• Issue involves opportunities for linking PCMHs with community-based prevention activities • Existence of tools or models for primary care providers to identify needs and connect patients to evidence-based prevention programs	• Upstream "glide path" framework and examples of ways to connect PCMHs with community-based resources that help patients with basics needs and behavior change (see Figure 3.8) • CDC Community Guide, What Works for Health and other systematic reviews and evidence registries (see Figure 3.12)

*Sources include Catholic Health Association of the United States, the Association of State and Territorial Health Officials, and SHIPs from PHAB-accredited state health departments.

** Mokdad, *Actual causes of death in the United States, 2000*, JAMA 2004

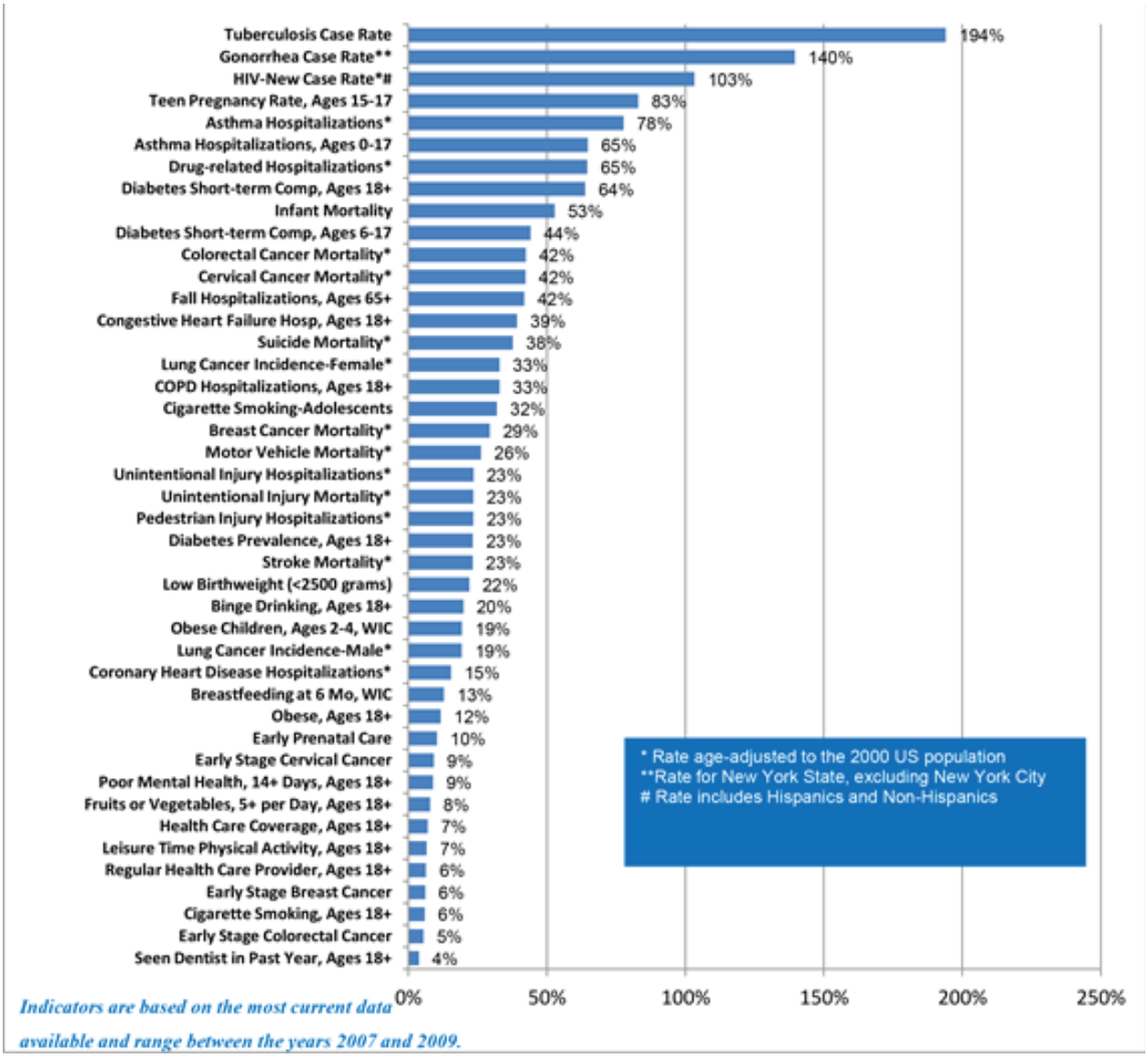
2J.3 **Strategy selection prioritization criteria**

In 2013, HPIO partnered with the Ohio Department of Health to develop a guide called **Evidence in Action** for selecting effective prevention strategies. This guide includes an Evidence-Based Strategy Selection Worksheet with the following decision criteria:

- **Strength of evidence:** Strength of the evidence of effectiveness as rated by the Community Guide or What Works for Health.
- **Readiness:** Some groundwork has been laid for the strategy, or it is already being implemented in some local communities but needs to be scaled up or spread throughout the state.
- **Coordination:** Avoids duplicating current efforts and/or adds value in some way to existing work. Selecting and implementing this strategy would accelerate or expand existing work in a meaningful way.
- **Available funding:** We can identify potential funding sources for implementation and/or the strategy requires minimal funding.
- **Political will and political timing:** The timing is right within the current political context to implement this strategy.
- **Feasibility:** It is feasible to implement this strategy within the allowable timeframe, including feasibility of logistics, timing and meaningful support from key partners.
- **Reach:** Estimated number of people to be impacted by the strategy and potential to be implemented statewide in urban, suburban and rural communities.

