

# Improving population health planning in Ohio

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

January 2016

Upon review of the 2011 SHA and 2012-2014 SHIP, Public Health Accreditation Board (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

The State of Ohio commissioned the Health Policy Institute of Ohio to facilitate stakeholder engagement and provide guidance on

improving population health planning. As part of this process, HPIO developed initial recommendations for improving Ohio's SHA and SHIP. HPIO took into consideration PHAB's comments and the SHA and SHIP challenges (see item 1 in Appendix 1A). Initial recommendations were based upon PHAB Standards and Measures 1.5,<sup>1</sup> guidance from the Association of State and Territorial Health Officials (ASTHO)<sup>2</sup> and best practice examples from other states. HPIO then incorporated feedback from members of the Population Health Planning Advisory Group, which is listed in Appendix 1A of the full report titled "[Improving population health planning in Ohio.](#)"

Figure 1. Summary of state health assessment (SHA) and state health improvement plan (SHIP) recommendations

Cross-cutting recommendations for the SHA and SHIP	
1. <b>Conceptual framework</b>	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. <b>Leadership and cross-sector engagement</b>	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. <b>Fostering alignment with local assessments and plans</b>	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. <b>Existing data</b>	The SHA should build upon existing information about Ohio's health needs.
5. <b>Metric selection</b>	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. <b>Communicating findings</b>	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. <b>Existing plans</b>	The SHIP should build upon related state-level plans.
8. <b>Prioritization process</b>	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. <b>Objectives and evaluation</b>	The SHIP should include measurable objectives, an evaluation framework and mechanisms for ongoing monitoring and communication of progress.
10. <b>Evidence-based strategies</b>	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. <b>Implementation and financing</b>	The SHIP should specify how selected strategies will be implemented and financed.

The resulting final recommendations for improving Ohio's next SHA and SHIP align with PHAB requirements (see Appendix 1B), but also provide additional guidance and emphasize elements of particular importance to population health planning in Ohio.

### **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 1C 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 [full 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 1B).

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 1D 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 1E.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 Appendix 1E.2 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 1F 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 1B).

**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 1E.3)

- 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 Appendix 1E.2 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 Appendix 1G.1 and 1G.2 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 Appendix 1H and as described in the [HPIO Guide to Evidence-Based Prevention](#)

Strategies should be selected using specific criteria (see Appendix 1E.4 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 Appendix 11). Part Three of the full 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

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.](#)”

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.

## Notes

1. Public Health Accreditation Board. “Public Health Accreditation Board Standards and Measures: Version 1.5.” December 2013. <http://www.phaboard.org/wp-content/uploads/SM-Version-1.5-Board-adopted-FINAL-01-24-2014.docx.pdf>
2. State Health Assessment Guidance and Resources, and Developing a State Health Improvement Plan: Guidance and Resources.

## Appendix

### Appendix 1A. Summary of key population health planning infrastructure challenges and contributing factors

Current challenges Lack of ...	Contributing factors
<p>1. <b>Actionable state health assessment (SHA) and state health improvement plan (SHIP)</b></p>	<p><b>1a. Priorities:</b> 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.</p> <p><b>1b. Objectives:</b> Not all objectives in the 2012-2014 SHIP were specific and measurable.</p> <p><b>1c. Implementation:</b> 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.</p> <p><b>1d. Ongoing monitoring and communication:</b> Ongoing tracking of SHIP implementation and outcomes could be communicated more clearly and consistently to SHIP stakeholders, policymakers and the general public.</p>
<p>2. <b>Alignment between state and community-level planning</b></p>	<p><b>2a. Alignment requirements:</b> 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.</p> <p><b>2b. Timeline:</b> 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.</p> <p><b>2c. Bidirectional communication:</b> 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.</p> <p><b>2d. Actionable SHA and SHIP:</b> See 1a through 1d of this figure for contributing factors.</p>
<p>3. <b>Alignment between local health departments and hospitals</b></p>	<p><b>3a. Collaboration requirements:</b> 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.</p> <p><b>3b. Timeline:</b> 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.</p> <p><b>3c. Definition of community:</b> 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.</p>
<p>4. <b>Efficient data collection and sharing</b></p>	<p><b>4a. Population-level data:</b> 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.</p> <p><b>4b. Clinical data:</b> 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.</p>
<p>5. <b>Implementation of evidence-based community health improvement activities</b></p>	<p><b>5a. Resources:</b> Resources may be inefficiently expended in a community to conduct multiple assessments and plans, leaving fewer resources for implementation of community health-improvement strategies.</p> <p><b>5b. Identification of evidence-based strategies:</b> 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.</p> <p><b>5c. Worldview:</b> 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.</p>
<p>6. <b>Sustainable funding</b></p>	<p><b>6a. Local health department funding:</b> Local health department funding for assessments and plans is often fragmented or inadequate.</p> <p><b>6b. Hospital funding:</b> 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.</p>
<p>7. <b>Tracking progress</b></p>	<p><b>7a. Transparency requirements:</b> 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.</p> <p><b>7b. Evaluation requirements:</b> 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.</p>

