PHAB

Advancing public health performance

Analysis of PHAB Population Health Outcomes Reporting Data

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Introduction

The Public Health Accreditation Board (PHAB) seeks to advance and transform public health practice by championing performance improvement, strong infrastructure, and innovation. By strengthening health departments' capacities—including those related to collaboration, quality improvement, and evidence-based practice—PHAB's logic model anticipates that the work entailed to become accredited and maintain accreditation status will ultimately contribute to improved community health indicators and increased health equity.[1] In part to better understand the relationship between accreditation and health outcomes, PHAB introduced a reaccreditation requirement that health departments report population health outcomes they are tracking in their community.

This report summarizes data generated through the population health outcomes reporting process. It begins with a description of the requirement and the methodology for this report. It then shares findings about the topics that health departments track in their communities, including how those topics vary based on health department characteristics. Finally, it provides information about a subset of those outcomes for which health departments provide greater details.

The following represent key findings from this analysis:

- The vast majority of health departments track outcomes related to determinants of health–social and physical environment and access to preventive health care—in addition to outcomes about morbidity and mortality.
- The most common topics tracked by health departments are tobacco use; poverty; diabetes; access to healthy food; obesity; and sexually acquired infections/sexually transmitted diseases.
- The most common topics tracked are similar, regardless of health department size (when comparing health departments serving populations of 100,000 or fewer to larger health departments). However, larger health departments are more likely to track infant mortality and cancer mortality and smaller health departments are more likely to track access to health insurance, illicit drug use, and access to oral health care providers.
- Healthy People is the most common source of benchmark data, followed by state registries, and the Behavioral Risk Factor Surveillance System (BRFSS/YBRFSS).
- Only a small number of the objectives health departments provided detailed reporting on examine data disaggregated by race or ethnicity.
- Health departments describe a range of collaborative activities to address, such public health concerns as, infant mortality, obesity rates, and transit barriers.

Section 1: Reporting Requirement and Methodology

As part of the documentation submission process for reaccreditation, health departments are required to report on the population health outcomes they track in their communities. There are three reasons why this requirement was established:

- To establish a national database of selected health outcomes and their associated objectives that accredited health departments have chosen to monitor.

[1] The PHAB logic model can be found here: https://phaboard.org/r-e-overview/.

- To document how the ongoing work of maintaining accreditation can contribute to better health outcomes.
- To further encourage health departments and their communities to track and use data in a systematic way.

PHAB selected the model of population health developed by David Kindig and colleagues as the organizing framework for the reporting requirement.[2] Based on that model, PHAB identified seven broad areas for population health outcomes: mortality, health related quality of life, preventive health care, individual behavior, social environment, physical environment, and genetics. PHAB then lists specific topics under each area. As part of the reaccreditation requirement, health departments select all of the topics that they track in their communities. Section 2 of this report provides findings on which topics are tracked.

In addition, health departments select five to ten topics for which they provide more detailed information including the specific objective and target; baseline and more recent data; source of their data and benchmark data; whether the measure is included in their community health assessment (CHA), community health improvement plan (CHIP), or strategic plan; and whether the health department is addressing the measure as part of their work related to a particular reaccreditation standard. Section 3 of this report provides findings related to these measures that health departments provide additional details about.

After health departments complete the reaccreditation process, health departments are required to provide updates on the population health outcomes in their Annual Reports. In addition to updating the list of topics they track, health departments are asked to report an additional year of data for the objectives they provided details about during reaccreditation. They are also asked to select one of the objectives to provide a narrative account of the work they have done with their communities to address that measure. This is an opportunity for health departments to tell their story of progress, challenges, or something in-between as they tackle population health issues. (While health departments are encouraged to continue to report on the same measures each year, it is understood that priorities may change and therefore the health department may switch one or more measures, if necessary.) In 2020, the first health departments to be reaccredited provided an Annual Report update on their population health outcomes data.