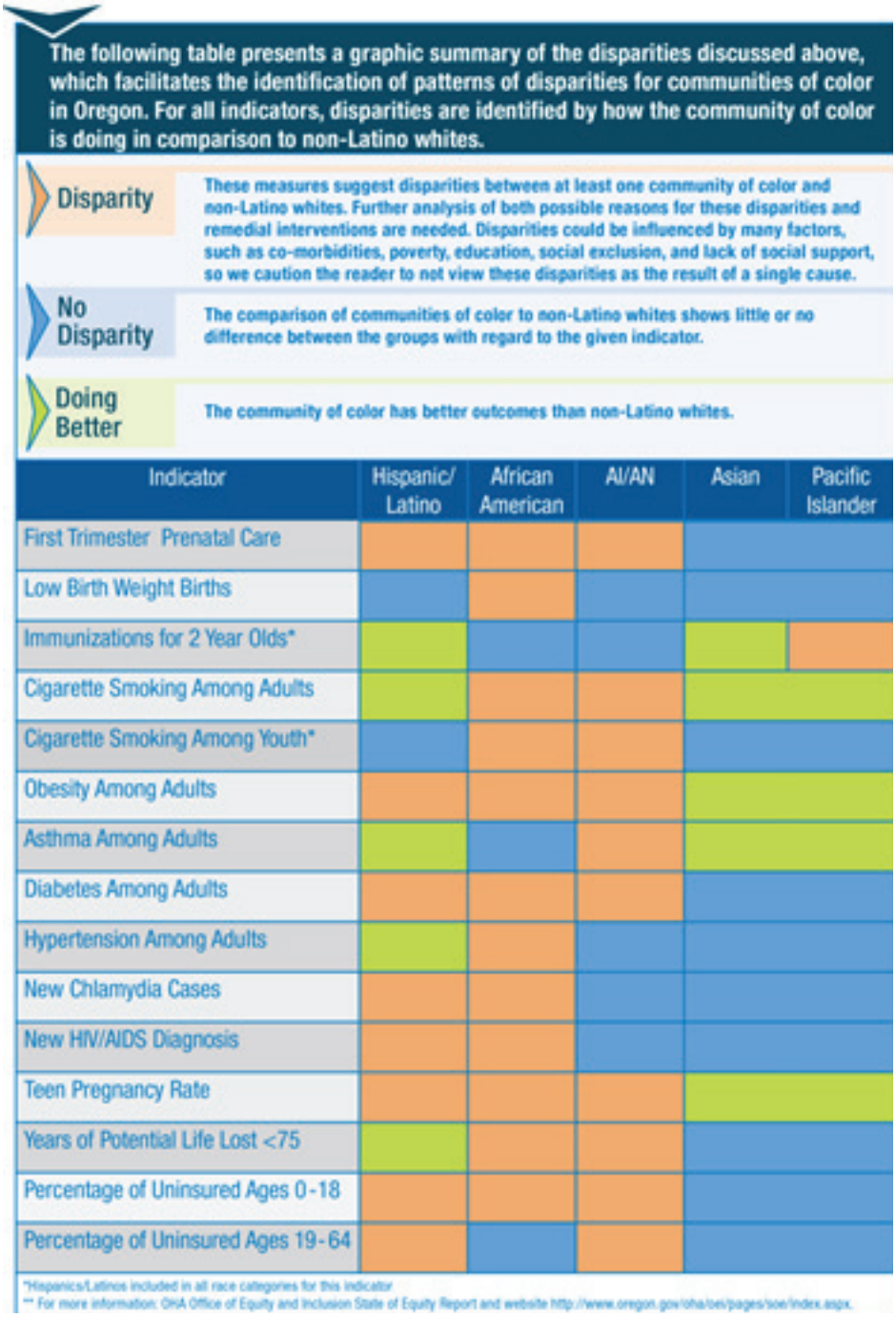
Appendix 2K. **Examples of ways to display health disparities**

2K.1 "Index of Disparity" for public health priority areas, New York state, 2007-2009



Source: Description of Population Demographics and General Health Status, New York State, 2012, 2013-17 Prevention Agenda

2K.2 Oregon's disparity scorecard



The following table presents a graphic summary of the disparities discussed above, which facilitates the identification of patterns of disparities for communities of color in Oregon. For all indicators, disparities are identified by how the community of color is doing in comparison to non-Latino whites.

Disparity — These measures suggest disparities between at least one community of color and non-Latino whites. Further analysis of both possible reasons for these disparities and remedial interventions are needed. Disparities could be influenced by many factors, such as co-morbidities, poverty, education, social exclusion, and lack of social support, so we caution the reader to not view these disparities as the result of a single cause.

No Disparity — The comparison of communities of color to non-Latino whites shows little or no difference between the groups with regard to the given indicator.

Doing Better — The community of color has better outcomes than non-Latino whites.

Indicator	Hispanic/ Latino	African American	AI/AN	Asian	Pacific Islander
First Trimester Prenatal Care	Disparity	Disparity	Disparity	No Disparity	No Disparity
Low Birth Weight Births	No Disparity	Disparity	No Disparity	No Disparity	No Disparity
Immunizations for 2 Year Olds*	Doing Better	No Disparity	No Disparity	Doing Better	Disparity
Cigarette Smoking Among Adults	Doing Better	Disparity	Disparity	Doing Better	Doing Better
Cigarette Smoking Among Youth*	No Disparity	Disparity	Disparity	No Disparity	No Disparity
Obesity Among Adults	Disparity	Disparity	Disparity	Doing Better	Doing Better
Asthma Among Adults	Doing Better	No Disparity	Disparity	Doing Better	Doing Better
Diabetes Among Adults	Disparity	Disparity	Disparity	No Disparity	No Disparity
Hypertension Among Adults	Doing Better	Disparity	No Disparity	No Disparity	No Disparity
New Chlamydia Cases	Disparity	Disparity	No Disparity	No Disparity	No Disparity
New HIV/AIDS Diagnosis	Disparity	Disparity	No Disparity	No Disparity	No Disparity
Teen Pregnancy Rate	Disparity	Disparity	Disparity	Doing Better	Doing Better
Years of Potential Life Lost <75	Doing Better	Disparity	Disparity	No Disparity	No Disparity
Percentage of Uninsured Ages 0-18	Disparity	Disparity	Disparity	No Disparity	No Disparity
Percentage of Uninsured Ages 19-64	Disparity	No Disparity	Disparity	No Disparity	No Disparity

*Hispanics/Latinos included in all race categories for this indicator
** For more information: OHA Office of Equity and Inclusion State of Equity Report and website http://www.oregon.gov/oha/oei/pages/soe/index.aspx

Source: State Health Profile, Oregon Public Health Division, 2012

Appendix 2L. **Examples of tools that can assist in the development of community health assessment and plans**

Key

- **Process:** Provides information and/or guidelines on how to conduct assessments and/or plans and the different components of the process, including identifying health needs
- **Report layout:** Provides a template for structuring the assessment and/or plan report
- **Primary data collection:** Provides information and/or guidelines on how to collect primary data (such as focus groups, key informant interviews)
- **Secondary data collection:** Provides data and/or indictors that can be incorporated into an assessment
- **Community engagement:** provides information and/or guidelines on how to engage community members and other community stakeholders in the assessment and/or planning processes
- **Implementation:** Provides resources or examples of evidence-based strategies that can be incorporated into a plan
- **Evaluation:** Provides information and/or guidelines on what to include in and how to conduct an evaluation plan to track or monitor progress