## Appendix 1B. 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.

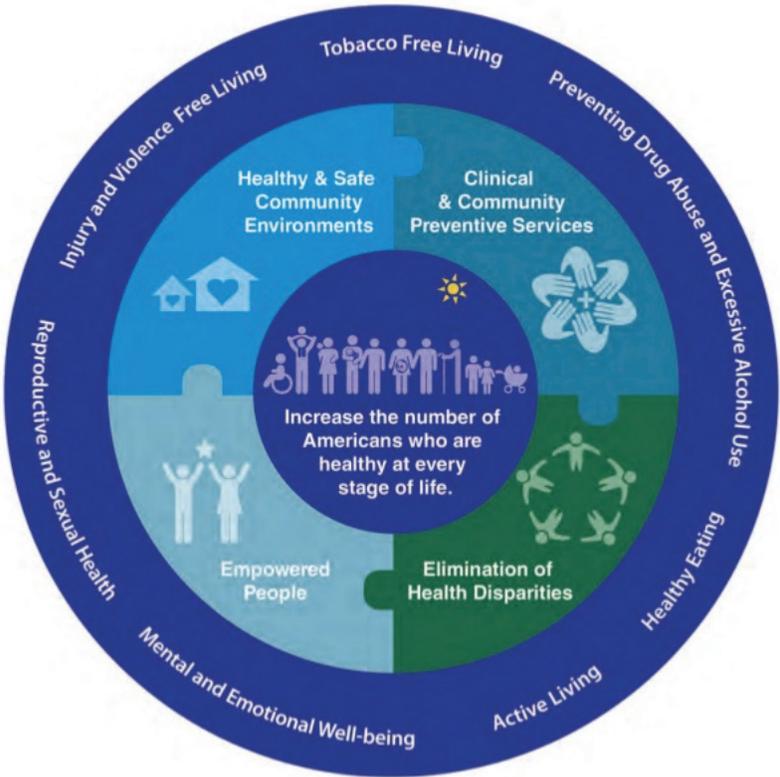
### State health improvement plan requirements

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.

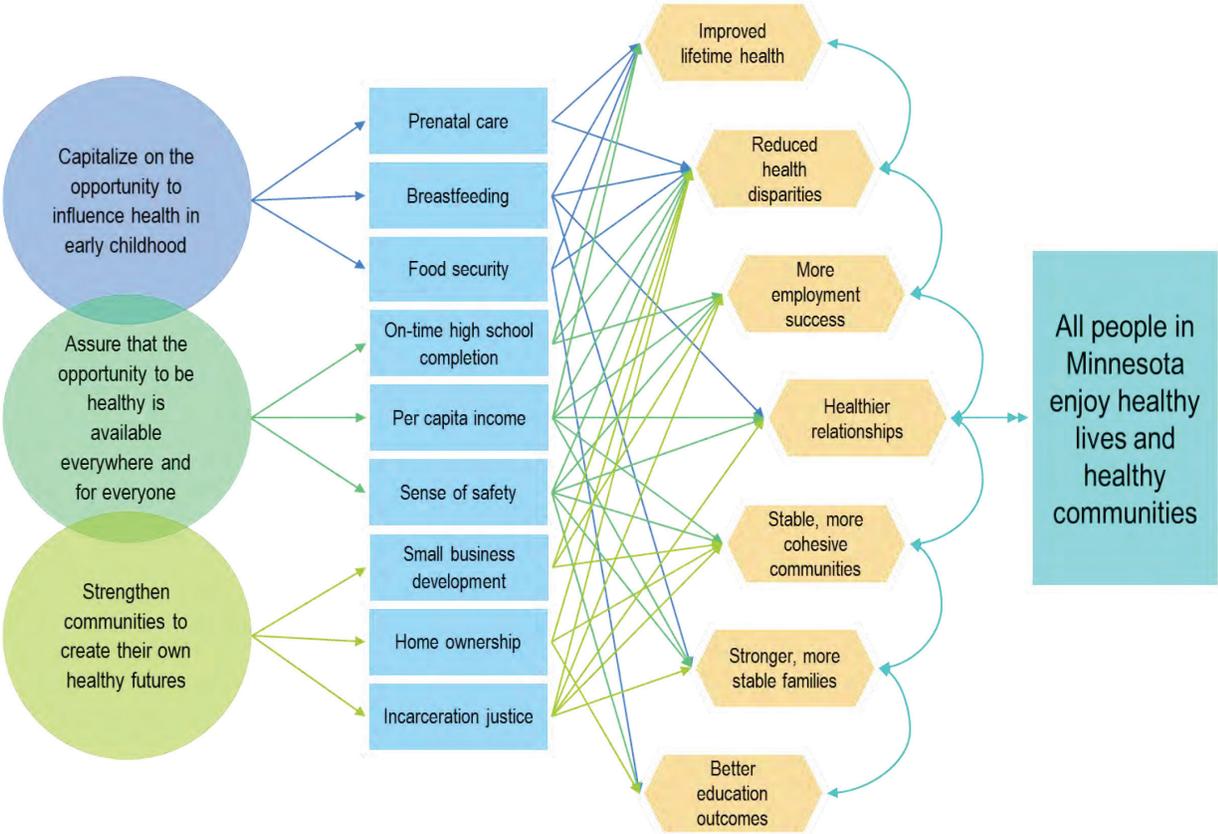
Source: PHAB Standards and Measures Version 1.5