It should be noted that the reaccreditation requirement is for health departments to report this information. They are not assessed on the content of what they report. Therefore, there is no assessment of whether health departments selected appropriate objectives or targets, nor are they penalized for not making progress towards those objectives in Annual Reports. Notably, this analysis reflects the reporting of a set of early adopters of the accreditation program -- this analysis should not be generalized to health departments across the country.

This report analyzes data from health departments that submitted their reaccreditation population health outcomes report between 2018 (when the first cohort of health departments began the

[2] https://www.improvingpopulationhealth.org/blog/what-is-population-health.html

reaccreditation application process) and May 2021. Health departments entered the data in e-PHAB, PHAB's electronic accreditation system. Then data were downloaded, cleaned and coded in Excel, and analyzed in SAS.

Section 2 of the report provides information on the broad areas and topics that health departments most commonly track in their communities. Unless otherwise noted, analysis is based on the most recent year of data submitted by a particular health department. If a health department submitted their reaccreditation outcomes in 2019 and their first annual report outcomes in 2021, data from 2021 were used to determine if that health department was tracking an outcome about a particular topic.

Health departments may create custom topics if they do not find a topic that they feel corresponds to what they were tracking. PHAB staff reviewed all custom topics and recoded them to an existing topic, if appropriate. For example, if a health department created a custom topic for "childhood obesity," it was recoded to the topic of "obesity."[3]

To provide another framework for understanding the population health outcomes tracked by accredited health departments, we created a crosswalk between the list of PHAB topics and Healthy People 2030 topics.[4] In doing so, we found that several PHAB topics could be mapped to a single Healthy People 2030 topic and a single PHAB topic could be mapped to several Healthy People topics. For example, the following PHAB topics – Cancer mortality, Cancer prevalence, Access to colorectal cancer screening, and Access to mammography – were all mapped to the Healthy People 2030 topic of Cancer. At the same time, the PHAB topics – Access to colorectal cancer screening, and Access to mammography – were also mapped to the Healthy People 2030 topic of Health Care Access and Quality.

To understand how health department characteristics might influence the selection of topics tracked, PHAB generated crosstabulations to identify differences in PHAB topics and Healthy People topics based on the size of the jurisdiction served (health departments serving 100,000 or fewer compared to larger health departments), health department type (state compared to local), and year reported to PHAB. It should be noted that there are relatively few health departments that fit into many of these categories. As such, findings should be considered preliminary.[5] Readers interested in more comparisons can explore the PHAB Data Portal (http://phabdata.org), which allows users to filter by health department type and population served, as well as a number of other characteristics. Those data are updated quarterly.

[3] Based on the custom topics that were created in the first nine months of the requirement, PHAB added new topics to the list, so that all health departments completing the reporting requirement after that point had the option to select those topics as well. For example, "Alzheimer's mortality" was not on the original list of topics from which a health department could select. It has since been added. Because it was not an option for all health departments, it is unlikely to be one of the most commonly selected topics.

[4] https://health.gov/healthypeople/objectives-and-data/browse-objectives

[5] For comparisons based on health department size, there are 17 small health departments and 54 large ones. For comparisons based on health department type, there are 8 state departments and 63 local departments. For comparisons based on year reported, there is a range between 15-30 health departments per year. This comparison over time is the only analysis in Section 2 that uses multiple years of data reported by the same health department.

Section 3 of the report focuses on the 5-10 objectives health departments provided additional details. In addition to recoding topics, as described above, PHAB cleaned the information health departments provided as their source of benchmark data. For example, if health departments provided the name of their state version of the Behavioral Risk Factor Surveillance System (BRFSS or the youth version - YBRFSS), it was recoded to a broader category for BRFSS/YBRFSS. In addition, the objectives were coded to identify if the objective was focused on a particular demographic category (for example, if it was focused on older adults, or Black people). PHAB developed an internal guidance document to ensure coding was conducted consistently.

For the subset of health departments that submitted an Annual Report after they have been reaccredited, we compared the data they reported in their reaccreditation application with that in the Annual Report to identify indications of progress towards their intended targets. We also provided several examples of the types of activities health departments included in their narratives to describe how they are advancing their population health goals.