Resource	Description	Process	Report layout	Data collection		Community engagement	Implementation	Evaluation
				Primary	Secondary			
Association for Community Health Improvement Community Health Assessment Toolkit http://www.assesstoolkit.org/	• A guide for planning, leading and using community health needs assessments to better understand and improve the health of communities • Toolkit includes examples and guidelines for an assessment framework	■	■	■				■
Assessment Protocol for Excellence in Public Health http://www.naccho.org/topics/infrastructure/APEXPH/	Flexible planning tool that provides a framework for working with community members and other organizations to assess the health status of the community	■				■		
Asset-Based Community Development Institute http://www.abcdinstitute.org/about/	Offers tools and trainings to mobilize asset-based community mapping and development					■		
Catholic Health Association, Assessing and Addressing Community Health Needs https://www.chausa.org/communitybenefit/assessing-and-addressing-community-health-needs	Offers practical advice on how hospitals can work with community and public health partners to assess community health needs and develop effective strategies for improving community health	■	■			■		
Centers for Disease Control and Prevention's Community Health Improvement Navigator http://www.cdc.gov/CHInav/	Provides expert-vetted tools and resources for: • Identifying geographic areas of greatest need within communities • Establishing effective collaborations • Finding interventions that work for the greatest impact on health and wellbeing for all	■				■	■	
Community Commons http://www.communitycommons.org/	• Provides county-level data on health outcomes, health behaviors, clinical care, social and economic factors and the physical environment • Maps of sub-county-level data available for some indicators • Vulnerable Populations Footprint tool provides sub-county maps of low educational attainment and high poverty • Breakouts by age, race, ethnicity and other population characteristics available for some indicators • Trend data available for some indicators • Includes data visualization, mapping and community health needs assessment report tools	■	■		■			

Appendix 2L. **Continued**

Resource	Description	Process	Report layout	Data collection		Community engagement	Implementation	Evaluation
				Primary	Secondary			
Community Guide (Guide to Community Preventative Services) http://www.thecommunityguide.org/	"Gold standard" source for evidence-based public health interventions in community settings, covering a wide range of health topics						■	
Community Health Advisor http://www.communityhealthadvisor.org/	Database of evidence-based policies and programs to reduce tobacco use and increase physical activity. Includes interactive tool that generates state and county-level estimates of the health and cost impact of implementing specific interventions.				■		■	
County Health Rankings & Roadmaps http://www.countyhealthrankings.org/	• Provides county-level data on health outcomes, health behaviors, clinical care, social and economic factors and the physical environment. • Includes an action center that provides resources and tools for key action steps needed to improve community health	■		■	■	■	■	■
Healthy People 2020 MAP-IT Guide http://www.healthypeople.gov/2020/tools-and-resources/Program-Planning	Framework can be used to: • Mobilize partners • Assess the needs of a community • Create and implement a plan to reach Healthy People 2020 objectives • Track a community's progress	■			■	■		■
HPIO Guide to Evidence-Based Prevention http://www.healthpolicyOhio.org/tools/health-policy-tools/guide-to-evidence-based-prevention/	• Provides description of key concepts in evidence-based decision-making and guidance on how to identify credible sources of what works to improve health • Includes links to recommended sources of evidence to address Ohio's highest priority health problems						■	
HPIO Health Value Dashboard http://www.healthpolicyOhio.org/2014-health-value-dashboard/	• Identifies Ohio's greatest health challenges and strengths • Includes state-level data for population health, healthcare cost, prevention and public health, access, healthcare system, social and economic environment and physical environment • Provides links to local-level data when available				■			
Mobilizing for Action through Planning and Partnerships http://www.naccho.org/topics/infrastructure/mapp/	A community-driven strategic planning tool for improving community health that includes detailed steps and guidelines for conducting a community assessment	■	■			■		■
NACCHO Resource Center for Community Health Assessments and Community Health Improvement Plans http://www.naccho.org/topics/infrastructure/CHAIP/	Provides practical, customizable tools and resources to support local health departments and their partners in completing community health improvement processes	■	■	■	■	■		■

Appendix 2L. **Continued**

Resource	Description	Process	Report layout	Data collection		Community engagement	Implementation	Evaluation
				Primary	Secondary			
National Center for Rural Health Works CHNA Toolkit http://ruralhealthworks.org/wp-content/files/2-CHNA-Toolkit-Text-and-All-Appendices-May-2012.pdf	• Provides a relatively quick, non-intensive process for rural hospitals to complete the community health needs assessment process • Includes a detailed process plan, suggestions for primary data collection and materials to guide implementation	■	■	■	■			
National Public Health Performance Standards http://www.cdc.gov/nphpsp/	Provides a framework to assess capacity and performance of public health systems and public health governing bodies	■						■
Ohio Department of Health Network of Care http://www.odh.Ohio.gov/features/odhfeatures/Network%20of%20Care.aspx	• Provides county and city-level data on a wide variety of health outcomes and behaviors as well as the social and physical environment • Breakouts by age, race, ethnicity and other characteristics available for some indicators • Trend data and peer county comparisons available for some data				■			
Principles to Consider for the Implementation of a Community Health Needs Assessment Process http://nnphi.org/wp-content/uploads/2015/08/PrinciplesToConsider-ForTheImplementationOfACHNAProcess_GWU_20130604.pdf	• Identifies guiding principles to inform community health needs • Offers a pathway for hospitals, public health entities and other interested parties to work collaboratively to address the health needs of their communities	■				■		■
University of Kansas Community Toolbox http://ctb.ku.edu/en/assessing-community-needs-and-resources	• Provides guidance for conducting assessments of community needs and resources • Includes examples and outlines for conducting community assessments	■	■					
What Works for Health (County Health Rankings) http://www.countyhealthrankings.org/roadmaps/what-works-for-health	• Searchable database of evidence-based programs and policies to address health behaviors, clinical care, social and economic factors and the physical environment • Includes a rating of the strength of evidence for each strategy						■	

Part Three Appendices

Appendix 3A. **State and community-level assessments and plans conducted in Ohio, 2011-2015**