# Appendix 1C. Conceptual framework examples for the state health assessment (SHA) and state health improvement plan (SHIP)

## 1C.1. National Prevention Strategy framework



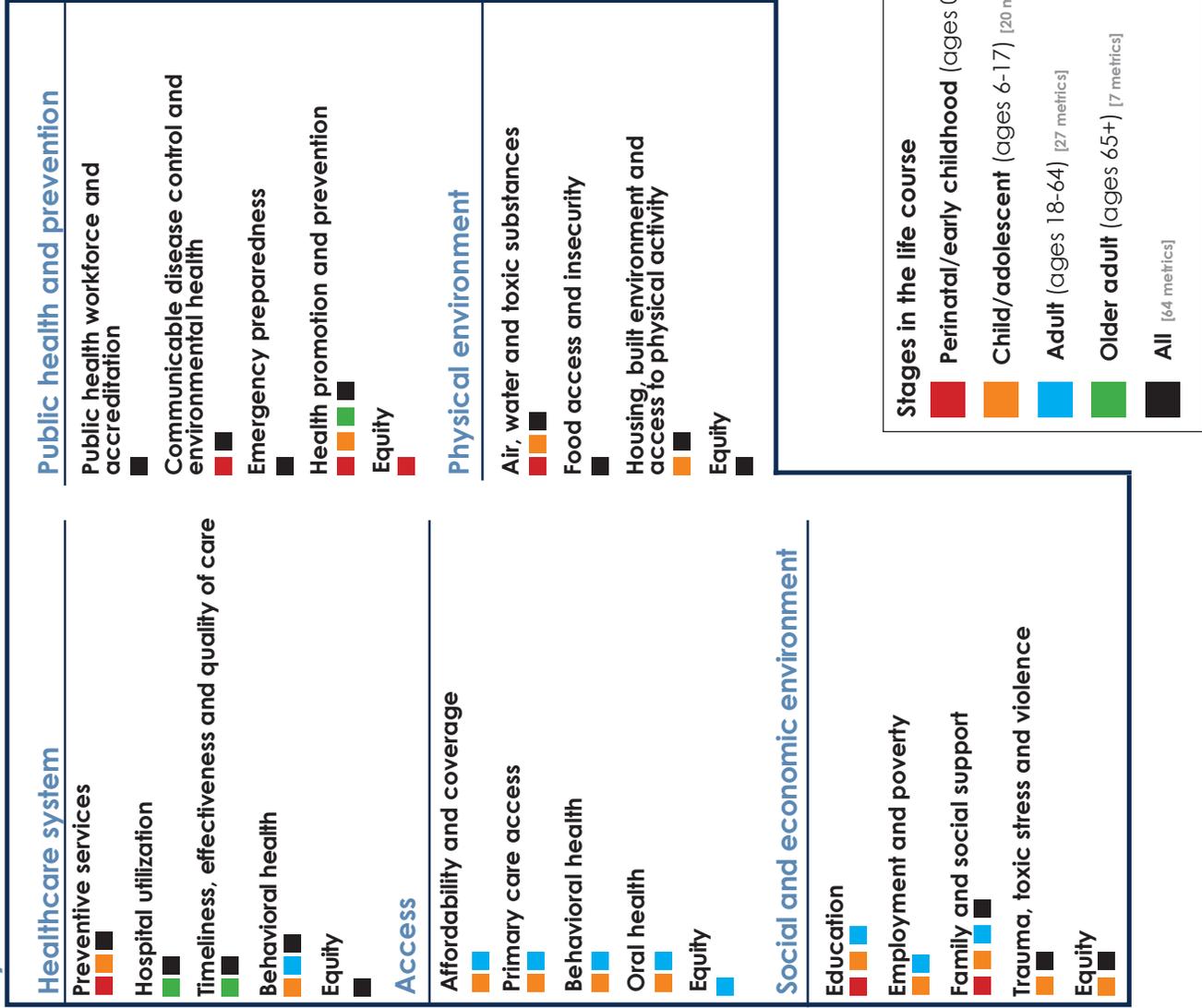
## 1C.2. Minnesota state health improvement plan framework