Section 2: Broad Areas and Topics Tracked in Communities

This analysis focuses on 71 health departments that provided complete population health outcomes reporting information as of May 2021. Of the seven broad areas in the PHAB framework, almost all health departments reported tracking at least one topic within each, except for Genetics (see Table 1).

Table 1. Percentage of Health Departments Reporting Tracking at Least One Topic In Each Broad Area

Broad Area	% of HDs
Health Related Quality of Life	100.0%
Individual Behavior	98.6%
Mortality	95.8%
Preventive Health Care	97.2%
Social Environment	94.4%
Physical Environment	88.7%
Genetics	12.7%

Table 2 shows the topics tracked by at least 50% of health departments, organized by Broad Area. The following topics are being tracked by at least 80% of health departments: tobacco use; poverty; diabetes; access to healthy food; obesity; sexually acquired infections/sexually transmitted diseases; addiction and other substance use-related mortality; infant mortality; physical activity/inactivity levels; employment/unemployment; suicide; and poverty.

Table 2. Percentage of Health Departments Reporting Tracking Common Topics

Mortality	
Topic	**% of HDs**
Addiction and other substance use-related mortality	83.1%
Infant mortality	83.1%
Suicide	80.3%
Cancer mortality (e.g., breast and cervical cancer)	78.9%
Cardiovascular mortality (e.g., heart disease)	69.0%
Automobile mortality (e.g., alcohol impaired driving)	57.7%
Homicides and violence mortality	60.6%
Nonviolent injury mortality (accidental/unintentional injuries)	59.2%
Life expectancy (e.g., years of potential life lost)	50.7%
Maternal mortality	47.9%
Health Related Quality of Life	
Topic	**% of HDs**
Diabetes	87.3%
Obesity	84.5%
Sexually acquired infections/sexually transmitted diseases	84.5%
Self-reported mental health (e.g., poor mental health days)	77.5%
HIV	70.4%
Cancer	64.8%
Hypertension	66.2%
AIDS	62.0%
Asthma	62.0%
Self-reported health and well-being (e.g., self-reported poor health status)	69.0%
Self-reported physical health (e.g., poor physical health days)	63.4%
Depression/Anxiety	60.6%
Chronic lung disease	46.5%
Other cardiovascular diseases	40.8%
Individual Behavior	
Topic	**% of HDs**
Tobacco use	97.2%
Physical activity/inactivity levels	81.7%
Teen pregnancy	73.2%
Alcohol dependence/abuse	71.8%
Healthy eating patterns	67.6%
Breastfeeding	67.6%
Smokeless tobacco use	62.0%
Illicit drug use	66.2%
Opioid addiction	56.3%
Sexual activity (risky sexual behavior)	53.5%
Prescription drug abuse/addiction	52.1%
Other drug use/dependence	46.5%
Injury prevention (e.g., falls prevention)	43.7%

Preventive Health Care	
Topic	**% of HDs**
Access to health insurance	74.6%
Access to primary care	71.8%
Access to childhood immunization	63.4%
Access to dentists and related oral health care providers	62.0%
Access to mental health providers	60.6%
Access to influenza immunizations	57.7%
Access to prenatal care	56.3%
Access to mammography	50.7%
Access to breast cancer screening	52.1%
Access to colorectal cancer screening	46.5%
Preventable hospitalization rate	45.1%
Social Environment	
Topic	**% of HDs**
Poverty	88.7%
Employment/unemployment	81.7%
High school graduation/dropout rate	76.1%
Housing/homelessness (affordability, stability)	67.6%
Violent crime (e.g., street and neighborhood violence)	50.7%
Children in single-parent households	49.3%
Domestic violence	47.9%
Child abuse	46.5%
Driving alone to work/long commute	42.3%
Income inequality	45.1%
Physical Environment	
Topic	**% of HDs**
Access to healthy food	85.9%
Air quality (including smoke-free policies)	63.4%
Access to exercise opportunities (e.g., parks, recreational facilities)	63.4%
Community walkability/bikeability	59.2%
Drinking water quality	49.3%
Access to public transportation	52.1%
Housing (aging housing stock, overcrowding, pest and lead exposure)	47.9%

Table 3 shows the Healthy People topics tracked by at least 50% of health departments. The most common Healthy People topics, tracked by at least 95% of health departments, are: mental health and mental disorders; health care access and quality; drug and alcohol use; tobacco use; addiction; and pregnancy and childbirth.