State-level assessments and plans (year released)	Lead organization	Priorities
State Health Assessment (2011)	Ohio Department of Health	No
Ohio Injury Prevention Partnership Ohio Older Adult Falls Prevention Coalition State Plan 2010-2014 (2011)	Ohio Injury Prevention Partnership*	Yes (one primary priority)
Ohio Injury Prevention Partnership Child Injury Action Group Strategic Plan 2011-2016 (2011)	Ohio Injury Prevention Partnership*	Yes (five priorities)
2012-2014 State Health Improvement Plan (2012) and 2015-2016 State Health Improvement Plan Addendum (2015)	Ohio Department of Health	Yes (nine priorities)
Ohio Adolescent Health Strategic Plan 2013-2020 (2013)	Ohio Adolescent Health Partnership*	Yes (five key issues)
Ohio Suicide Prevention Foundation Strategic Plan 2013-2016 (2013)	Ohio Suicide Prevention Foundation	Yes (one primary priority)
Health Value Dashboard (2014)	Health Policy Institute of Ohio	Yes (13 health challenges, defined as metrics for which Ohio ranks in the bottom quartile of states)
Ohio's Plan to Prevent and Reduce Chronic Disease: 2014-2018 (2014)	Ohio Chronic Disease Collaborative*	Yes (10 outcome areas)
Ohio State Profile (state-level overview of key healthcare indicators prepared for State Innovation Models grantees) (2015)	State Health Access Data Assistance Center	No
Population Health Management Diagnostic Outputs Report (Medicaid primary care claims data, 2015)	Governor's Office of Health Transformation	No
Impact of Chronic Disease in Ohio (2015)	Ohio Department of Health	No
Ohio Infant Mortality Reduction Plan 2015-2020 (2015)	Ohio Collaborative to Prevent Infant Mortality*	Yes (seven strategic focus areas)
Ohio Comprehensive Cancer Control Plan 2015-2020 (2015)	Ohio Partners for Cancer Control*	Yes (11 priorities)
Achieving Equity and Eliminating Infant Mortality Disparities within Racial and Ethnic Populations: From Data to Action (2015)	Ohio Commission on Minority Health	Yes (one primary priority)
Community-level assessments and plans	**Lead organizations**	**Priorities**
Local Health Department community health assessments and improvement plans (110 assessment and/plan documents completed between 2009-2014)	Local health departments	Yes (multiple priorities)
Hospital community health needs assessments and implementation strategies (170 assessment/plan documents completed between 2011-2014)	Nonprofit hospitals	Yes (multiple priorities)

*Statewide collaborative supported by the Ohio Department of Health

Appendix 3B. **Priority areas identified in state, local health department and hospital assessments and plans**

	State-level plans (n=10)	LHD CHA/CHIP (n=110)	Hospital CHNA (n=170)	All combined (equally weighted)
Health conditions				
1. **Obesity.** Such as: overweight, obesity, morbid obesity; childhood or adult	30%	69.1%	68.8%	56%
2. **Substance abuse.** Focus on health condition/treatment, such as: addiction or abuse (alcohol, marijuana, prescription drugs, opioids, MDMA, other drugs)	30%	49.3%	54.7%	44.7%
3. **Infant mortality/low birth weight.** Such as: infant mortality, low birth weight, prematurity, prenatal care	60%	17.4%	42.4%	39.9%
4. **Mental health.** Focus on diagnostic mental health conditions, such as depression, PTSD, bipolar disorder, schizophrenia, other mental health conditions	10%	43.5%	58.2%	37.2%
5. **Diabetes.** Such as: pre-diabetes, diabetes mellitus 1, diabetes mellitus 2, insulin dependent dm, non-insulin dependent diabetes	30%	18.8%	50%	32.9%
6. **Cancer.** Such as: lung, breast, prostate, any type	30%	18.8%	47.1%	32%
7. **Heart disease.** Such as: hypertension, coronary artery disease, congestive heart disease	20%	15.9%	52.4%	29.4%
8. **Infectious diseases.** Such as: sexually transmitted infection, influenza, hospital-acquired, novel virus, any other	10%	10.1%	12.9%	11%
9. **Under immunization.** Such as: access to an completion of recommended immunizations; childhood or adolescent immunization rates	20%	7.2%	5.9%	11%
10. **Asthma/Chronic Obstructive Pulmonary Disease (COPD).** Such as: childhood or adult lung disease	0	2.9%	26.5%	9.8%
11. **Oral health.** Such as: dental care, caries, extractions	0	8.7%	5.9%	4.9%
Health behaviors				
12. **Physical activity.** Such as: physical inactivity, fitness, exercise, sedentary lifestyle, active living with a focus on individual behaviors	40%	69.6%	38.8%	49.5%
13. **Nutrition.** Such as: diet, junk food consumption, health eating with focus on individual behaviors	40%	63.8%	37.1%	47%
14. **Tobacco.** Such as: use of cigarettes, cigars, hookah, e-cigarettes, chew, flavored products	50%	31.9%	32.4%	38.1%
15. **Substance abuse.** Such as: prevention or harm reduction for chemical substances including alcohol, marijuana, prescription drugs, other drugs	20%	56.5%	24.1%	33.5%
16. **Injury protection.** Such as: motor vehicle/motorcycle, bicycle, occupational safety, crime/gun violence reduction, neighborhood safety, crimes against person, crimes against property	40%	23.2%	20.6%	27.9%
17. **Emotional health.** Such as: stress, emotional well-being, coping skills, suicide prevention	10%	35.3%	30%	25.1%
18. **Youth development/School health.** Such as: programs promoting healthy child development in the community or in schools. May include comprehensive health education, school health policy, physical education, school nursing/clinics	0	46.4%	15.3%	20.6%
19. **Chronic disease.** Such as: diabetes, heart disease, asthma	20%	26.5%	7.1%	17.9%
20. **Sexual and reproductive health.** Such as: sex education, condom use, prevention of unplanned pregnancy/teen pregnancy	10%	19.1%	11.2%	13.4%
21. **Family violence.** Such as: relationship or intimate partner violence, domestic violence, child abuse, elder abuse, sexual violence	20%	8.7%	11.2%	13.3%