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

1C.3. HPIO Health Value Dashboard conceptual frame-

Systems and environments that affect health



Improved population health

- Health behaviors
- Conditions and diseases
- Overall health and wellbeing
- Equity

Improved health value

Sustainable healthcare costs

- Total
- Employer
- Consumer
- Medicare
- Medicaid
- Public health and mental health



## Appendix 1D. Potential strategy for aligning Ohio's state health assessment (SHA) with the HPIO Health Value Dashboard

### 1D.1 Alignment timeline

	2014	2015	2016	2017	2018	2019	2020
<b>HPIO Dashboard</b>	Release 2014 Dashboard (Dec.)			Release 2017 Dashboard (Jan.)		Release 2019 Dashboard (Jan.)	
<b>Ohio Department of Health (ODH) state health assessment (SHA)/ state health improvement plan (SHIP)</b>	Initial Public Health Accreditation Board (PHAB) application	<ul style="list-style-type: none"> <li>Revised PHAB application</li> <li>SHIP addendum</li> </ul>	Complete SHA <ul style="list-style-type: none"> <li>Compile updated Ohio data for Dashboard metrics</li> <li>Include additional material required by PHAB</li> <li>Include deeper dive on disparities for Dashboard metrics</li> </ul> Complete SHIP			Update SHA and SHIP	PHAB renewal application (5-year cycle)
<b>Partnership process</b>			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			

**1D.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 <i>Dashboard</i> , and identifying health issues	<i>Dashboard</i> 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 <i>Dashboard</i> 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 1E. Examples of criteria for selecting metrics

### 1E.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.

### Appendix 1E.2. Health priority categories

<p><b>Health conditions</b></p> <ul style="list-style-type: none"> <li>• Heart disease</li> <li>• Diabetes</li> <li>• Asthma/Chronic Obstructive Pulmonary Disease (COPD)</li> <li>• Obesity</li> <li>• Cancer</li> <li>• Infectious diseases</li> <li>• Infant mortality/low birth weight</li> <li>• Oral health</li> <li>• Substance abuse treatment</li> <li>• Mental health</li> <li>• Under-immunization</li> </ul>	<p><b>Health behaviors</b></p> <ul style="list-style-type: none"> <li>• Chronic disease (management)</li> <li>• Tobacco use</li> <li>• Physical activity</li> <li>• Nutrition</li> <li>• Substance abuse</li> <li>• Emotional health</li> <li>• Youth development/school health</li> <li>• Sexual and reproductive health</li> <li>• Injury protection</li> <li>• Family violence</li> </ul>
<p><b>Community conditions</b></p> <ul style="list-style-type: none"> <li>• Built environment (place)</li> <li>• Food environment</li> <li>• Active living environment</li> <li>• Social determinants of health/health equity</li> <li>• Community partnership</li> </ul>	<p><b>Health system conditions</b></p> <ul style="list-style-type: none"> <li>• Under-insurance</li> <li>• Access to medical care</li> <li>• Access to behavioral health care</li> <li>• Access to dental care</li> <li>• Bridging public health and medicine</li> <li>• Quality improvement</li> <li>• Hospital/clinical infrastructure</li> <li>• Health information technology</li> <li>• Workforce development</li> <li>• Funding/financing/cost of services</li> </ul>

**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."

### 1E.3. Criteria for prioritizing population health issues for the state health improvement plan and other population health plans