Table 3. Percentage of Health Departments Reporting Tracking Common Healthy People Topics

Social Determinants of Health	
Topic	**% of HDs**
Health Care Access and Quality	97.2%
Economic Stability	91.5%
Neighborhood and Built Environment	88.7%
Education Access and Quality	77.5%
Health Behaviors	
Topic	**% of HDs**
Drug and Alcohol Use	97.2%
Tobacco Use	97.2%
Physical Activity	93.0%
Child and Adolescent Development	91.5%
Family Planning	91.5%
Nutrition and Healthy Eating	91.5%
Violence Prevention	81.7%
Injury Prevention	80.3%
Vaccination	63.4%
Health Conditions	
Topic	**% of HDs**
Mental Health and Mental Disorders	98.6%
Addiction	97.2%
Pregnancy and Childbirth	95.8%
Diabetes	90.1%
Sexually Transmitted Infections	88.7%
Cancer	85.9%
Heart Disease and Stroke	84.5%
Overweight and Obesity	84.5%
Respiratory Disease	76.1%
Oral Conditions	62.0%

The analysis of topics based on health department characteristics revealed that the most common topics were generally consistent, regardless of health department size. For example, tobacco use is the most common PHAB topic, regardless of health department size. Similarly, topics like poverty and diabetes were tracked by very large proportions of health departments both large and small. Table 4 shows the few instances where there was a topic that was among the most common for large health departments (80% or more of large health departments reported tracking that topic), but not among small health departments and the differences in percentages was 10 percentage points or more—or vice versa.

Table 4. Differences in Common Topics based on Health Department Size

Topics more common among large HDs		
Topic	**% of Large HDs (population > 100,000)**	**% of Small HDs (population ≤ 100,000)**
Infant mortality	88.9%	64.7%
Cancer mortality (e.g., breast and cervical cancer)	81.5%	70.6%
Topics more common among small HDs		
Topic	**% of Large HDs (population > 100,000)**	**% of Small HDs (population ≤ 100,000)**
Access to health insurance	70.4%	88.2%
Illicit drug use	61.1%	82.4%
Access to dentists and related oral health care providers	55.6%	82.4%

Table 5 provides similar data for differences in Healthy People topics.

Table 5. Differences in Common Healthy People Topics based on Health Department Size

Healthy People topics more common among large HDs		
Topic	**% of Large HDs (population > 100,000)**	**% of Small HDs (population ≤ 100,000)**
Cancer	88.9%	76.5%
Healthy People topics more common among small HDs		
Topic	**% of Large HDs (population > 100,000)**	**% of Small HDs (population ≤ 100,000)**
Oral Conditions	55.6%	82.4%
Injury Prevention	77.8%	88.2%

Comparisons by health department type are preliminary as PHAB currently has data for only 8 state health departments. Broadly, a higher percentage of those states reported tracking each topic, compared to local health departments. Table 6 highlights the topics where 100% of state health departments tracked a topic and fewer than 80% of local health departments did.

Table 6. Differences in Common Topics based on Health Department Size

Topic	% of Local HDs	% of State HDs
Self-reported mental health (e.g., poor mental health days)	74.6%	100.0%
Access to primary care	68.3%	100.0%
HIV	66.7%	100.0%
Housing/homelessness (affordability, stability)	63.5%	100.0%
Hypertension	61.9%	100.0%
Access to childhood immunization	58.7%	100.0%
Asthma	57.1%	100.0%
Access to mental health providers	55.6%	100.0%
Depression/Anxiety	55.6%	100.0%
Nonviolent injury mortality (accidental/unintentional injuries)	54.0%	100.0%
Sexual activity (risky sexual behavior)	47.6%	100.0%
Prescription drug abuse/addiction	46.0%	100.0%
Domestic violence	41.3%	100.0%
Maternal mortality	41.3%	100.0%

Table 7 provides similar data for differences in Healthy People topics.