Appendix 3B. **continued**

	State-level plans (n=10)	LHD CHA/CHIP (n=110)	Hospital CHNA (n=170)	All combined (equally weighted)
Community conditions affecting health				
22. **Food environment** Such as: healthy eating, nutritional education/marketing, access to healthy food, urban farming, produce prescription, fast food restaurants. Focus on food environment rather than individual behaviors.	10%	49.3%	14.1%	24.5%
23. **Built environment (place)** Such as: neighborhood conditions, safety, transportation. Includes Healthy homes issues such as home safety, lead, black mold, infestations (i.e. bed bugs, smoke and carbon monoxide detectors	20%	34.8%	15.3%	23.4%
24. **Social determinants of health/Health equity** Such as: poverty (area level, individual, income gap), education, racism, social class. Also includes efforts to discover and respond to health disparities.	10%	29%	18.2%	19.1%
25. **Community partnership**	0	33.3%	4.7%	12.7%
26. **Active living environment** Such as: green space, shared use agreements, fitness opportunities, safe routes to school, complete streets. Focus on active living environment rather than individual behaviors; distinguished from built environment.	0	32.8%	1.2%	11.3%
Health system conditions affecting health				
27. **Access to medical care** Such as: access to affordable, high quality primary and specialty care; appropriate emergency care; affordable prescriptions	0	55.1%	58.8%	38%
28. **Access to behavioral health care** Such as: access to affordable, high quality treatment for addiction and mental illness; access to support services for mental health consumers (supported housing, peer support, employment services, etc.). Includes integration of behavioral and physical health such as behavioral health screening, referral, treatment; alternative or complementary approaches; Medicaid "health homes"	0	44.9%	28.2%	24.4%
29. **Under-insurance** Such as: serving the uninsured, navigating and enrolling in health insurance coverage, promoting broader insurance coverage	0	27.5%	25.9%	17.8%
30. **Access to dental care** Such as: access to affordable, high quality preventive dental care and dental treatment	0	18.8%	22.4%	13.7%
31. **Funding/Financing/cost of services** Such as: efforts to improve public health funding streams or revenue production for LHDs; efforts to decrease the cost of public health services or clinical/medical care	10%	8.8%	8.8%	9.2%
32. **Workforce development** Such as: enhancing knowledge attitudes and skills of workforce; cultural competence/sensitivity training	10%	10.1%	4.1%	8.1%
33. **Health Information Technology** Such as: enhancing HIT for research, evaluation, health communication	0	19.4%	1.8%	7.1%
34. **Quality improvement** Such as: assessment and quality improvement of any hospital, LHD, or clinical services; high value medical care; quality of care; medical mistakes; iatrogenic consequences	10%	5.8%	4.7%	6.8%
35. **Bridging public health and medicine** Such as: data sharing; shared medical appointments; chronic disease self-management; shared outreach, research and grants; emergency preparedness; patient-centered medical homes	0	18.8%	0.6%	6.5%
36. **Hospital/Clinical infrastructure** Such as: improvement of hospital, health system or clinical infrastructure	0	15.9%	1.2%	5.7%

Appendix 3C. **U.S. Department of Health and Human Services implementation guidance on data collection standards for race, ethnicity, sex, primary language and disability status**

Ethnicity Data Standard
Are you Hispanic, Latino/a, or Spanish origin?
(One or more categories may be selected)

- No, not of Hispanic, Latino/a, or Spanish origin
- Yes, Mexican, Mexican American, Chicano/a
- Yes, Puerto Rican
- Yes, Cuban
- Yes, Another Hispanic, Latino/a or Spanish origin

Hispanic/ Latino

Race Data Standard
What is your race? (One or more categories may be selected)

- White
- Black or African American
- American Indian or Alaska Native

- Asian Indian
- Chinese
- Filipino
- Japanese
- Korean
- Vietnamese
- Other Asian

Asian

- Native Hawaiian
- Guamanian or Chamorro
- Samoan
- Other Pacific Islander

Native Hawaiian or Other Pacific Islander

Sex Data Standard
What is your sex?

- Male
- Female

Data Standard for Primary Language
How well do you speak English? (5 years old or older)

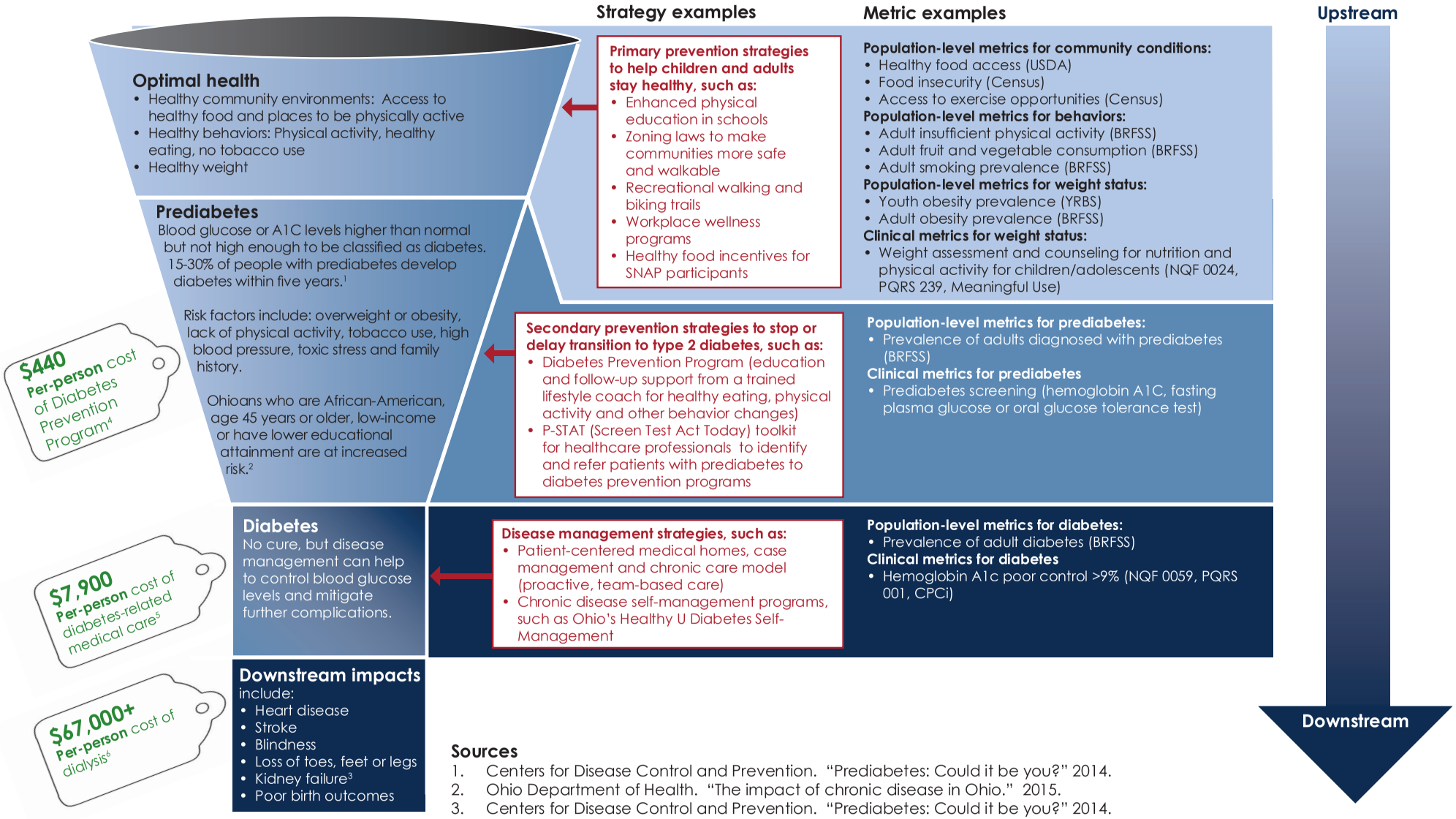
- Very well
- Well
- Not well
- Not at all