Criteria	Description	Information sources
<b>Nature of the problem*</b>		
<b>1. Magnitude of the health problem</b>	Number or percent of Ohioans affected	<ul style="list-style-type: none"> <li>State health assessment (Ohio Department of Health [ODH]): Prevalence data and leading causes of death</li> <li><i>Health Value Dashboard</i> (HPIO)</li> <li>Topic-specific reports, such as Impact of Chronic Disease in Ohio (ODH)</li> </ul>
<b>2. Severity of the health problem</b>	Risk of morbidity and mortality associated with the problem	<ul style="list-style-type: none"> <li>State health assessment (ODH): Years of potential life lost by cause of death</li> <li>Leading "actual" causes of death**</li> <li>Stakeholder expertise</li> </ul>
<b>3. Magnitude of health disparities and impact on vulnerable populations</b>	<ul style="list-style-type: none"> <li>Size of gap between racial/ethnic groups and income/poverty status groups</li> <li>Impact on children, families living in poverty, people with disabilities, etc.</li> </ul>	<ul style="list-style-type: none"> <li>State health assessment (ODH): Disparities and inequities data and analysis</li> <li>Topic-specific reports, such as Impact of Chronic Disease in Ohio (ODH)</li> </ul>
<b>4. Ohio's performance relative to benchmarks or other states</b>	Extent to which Ohio is doing much worse than national benchmarks, other states or the U.S. overall	<ul style="list-style-type: none"> <li><i>Health Value Dashboard</i> (HPIO)</li> <li>Network of Care (Ohio performance on Healthy People 2020 targets)</li> </ul>
<b>5. Trends</b>	Extent to which the problem has been getting worse in recent years	<ul style="list-style-type: none"> <li>State health assessment (ODH): Trend data</li> <li><i>Health Value Dashboard</i> (HPIO)</li> </ul>
<b>Impact on healthcare costs and employment</b>		
<b>6. Impact on healthcare costs—total cost</b>	Contribution of the health problem to healthcare costs for all payers—total cost	<ul style="list-style-type: none"> <li>Chronic Disease Cost Calculator (Centers for Disease Control and Prevention [CDC])</li> <li>Primary care claims data report (McKinsey &amp; Company/Governor's Office of Health Transformation [OHT])</li> <li>Topic-specific sources</li> </ul>
<b>7. Impact on healthcare costs—per-person treated</b>	Contribution of the health problem to healthcare costs for all payers—per person treated	<ul style="list-style-type: none"> <li>Chronic Disease Cost Calculator (CDC)</li> <li>Primary care claims data report (McKinsey &amp; Company/OHT)</li> <li>Topic-specific sources</li> </ul>
<b>8. Impact on employment and productivity</b>	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	<ul style="list-style-type: none"> <li>Chronic Disease Cost Calculator: Absenteeism costs (CDC)</li> <li>Topic-specific sources</li> <li>Stakeholder expertise</li> </ul>
<b>Potential for impact*</b>		
<b>9. Preventability of disease or condition</b>	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	<ul style="list-style-type: none"> <li>Stakeholder expertise</li> <li>Leading "actual" causes of death**</li> </ul>
<b>10. Availability of evidence-based strategies</b>	<ul style="list-style-type: none"> <li>Existence of population health strategies</li> <li>Strength of evidence for available strategies</li> </ul>	<ul style="list-style-type: none"> <li>CDC Community Guide, What Works for Health and other systematic reviews and evidence registries (see pages 55-56)</li> <li>Stakeholder expertise</li> </ul>
<b>11. Potential strategies are cross-cutting or have co-benefits</b>	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.)	<ul style="list-style-type: none"> <li>Analysis of upstream determinants, including community conditions and the broader social, economic and environment</li> <li>Stakeholder expertise</li> </ul>
<b>12. Opportunity to add value</b>	<ul style="list-style-type: none"> <li>There is a need for increased activity and/or alignment on this issue at the statewide level</li> <li>There is a gap in leadership or collective impact</li> </ul>	<ul style="list-style-type: none"> <li>State health assessment (ODH): Description of current assets and resources</li> <li>Stakeholder expertise</li> </ul>
<b>13. Ability to track progress</b>	<ul style="list-style-type: none"> <li>Progress on the issue can be tracked using existing population-level indicators</li> <li>Statewide data is or will be available within appropriate planning and evaluation timeframe</li> </ul>	<ul style="list-style-type: none"> <li>Healthy People 2020</li> <li><i>Health Value Dashboard</i></li> <li>Network of Care</li> <li>Topic-specific sources</li> </ul>
<b>Opportunity for clinical-community linkages</b>		
<b>14. Alignment with Ohio's SIM PCMH model</b>	<ul style="list-style-type: none"> <li>Relevance to patient-centered medical home (PCMH) clinical quality measures</li> <li>Relevance of issue to health priorities identified in PCMH patient satisfaction surveys</li> </ul>	<ul style="list-style-type: none"> <li>Ohio PCMH Primary Care Delivery Model</li> <li>Ohio PCMH clinical quality measures (see Figure 3.5)</li> <li>Population health priorities identified through PCMH patient satisfaction surveys (aggregate data; see Transparency component of Care Delivery Model)</li> </ul>
<b>15. Availability of strategies to connect primary care with community-based prevention activities</b>	<ul style="list-style-type: none"> <li>Issue involves opportunities for linking PCMHs with community-based prevention activities</li> <li>Existence of tools or models for primary care providers to identify needs and connect patients to evidence-based prevention programs</li> </ul>	<ul style="list-style-type: none"> <li>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)</li> <li>CDC Community Guide, What Works for Health and other systematic reviews and evidence registries (see Figure 3.12)</li> </ul>