Table 7. Differences in Common Topics based on Health Department Size

Topic	% of Local HDs	% of State HDs
Respiratory Disease	73.0%	100.0%
Injury Prevention	77.8%	100.0%
Violence Prevention	79.4%	100.0%

While there is modest fluctuation in topics reported over time, we identified several instances where a topic that had never previously been tracked by more than 80% of health departments is tracked by more than 80% of health departments in 2021.[6] (See Table 8.)

Table 8. Differences in Common Topics based on Year Reported

Topic	% of HDs in 2018	% of HDs in 2019	% of HDs in 2020	% of HDs in 2021
Access to health insurance	66.7%	79.3%	70.0%	92.0%
Access to primary care	73.3%	65.5%	63.3%	92.0%
Healthy eating patterns	60.0%	72.4%	60.0%	84.0%
Breastfeeding	66.7%	72.4%	56.7%	80.0%

[6] PHAB added topics to the list of options in 2019 and changed the labels for several others. Those topics are not included in this table.

Section 3: Detailed Reporting

This analysis looks at the 561 objectives health departments provided detailed information.[7] (Each health department reported on 5-10 objectives.) Of the 561 objectives, the most common topic tracked was tobacco use. (See Table 9 for all topics included 20 or more times in the detailed reporting.)

Table 9. Number of Times Common Topics were Included in Detailed Reporting of Objectives

Topic	Frequency
Tobacco use	46
Obesity	35
Infant mortality	31
Suicide	30
Addiction and other substance use-related mortality	29
Sexually acquired infections/sexually transmitted diseases	23
Access to childhood immunization	21

When examining if these objectives focused on a particular demographic group, 85 objectives referenced infants and children and a similar number (87) referenced youth/young adults. A total of 20 objectives referenced racial or ethnic groups, with Black being the racial or ethnic group that appeared most frequently (16 objectives).

The sources of benchmark data were also reviewed to identify those referenced most frequently. Healthy People was listed as a benchmark for 91 objectives. Table 10 shows the sources of benchmark data that were referenced in at least 20 objectives.

Table 10. Number of Times Common Sources of Benchmark Data were Referenced in Detailed Reporting of Objectives

Source of Benchmark Data	Frequency
Healthy People	91
State registry	62
BRFSS/YBRFSS	52
Other CDC sources (e.g., Wonder, CDC National Vital Statistics System)	29
Healthy People	28
Vital records	22
County Health Rankings	20

Health departments are asked whether these objectives appear in several core documents. Approximately 88% of the objectives (491) were included in the community health assessment, while

[7] This section includes a total of 86 health departments, as 15 health departments applying for reaccreditation through the Centralized State Integrated Local Public Health Department System process also provided this detailed information on select outcomes.

nearly three-quarters (417) objectives were in the community health improvement plan, and 40% (229) of the objectives were in the strategic plan.

Finally, health departments reported whether their agencies' work in this area would help demonstrate conformity with any of the reaccreditation Standards & Measures. The most commonly selected measure is 4.1 (Cross-sector collaboration is routine and community health-enhancing networks are fostered to promote the public's health). Table 11 shows the measures cited at least 50 times. One objective could be tied to multiple measures.

Table 11. Number of Times Common Reaccreditation Measures were Referenced in Detailed Reporting of Objectives

Reaccreditation Measure	Frequency
4.1: Cross sector collaboration	119
3.1: Health education and promotion	91
1.3: Public health data	87
5.2: Community health improvement plan	64
4.2: Engagement of target population in public health strategy/intervention development	51

91 objectives had data from two different years—reaccreditation and a subsequent annual report. For approximately half of those objectives, the health department reported they made progress towards their goal. For example, if the objective was to increase the percentage of individuals whose self-reported health status was good or excellent, the health department then reported in their annual report a higher percentage of respondents indicated good/excellent health compared to the data submitted during reaccreditation.