Data Standard for Disability Status
Yes or No to each of the following questions:

- Are you deaf or do you have serious difficulty hearing?
- Are you blind or do you have serious difficulty seeing, even when wearing glasses?
- Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions? (5 years old or older)
- Do you have serious difficulty walking or climbing stairs? (5 years old or older)
- Do you have difficulty dressing or bathing?
- Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping? (15 years old or older)

Source: "U.S. Department of Health and Human Services Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status," available at https://aspe.hhs.gov/sites/default/files/pdf/76331/index.pdf. Accessed Jan. 1, 2016

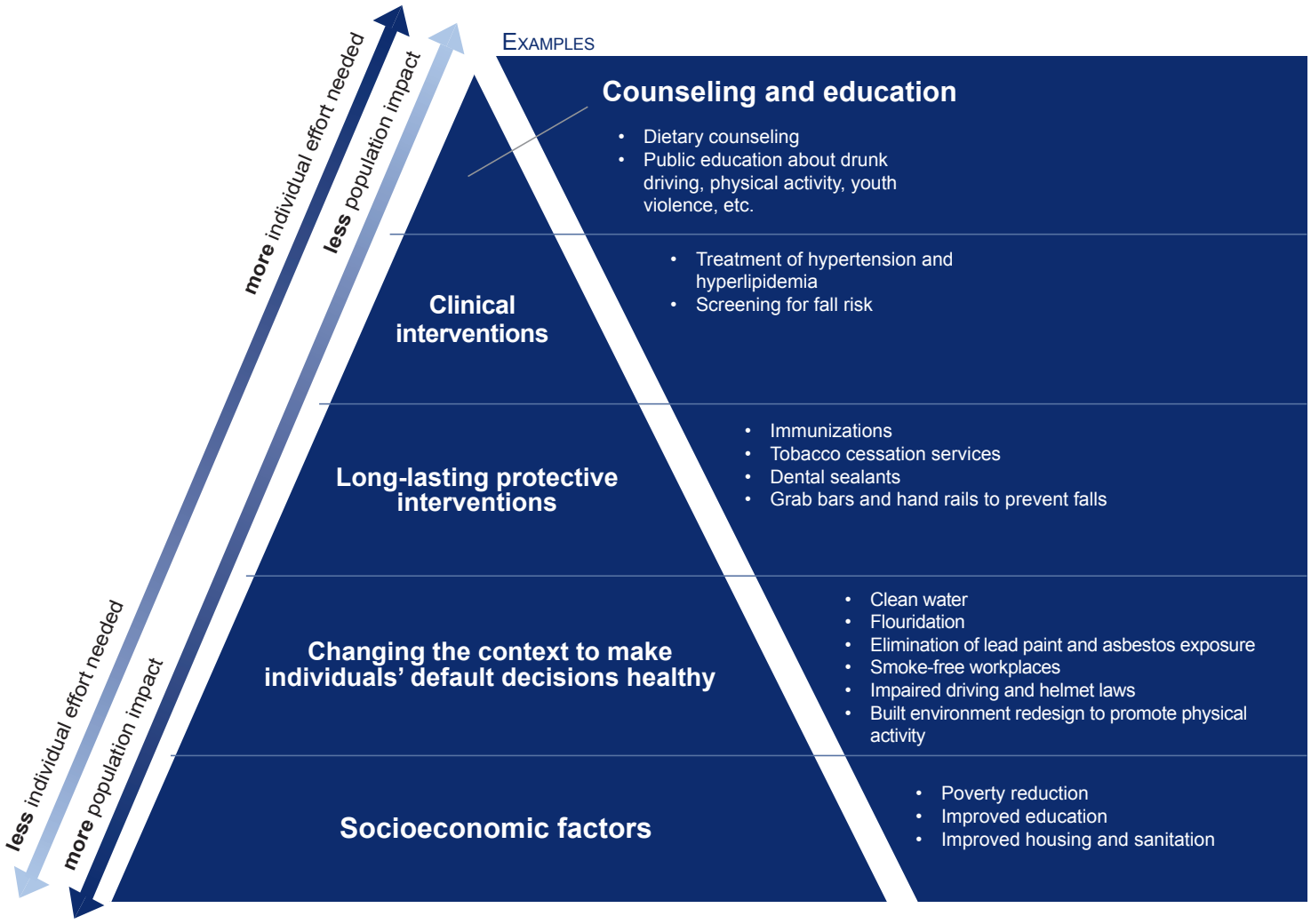
Appendix 3D. **Diabetes prevention and treatment funnel diagram**



Sources

1. Centers for Disease Control and Prevention. "Prediabetes: Could it be you?" 2014.
2. Ohio Department of Health. "The impact of chronic disease in Ohio." 2015.
3. Centers for Disease Control and Prevention. "Prediabetes: Could it be you?" 2014.
4. Refers to annual costs. Avalere, American Diabetes Association, The YMCA, and the American Medical Association. "Estimated impact of H.R. 962/S. 452, the Medicare diabetes prevention act." 2014.
5. Medical expenditures for people diagnosed with diabetes average about $13,000 per year, of which about $7,900 is attributed to diabetes. Medical expenditures for people with diabetes are approximately 2.3 times higher than for those without diabetes. Diabetes Care. "Economic costs of diabetes in the U.S. in 2012." 2013.
6. Per person per year Medicare ESRD costs were $87,561 for hemodialysis and $66,751 for peritoneal dialysis in 2010. U.S. Renal Data System 2014 Annual Data Report, Chapter 11: Costs of End State Renal Disease.

Appendix 3E. **Health Impact Pyramid**



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

Appendix 3F. **Evidence-based strategies**

Appendix 3F.1. **Brief inventory of strategies to address Ohio's population health priorities from *The Community Guide* and *What Works for Health***