\*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

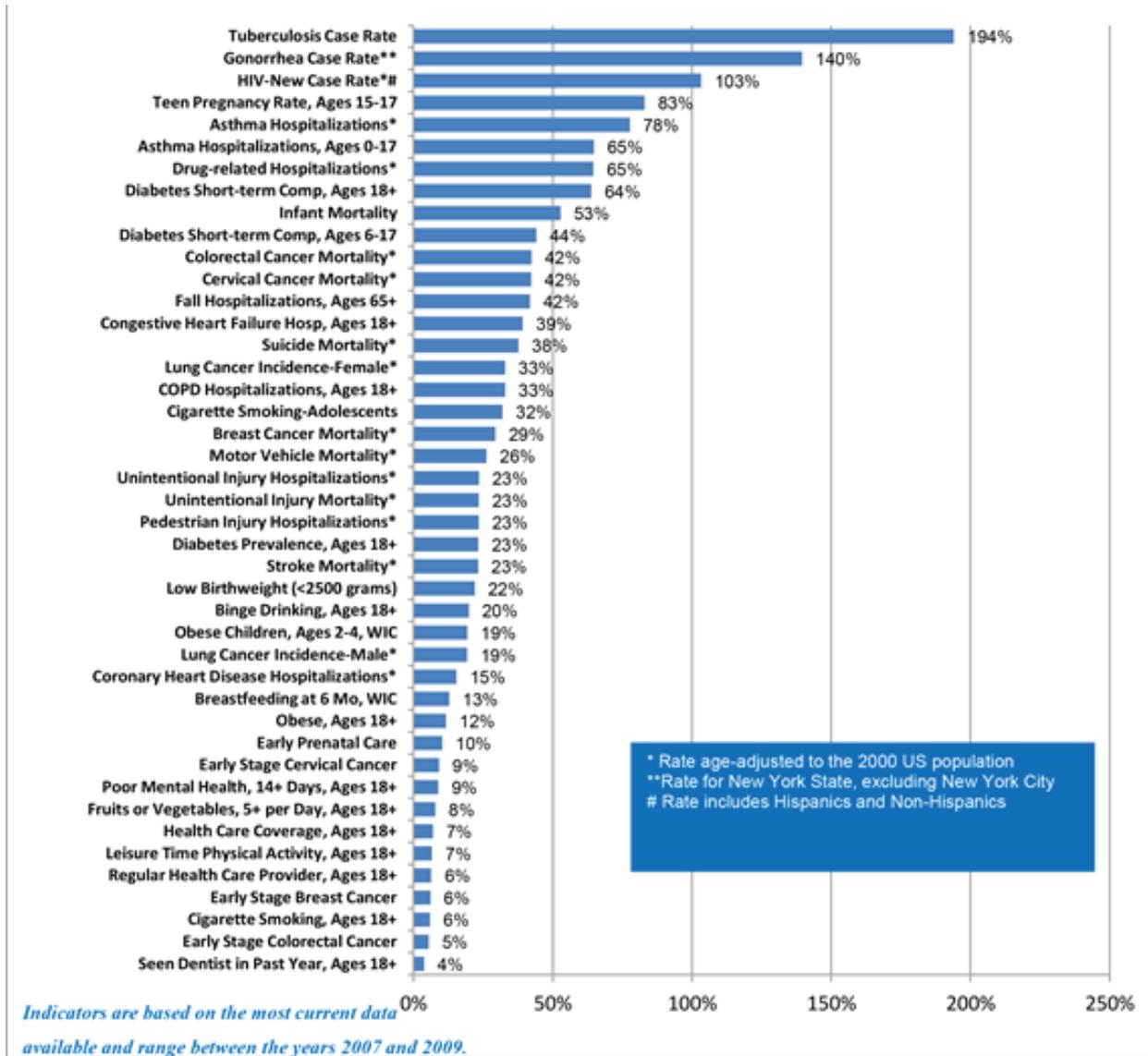
#### 1E.4 Strategy selection prioritization criteria

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 1F. Examples of ways to display health disparities