As part of the reporting process, health departments are asked to submit a narrative for one of their objectives. The narrative should address:

- What the health department has done, in collaboration with its partners, to work towards the target;
- What challenges the health department and its partners have encountered;
- How the actions taken by the health department and its partners have contributed to progress towards the target;
- How the health department knows it is making progress towards the target (for example, what short-term measures help the health department track progress); and
- How the health department and its partners are working to promote health equity in this area.

Health departments provided examples of work related to a wide variety of population health outcomes. Below are examples that illustrate the types of work that health departments describe:

- **Reduce the rate of infant deaths**: A health department's Office of Epidemiology provides data to multiple infant mortality reduction initiatives and community partners to direct their programmatic decision making and drive interventions that assist the community in decreasing the overall infant mortality rate (IMR). Data are used to adjust messaging, target specific communities, and track outcomes over time. As a result of their efforts, the IMR decreased from

2019 to 2020, the number of clients increased, and one program shared that 100% of the program's new moms are smoke-free at their first visit after birth.

- **Reduce the percentage of adults aged 18 years and older who are obese by 2% by 2020:** A health department is working in partnership with community organizations to "reduce obesity in children and adults by coming together to create healthier places to live, work and play. The focus is to eat better, move more and stress less in high risk communities." To achieve this objective, the health department implemented a media/outreach plan and community-led physical activity opportunities. Training for an evidence-based childhood obesity prevention program was also provided to local school district representatives. In coordination with these efforts, the health department was able to work with partners to distribute food boxes and is working to provide a mobile food pantry. With no grocery in one of the villages served, this is projected to have a major impact on the community. The health department has also hired a consultant to translate educational and promotional materials to reach the high number of Spanish-speaking residents.

- **Increase the percent of commuters who walk, bike, or use public transportation to get to work**: A health department led a sustainable collaboration that brought together institutions with funding and partnerships to address active transit barriers. Their efforts "centered around improving access to area resources for health and employment with government, non-profit, and previously marginalized groups including rural, urban, religious, senior, BIPOC, and disabled communities." Collective actions were made to increase local park paths and spaces, as well as to create an emergency hub for disaster purposes. Transportation networks created through this collaboration were in place to support aid during a natural disaster and COVID-19. This work focuses on equity and targets Title I schools and families in unincorporated rural areas that often lack municipal utilities, such as sidewalks and streetlights. Translators were available at community meetings and accommodations were made to support the needs of the community on public and paratransit.

Upon review of the population health outcomes narratives, several themes emerged. Equity is increasingly incorporated in many of the submitted public health outcome narratives. While this focus is not reflected in the quantitative data health departments submitted about population health outcomes, where very few health departments specified a focus on a specific subpopulation, an equity focus is consistent with analysis from other accredited health departments, including the emerging topics evaluated Annual Reports Section II.[8] COVID-19 was also mentioned in most narratives. While COVID-19 presented unparalleled challenges, most health departments described ways they adapted their efforts to continue working towards their objective.

[8] PHAB. *Analysis of PHAB Annual Reports*; 2021. https://phaboard.org/wp-content/uploads/Annual-Report-Quantitative-Summary.pdf. Accessed June 28, 2021.

Looking Forward

This analysis highlights some of the insights that can be gained from the population health outcomes that are provided as part of the reaccreditation process and subsequent annual reporting. Because relatively few of the more than 300 accredited health departments have yet to reach the reaccreditation milestone—and even fewer have provided annual report data following reaccreditation—these findings are still early. We anticipate that as more health departments complete this requirement, it will allow for more robust comparisons by health department characteristic. We invite interested readers to further explore on the PHAB Data Portal (http://phabdata.org). Over time, we will also build a more extensive longitudinal dataset that will better allow us to see progress across multiple years.

Collecting public health outcomes provides PHAB with an opportunity to test the hypothesis that maintaining accreditation status will ultimately contribute to improved community health indicators and increased health equity. As this dataset increases in breadth over time, PHAB will have a view of the relationship between accreditation and health outcomes.