Health priority area	Evidence-based strategy
Obesity	1. Multi-component school-based obesity prevention interventions 2. Worksite obesity prevention interventions* 3. Screen time interventions for children* 4. Multi-component obesity prevention interventions 5. Technology-supported multi-component coaching or counseling interventions**
Physical activity	1. Access to places for physical activity 2. Active recess interventions 3. Physically active classrooms 4. Homework or extra credit for PE class 5. Point-of-decision prompts: physical activity* 6. Bicycle and pedestrian master plans 7. Extracurricular activities: physical activity 8. Mixed-use development 9. Enhance/expand school-based physical education* 10. Social support for physical activity: community settings* 11. Safe Routes to Schools (SRTS) 12. Individually-adapted physical activity programs* 13. Worksite obesity prevention interventions 14. Zoning regulations: land use policy 15. Walking school buses 16. Fitness programs in community settings 17. Nutrition and physical activity interventions in preschool and childcare 18. Prescriptions for physical activity 19. Improve streetscape design 20. Multi-component obesity prevention interventions 21. Multi-component school-based obesity prevention interventions 22. Screen time interventions for children 23. Increase green space and parks 24. Multi-component workplace supports for active commuting 25. Community-wide physical activity campaigns* 26. Public transportation: individual incentives 27. Community-scale urban design and land use policies** 28. Street-scale urban design and land use policies** 29. Creation of or enhanced access to places for physical activity combined with informational outreach activities**
Nutrition	1. Nutrition and physical activity interventions in preschool and child care 2. Multi-component school-based obesity prevention interventions 3. School fruit and vegetable gardens 4. School breakfast programs 5. Worksite obesity prevention programs 6. School-based nutrition education programs 7. Taste-testing fruits & vegetables 8. Nutrition standards for food sold in schools 9. Limit access to competitive foods and beverages in schools 10. Food banks: healthy food initiatives 11. Farm to school programs 12. Reduce advertising for unhealthy foods and beverages 13. Healthy vending machines 14. Point-of-purchase prompts: healthy food choices 15. Healthy school lunch initiatives 16. Community gardens 17. Tax sugar sweetened beverages 18. Screen time interventions for children 19. Healthy vending machine options
Tobacco use	1. Cell phone-based tobacco cessation interventions* 2. Health care provider reminder systems: tobacco cessation 3. Increase funding for a comprehensive statewide tobacco program 4. Increase the price of tobacco* 5. Mass media campaigns: tobacco use/Mass-reach health communication interventions* 6. Proactive tobacco quitlines* 7. Reduce cost for tobacco cessation therapy* 8. Smoke-free policies: indoor areas* 9. Technology-based tobacco cessation interventions 10. Education to reduce home exposure to secondhand smoke 11. Restrict minor access to tobacco 12. Restrict tobacco marketing 13. Comprehensive tobacco control programs** 14. Incentives and competitions to increase smoking cessation among workers (when combined with additional interventions)** 15. Community mobilization with additional interventions**

Appendix 3F.1. **Continued**

Health priority area	Evidence-based strategy
Infant mortality/ Birth outcomes/ Perinatal	1. Centering Pregnancy 2. Breastfeeding promotion programs 3. School-based health clinics: reproductive health 4. Smoke-free policies: indoor areas
Mental health	1. Mental health benefits legislation* 2. Activity programs for older adults 3. Kinship care for children removed from home due to maltreatment 4. Group-based parenting programs 5. Integrate behavioral health into primary care practice 6. Housing rehabilitation loan and grant programs 7. Families and Schools Together (FAST) 8. Moving to Opportunity (MTO) 9. School-based social and emotional instruction 10. Cell phone-based support programs 11. Telemental health services 12. Multisystemic Therapy (MST) for families 13. Collaborative care for the management of depressive disorders** 14. Home-based depression care management** 15. Clinical-based depression care management**
Substance abuse	1. Reduce or limit alcohol outlet density* 2. Increase alcohol excise tax* 3. Mass media campaigns: alcohol-impaired driving 4. Integrate behavioral health into primary care practices 5. Multi-component interventions with community mobilization: alcohol-impaired driving 6. Dram shop liability laws* 7. Blood alcohol concentration (BAC) laws 8. Maintain current minimum drinking age laws 9. Alcohol screening and brief intervention* 10. Breath testing checkpoints 11. Administrative license suspension/revocation laws 12. Drug courts 13. Mentoring programs: delinquency 14. Limited days/times of alcohol sales* 15. Restrict alcohol advertising placement and content 16. Responsible beverage server training (RBS/RBST) 17. Restrict drink specials 18. Universal school-based programs: alcohol misuse & impaired driving 19. Increase access to naloxone 20. Enhanced enforcement of laws prohibiting [alcohol] sales to minors**
Diabetes	1. Culturally adapted health care 2. Telemedicine 3. Chronic disease self-management (CDSM) programs 4. Combined diet and physical activity promotion programs to prevent type 2 diabetes among people at increased risk** 5. Case management interventions to improve glycemic control** 6. Disease management programs (healthcare delivery)** 7. Self-management education: in community gathering places, adults with type 2 diabetes** 8. Self-management education: in the home, children and adolescents with type 1 diabetes**
Cancer	Interventions vary depending on type of cancer. Strategies are not included here because specific types of cancer have not yet been prioritized for population health planning
Heart disease	1. Smoke-free policies: indoor areas 2. Telemedicine 3. Chronic disease self-management (CDSM) programs 4. Text message-based health interventions 5. Flexible scheduling 6. Clinical Decision-Support Systems (CDSS)** 7. Interventions engaging community health workers** 8. Reducing out-of-pocket costs for CVD preventive services for patients with high blood pressure and high cholesterol** 9. Team-based care to improve blood pressure control** 10. Self-measured blood pressure monitoring interventions for improved blood pressure control, when used alone** 11. Self-measured blood pressure monitoring interventions for improved blood pressure control, when combined with additional support**

Appendix 3F.1. **Continued**

Health priority area	Evidence-based strategy
Asthma	1. Master Home Environmentalist program 2. Integrated pest management (IPM): indoor use 3. Culturally adapted health care 4. Housing rehabilitation loan and grant programs 5. Text message-based health interventions 6. Chronic disease self-management (CDSM) programs 7. Smoke-free policies: indoor areas 8. Telemedicine 9. Home-based multi-trigger, multicomponent environmental interventions, for children and adolescents with asthma**

Note: Strategies listed in this table were rated at the highest evidence levels by the What Works for Health (WWFH) evidence registry ("scientifically supported" or "some evidence" for expected beneficial outcomes; search date: 9/30/15).
*Recommended by The Community Guide and rated as "scientifically supported" or "some evidence" by WWFH.
**Recommended by The Community Guide, but not specifically included in WWFH with same categorization.

Appendix 3F.2. **Search criteria for evidence-based strategies**

In September 2015, HPIO searched the What Works for Health (WWFH) evidence registry for strategies that were rated at the highest evidence levels ("scientifically supported" or "some evidence" for expected beneficial outcomes), using the search criteria listed below. Note that What Works for Health includes all interventions that are recommended by The Community Guide, plus additional interventions that have not yet been reviewed for The Community Guide.