### 1F.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

## 1F.2 Oregon's disparity scorecard



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

## Appendix 1G. Examples of population-level outcomes metrics

### 1G.1 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
<b>Obesity, physical activity, nutrition</b>			
<b>Youth obesity.</b> Percent of high school students who are obese (YRBSS)			NA
<b>Adult obesity.</b> Percent of adults who are obese (BRFSS)			NWS 9
<b>Adult insufficient physical activity.</b> Percent of adults not meeting physical activity guidelines (BRFSS)			PA 2.4
<b>Access to exercise opportunities.</b> 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
<b>Alternative commute modes.</b> Percent of trips to work via bicycle, walking or mass transit (combined) (U.S. Census Bureau, ACS)			NA
<b>Safe Routes to School programs.</b> Percent of schools that have a completed school travel plan (Ohio Department of Transportation)			NA
<b>Complete Streets policies.</b> Number of communities that have adopted complete streets policies (Smart Growth America; National Complete Streets Coalition)			NA
<b>Fruit and vegetable consumption.</b> Median intake of fruits and vegetables (times per day) (BRFSS)			NA
<b>WIC at farmers markets.</b> Percent of farmers markets that accept WIC coupons (CDC State Indicators Report on Fruits and Vegetables 2013)			NA
<b>Healthy food access.</b> 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
<b>Food insecurity.</b> Percent of households with limited or uncertain access to adequate food (U.S. Census Bureau, CPS)			NWS 13
<b>Tobacco use</b>			
<b>Adult smoking.</b> Percent of population age 18 and older that are current smokers (BRFSS)			TU 1.1
<b>Youth all-tobacco use.</b> 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
<b>Quit attempts.</b> Percent of adult smokers who have made a quit attempt in the past year (BRFSS)			TU 4.1
<b>Cigarette tax.</b> State cigarette excise tax rate (CDC, as compiled by RWJF DataHub)			TU 17.1
<b>Tobacco prevention spending.</b> Tobacco prevention and control spending, as percent of the CDC-recommended level (ALA)			NA
<b>Children exposed to secondhand smoke.</b> 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)
<b>Infant mortality</b>			
<b>Infant mortality.</b> Infant deaths per 1,000 live births (Vital Statistics)			MICH 1.3
<b>Prenatal care.</b> 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
<b>Safe sleep.</b> Percent of infants most often laid on his or her back to sleep (CDC Pregnancy Risk Assessment Monitoring System)			MICH 20
<b>Teen birth rate.</b> Rate of births per 1,000 females 15-19 years of age (Vital Statistics)			FP 8
<b>Low birth weight.</b> Percent of live births <2,500 g (KIDS COUNT Data Center)			MICH 8.1
<b>Preterm birth.</b> Percent of live births that are preterm (<37 weeks of gestation) (Vital Statistics)			MICH 9.1
<b>Mental health</b>			
<b>Adult poor mental health.</b> Average number of days in past 30 where mental health was poor (BRFSS)			NA
<b>Youth depressive episodes.</b> Percent of adolescents who have had at least one major depressive episode (NSDUH)			MHMD 4.1
<b>Suicide deaths.</b> Suicide deaths per 100,000 population (Vital Statistics)			NA
<b>Unmet need for mental health.</b> 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
<b>Mental illness hospitalization follow-up.</b> Percent of Medicaid enrollees ages 6 and older who received follow-up after hospitalization for mental illness within 30 days of discharge (ODMHAS)			NA
<b>Substance abuse</b>			
<b>Drug overdose deaths.</b> Drug overdose deaths per 100,000 population (Vital Statistics)			SA 12
<b>Sales of opioid pain relievers.</b> Kilograms of opioid pain relievers sold per 100,000 population (DEA)			NA
<b>Unmet need for illicit drug use treatment.</b> Percent of individuals ages 12 and older needing but not receiving treatment for illicit drug use in the past year (NSDUH)			SA 8.1

Metric (source)	HPIO Health Value Dashboard	CMMI-suggested SIM population level measure*	Healthy People 2020 objective identifier
<b>Substance use disorder treatment retention.</b> 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
<b>Alcohol dependence or abuse.</b> Percent of individuals aged 12+ with past-year alcohol dependence or abuse (NSDUH)			NA
<b>Drug dependence or abuse.</b> Percent of individuals aged 12+ with past-year illicit drug dependence or abuse (NSDUH)			NA
<b>Adult binge drinking.</b> Percent of adults who report binge drinking in the past month (BRFSS)			SA 14.3
<b>Diabetes</b>			
<b>Adult diabetes prevalence.</b> Percent of adults diagnosed with diabetes (BRFSS)			NA
<b>Diabetes A1c measurements.</b> Percent of adults ages 19 and older with diagnosed diabetes who received 2 or more hemoglobin A1c measurements in the last year (BRFSS)			NA
<b>Cancer</b>			
<b>Cancer early stage diagnosis: All.</b> Percent of all cancer cases diagnosed at an early stage (OCISS)			NA
<b>Cancer early stage diagnosis: Female breast cancer.</b> Percent of all female breast cancer cases diagnosed at an early stage (OCISS)			NA
<b>Cancer early stage diagnosis: Colon and rectal cancer.</b> Percent of all colon and rectal cancer cases diagnosed at an early stage (OCISS)			NA
<b>Colorectal cancer screening.</b> 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
<b>Cancer incidence.</b> Incidence of breast, cervical, lung and colorectal cancer per 100,000 population, age adjusted (WONDER/Robert Wood Johnson Foundation DataHub)			NA
<b>Heart disease</b>			
<b>Cardiovascular disease mortality.</b> Heart-related deaths per 100,000 population (Vital Statistics)			HDS 2
<b>Heart failure readmissions for Medicare beneficiaries.</b> 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
<b>Blood pressure/hypertension medication.</b> Percent of adults with high blood pressure/hypertension taking prescribed medications to lower their blood pressure (BRFSS)			HDS 11
<b>Heart disease prevalence.</b> Estimated prevalence of adults ever diagnosed with heart disease (BRFSS)			NA
<b>Hypertension prevalence.</b> Estimated prevalence of adults ever diagnosed with hypertension (BRFSS)			HDS 5.1
<b>Child health/ Asthma**</b>			
<b>Adult asthma prevalence.</b> Estimated prevalence of adults who currently have asthma (BRFSS)			NA
<b>Child asthma prevalence.</b> Estimated prevalence of children age 0-17 ever diagnosed with asthma (BRFSS)			NA
<b>Asthma hospitalizations.</b> Hospitalizations for asthma per 10,000 children and adults aged 5-64 years. (NHDS)			RD 2.2
<b>Outdoor air quality.</b> Average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.2) (EPA)			NA
<b>Children exposed to secondhand smoke.</b> 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)
<b>Severe housing problems.</b> 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