Obesity

- Search word: "Obesity"
- Included only those with the following as an expected benefit
  - Reduced obesity
  - Improved weight status

Physical inactivity

- Search word: "Physical activity" (Note, "exercise" , "physical inactivity", "sedentary" and "fitness" did not yield any additional results)
- Included only those with "increased physical activity" or "increased active transportation" as an expected benefit

Poor nutrition

- Search words: "Nutrition", "Consumption" (dietary consumption, fruit/vegetables, water, sugar), "Diet", and "Food"
- Included only those with the following as an expected benefit:
  - Increased healthy food consumption
  - Increased food security
  - Improved nutrition
  - Improved dietary habits
  - Reduced unhealthy food consumption
  - Reduced sweetened beverage consumption
  - Increased fruit and/or vegetable consumption
  - Improved dietary choices
  - Reduced caloric intake
  - Reduced food portion sizes
- Did not include strategies that ONLY have food environment or food access outcomes (rather than actual change in consumption behavior, intake or nutrition status). Examples of food environment/access include: increased healthy food in food deserts, access to fruits/vegetables

Substance abuse/addiction

- Search words: "alcohol" and "drug" and "overdose" and "drinking"
- Included only those with the following as an expected benefit:
  - Reduced drug use, reduced illicit/illegal drug use
  - Reduced excessive drinking
  - Reduced alcohol-related crashes
  - Reduced alcohol-related harms
  - Reduced impaired driving
  - Reduced underage drinking
  - Reduced alcohol-related harms
- Did not include treatment-only outcomes, such as increased substance use disorder treatment, or environmental/access-only outcomes, such as reduced underage alcohol purchases.

Infant mortality/perinatal

- Search words: "infant mortality," "perinatal," "birth weight," "preterm", and "breastfeeding"
- Included only those with the following as an expected benefit:
  - Reduced low birthweight births
  - Reduced infant mortality
  - Improved birth outcomes
  - Reduced preterm birth
  - Increased breastfeeding rates
- Did not include access-only outcomes, such as improved prenatal care

Tobacco use

- "Tobacco use" category
- Include only those with the following as an expected benefit
  - Increased quit rates
  - Reduced exposure to secondhand smoke
  - Reduced youth smoking
  - Reduced number of tobacco users/ reduced tobacco use
  - Reduced tobacco consumption
  - Reduced use of e-cigarettes
  - Reduced cigarette smoking
- Did not include interventions with only outcomes related to access to cessation treatment or access/environment, such as illegal sales to youth

Appendix 3F.2. **continued**

Mental illness
- Search words: "mental," "mental health," and "mental illness", and "stress"
- Included only those with the following as an expected benefit:
  - Improved mental health
  - Reduced suicide
  - Reduced stress
- Did not include interventions with only access/treatment outcomes, such as "increased access to mental health services"
- Did not include self-esteem, self-confidence, social skills, bullying, school climate and related issues for this review, but may want to consider these outcomes for future work.

Diabetes
- Search word: "diabetes"
- Included only those with the following as an expected benefit:
  - Improved chronic disease management
  - Improved health outcomes, with specific mention of diabetes in "evidence of effectiveness" narrative

Heart disease
- Search words: "heart disease", "cardiovascular", "hypertension", "blood pressure", and "coronary"
- Included only those with the following as an expected benefit:
  - Improved health outcomes, with specific mention of heart disease, blood pressure control/hypertension, etc. in "evidence of effectiveness" narrative

Asthma
- Search words: "asthma"
- Also looked at WWFH category "Air and Water Quality"
- Included only those with the following as an expected benefit:
  - Improved asthma management
  - Reduced exposure to allergens, with specific mention of asthma in "evidence of effectiveness" narrative
  - Reduced exposure to secondhand smoke, with specific mention of asthma in "evidence of effectiveness" narrative
  - Improved health outcomes, with specific mention of asthma in "evidence of effectiveness" narrative

Notes

1. Booske, et. al, "Different perspectives for assigning weights to determinants of health," County Health Rankings working paper, February 2010.
2. Health Policy Institute of Ohio. "2014 Health Value Dashboard." December 16, 2014.
3. 2014 Ohio Infant Mortality Data: General Findings, Ohio Department of Health, December 2015
4. Health Policy Institute of Ohio. "2014 Health Value Dashboard." December 16, 2014.
5. Public Health Accredidation Board's (PHAB's) accreditation process, which launched in 2011, is meant to advance the quality and performance of public health departments. PHAB is a relatively new national nonprofit organization created in 2007 out of a process led by the Robert Wood Johnson Foundation.
6. Ohio Revised Code (ORC) § 3701.13
7. Public Health Accreditation Board. "Accredited Health Departments." Accessed Jan. 5, 2016. http://www.phaboard.org/news-room/accredited-health-departments/
8. Association of Ohio Health Commissioners, Public health futures: Considerations for a new framework for local public health in Ohio. 2012.
9. National Association of County and City Health Officials, as reported in the HPIO 2014 Health Value Dashboard.
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12. 2013 data. "Hospitals by Ownership Type." The Henry J. Kaiser Family Foundation. Accessed December 10, 2015. http://kff.org/other/state-indicator/hospitals-by-ownership/
13. The Internal Revenue Service Schedule H instructions state that community need may be demonstrated through: a community health needs assessment (CHNA) conducted or accessed by the organization, documentation that demonstrated community need or a request from a public health agency or community group was the basis for initiating or continuing the activity or program, and/or the involvement of unrelated, collaborative tax-exempt or government organizations as partners in the activity or program carried out for the express purpose of improving community health. Internal Revneue Service. "Instructions for Schedule H (Form 990)." Accessed December 10, 2015. http://www.irs.gov/pub/irs-pdf/i990sh.pdf
14. Sum of unreimbursed costs for other means-tested government programs, unreimbursed costs for Medicaid and charity care.
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16. The Ohio Research Association for Public Health Improvement (RAPHI), housed at Case Western Reserve University, partnered with HPIO on a "QuickStrike" project funded by the Robert Wood Johnson Foundation. As part of the RAPHI-led project, HPIO and RAPHI compiled and reviewed Ohio local health department and hospital community health planning documents, completed March 2015.
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19. Health Policy Institute of Ohio. "Population Health." Accessed Jan. 6, 2016. http://www.healthpolicyohio.org/populationhealth/
20. Rosenbaum, Sara. The George Washington University School of Public Health and Health Services, Department of Health Policy. "Principles to Consider for the Implementation of a Community Health Needs Assessment Process." June 2013. http://nnphi.org/CMSuploads/PrinciplesToConsiderForTheImplementationOfACHNAProcess_GWU_20130604.pdf; Supporting alignment and accountability in community health improvement. Prybil, et al. Commonwealth Center for Governance Studies, Inc. "Public Health Institute, 2014; Improving community health through hospital-public health collaboration." November 2014.
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28. Krug, Etienne G., et. al., eds. "World report on violence and health." Geneva, Switzerland: World Health Organization, 2002
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