## 1G.2. 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
<b>Education</b>		
<b>Fourth-grade reading.</b> Percent of 4th graders identified as proficient by a national assessment (NAEP)		NA
<b>High school graduation.</b> Percent of incoming 9th graders who graduate in 4 years from a high school with a regular degree (NCES)		AH 5.1
<b>Preschool enrollment.</b> Percent of 3 and 4 year-olds enrolled in preschool (U.S. Census Bureau, ACS)		NA
<b>Education attainment.</b> Percent of adults over age 25 with a bachelor's degree or higher (U.S. Census Bureau, ACS)		NA
<b>Employment and poverty</b>		
<b>Child poverty.</b> Percent of persons under age 18 who live in households at or below the poverty threshold (U.S. Census Bureau, CPS)		SDOH 3.2
<b>Adult poverty.</b> Percent of persons age 18+ who live in households at or below the poverty threshold (U.S. Census Bureau, CPS)		NA
<b>Unemployment.</b> Annual average unemployment rate, ages 16 and older (BLS)		NA
<b>Family and social support</b>		
<b>Social-emotional support.</b> Percent of adults without social-emotional support (BRFSS)		NA
<b>Social capital and cohesion.</b> Composite measure that includes connections with neighbors, supportive neighborhoods, voter turnout and volunteerism (NHSPI)		NA
<b>Teen birth rate.</b> Rate of births per 1,000 females 15-19 years of age (Vital Statistics)		FP 8
<b>Single-parent households.</b> Percent of children living in single-parent households (U.S. Census Bureau, ACS)		NA
<b>Trauma, toxic stress and violence</b>		
<b>Violent crime.</b> Violent crime rate per 100,000 residents (NIBRS)		NA
<b>Child abuse and neglect.</b> Rate of child maltreatment victims per 1,000 children in population (ACF)		NA
<b>Adverse childhood experiences.</b> Percent of children who have experienced two or more adverse experiences (NSCH)		NA
<b>Equity</b>		
<b>Income inequality.</b> Gini coefficient: extent of inequality in the distribution of income (U.S. Census Bureau, ACS)		NA
<b>Residential segregation.</b> 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

## Appendix 1H. 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
<b>The Community Guide*</b>	U.S. Centers for Disease Control and Prevention (CDC)			
<b>What Works for Health</b>	University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation			
<b>Community Health Improvement Navigator</b>	U.S. Centers for Disease Control and Prevention (CDC)			
<b>U.S. Preventive Services Task Force (USPSTF) Recommendations*</b>	Agency for Healthcare Research and Quality (AHRQ)			
<b>AHRQ Health Care Innovations</b>	Agency for Healthcare Research and Quality (AHRQ)			
<b>Cochrane Reviews*</b>	Cochrane Collaboration			
<b>National Registry of Evidence-based Programs and Practices (NREPP)</b>	Substance Abuse and Mental Health Services Administration (SAMHSA)			
<b>Research-tested Intervention Programs (RTIPs)</b>	National Cancer Institute (NCI)			
<b>Campbell Library Systematic Reviews*</b>	Campbell Collaboration Library			
<b>Public Health Law Research-Evidence Briefs</b>	Temple University and the Robert Wood Johnson Foundation			
<b>Promising Practices Network</b>	RAND Corporation			
<b>What Works Clearinghouse</b>	Institute for Education Sciences, U.S. Department of Education			

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

## Appendix 11. Alignment between Ohio's top 10 health priorities and patient-centered medical home (PCMH) quality measures

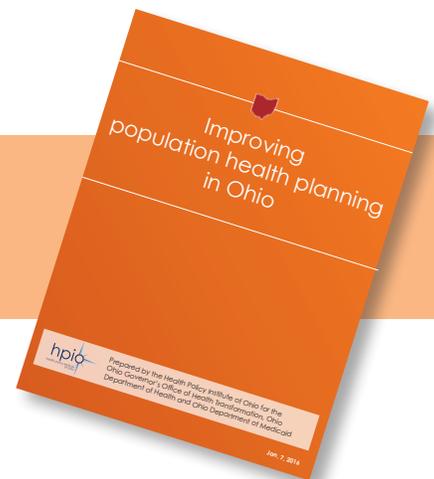
Ohio's top 10 health priorities	PCMH quality measures
<b>Obesity</b> <b>Physical activity</b> <b>Nutrition</b>	Adult body mass index (BMI) (adult)
	Weight assessment and counseling for nutrition and physical activity (pediatric)
	Well-child visits in first 15 months of life (pediatric)
	Well-child visits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

To download the complete report, "Improving population health planning in Ohio," visit

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