The Futures Initiative: How the 10 Essential Public Health Services Framework Was Updated in 2020

Final Report

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Executive Summary

From spring 2019 to fall 2020, the Public Health National Center for Innovations partnered with the de Beaumont Foundation on *The Futures Initiative: the 10 Essential Public Health Services* to bring together a task force of public health experts to revise the 10 Essential Public Health Services (EPHS). The framework, which has served as a guide to the public health field since it was developed in 1994, now centers equity and reflects current and future public health practice.

The revision process celebrated the 25-year history of the EPHS, beginning with an environmental scan that described the history and impact of the framework. The Task Force used the research and feedback from the field to inform the revision process. Engaging the public health field broadly was central to maintaining the EPHS as a guide for practice, and feedback occurred in multiple phases to ensure ample opportunity for input.

The Task Force met four times, in-person at first and virtually once the COVID-19 pandemic arrived in the United States, to deliberate on whether, and what, changes were needed to the EPHS. Based on input from Task Force members and feedback from the field, in addition to modernizing language and concepts and shifting between services, two additional major changes were deemed necessary:

- Emphasizing the importance of equity throughout the framework.
- Adding the concepts of building and maintaining a strong organizational infrastructure.

Equity was noticeably missing from the original framework, and disparities in public health today reveal the need to bring it to the core of public health work. Equity is now central to the EPHS, literally in the graphic, and throughout the Essential Services. Organizational infrastructure was added to emphasize its importance across the public health system. Additional changes were made to each Essential Service to ensure they reflect current and future public health practice and to move concepts from one service to another, as needed. The revision process also revealed the need to reevaluate the Essential Services on a regular basis to ensure they meet the needs of the field and reflect where the field is going; in five years, the de Beaumont Foundation will reconvene a task force to determine what, if any, changes may be needed.

This report describes the process used to revisit and refresh the 10 EPHS, details the data collected, and shares the final, revised framework.

Defining Public Health: The 10 Essential Public Health Services

In 1994, in the midst of discussions of healthcare reform and lack of clarity about the role of public health, the Public Health Functions Steering Committee developed the 10 Essential

Public Health Services (EPHS) as a means of communicating the key public health services needed to protect and promote the health of the public.[1]

When it was developed, the EPHS defined public health and its role, provided a framework for accountability related to health outcomes,[2] and provided a starting point in giving structure to how public health could work in the community.[3] It represented a "return to the initial charge of public health" and indicated "a shift:

- in focus from treating disease to sustaining health; from solving isolated problems to creating a preferred future; from an individual's needs to a broader perspective on the health of populations;
- in strategy from treating illness to promoting prevention; from being focused on needs and problems to looking at community-wide assets and opportunities; from being reactive to being proactive;
- in guiding principles from managing individual health system components to supporting the dynamic interaction of these components [through] a systems and community approach to health; and setting expectations, outcomes, and accountability that can only be achieved through empowerment."[2]

In the 25 years since their development, the EPHS have become the definition of what public health is for those within the field and beyond.[4] **The 2020 revision of the 10 Essential Public Health Services is the framework that will be used to guide the field moving forward, replacing the original version**, with content that updates the framework to align with current practice and includes emerging and future-leaning elements.

Revising the 10 Essential Public Health Services

The Futures Initiative: the 10 Essential Public Health Services, a partnership between the de Beaumont Foundation, PHNCI, and a task force of public health experts, launched in spring 2019 to reflect on and celebrate the 25-year history of the original 10 EPHS and bring them in line with current and emerging public health practice needs. Much has changed over the last 25 years in public health, from an increasing recognition of racism as a public health issue to the development and use of new technologies to changes in organizational infrastructure, and thus it was an opportune and essential time to revisit the framework to best support practitioners and the field.

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[1] Defining public health practice: 25 years of the 10 essential public health services. 2020. https://phnci.org/uploads/resource-files/Defining-Public-Health-Practice-25-Years-of-the-10-Essential-Public-Health-Services.pdf

[2] Harrell JA, Baker EL. The essential services of public health. Leadership Public Health. 1994;3(3):27-30.

[3] Nelson J, Essien J, Loudermilk R, Cohen D. *The Public Health Competency Handbook: Optimizing Individual and Organizational Performance for the Public's Health.* Atlanta, GA: Center for Public Health Practice of the Rollins School of Public Health, 2002.

[4] Corso LC, Wiesner PJ, Halverson PK, Brown CK. Using the essential services as a foundation for performance measurement and assessment of local public health systems. J Public Health Manag Pract. 2000;6(5):1-18.

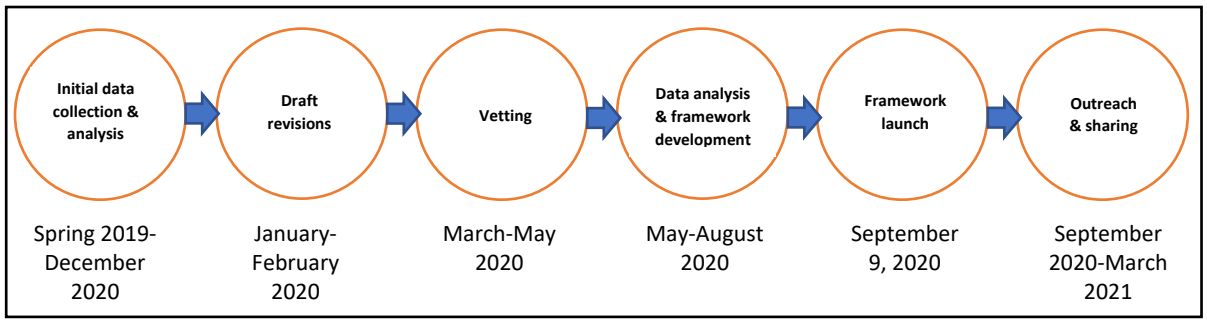
The goals of *The Futures Initiative* were to engage the public health field to:

- Determine if a revision of the EPHS was supported
- Revise the framework to incorporate modern public health needs and reflect current and future public health practice
- Maintain the EPHS as a framework to guide the field and a resource to communicate about public health with key stakeholders

Since their inception, the EPHS has been a framework owned by the field, for the field, that could be used describe the entire public health system. To this day, no single organization 'owns' the EPHS, and the revised framework is intended to remain a product of the field.

Figure 1 outlines the timeline of *The Futures Initiative: the 10 Essential Public Health Services.*

Figure 1: *The Futures Initiative* Timeline



Environmental Scan and Psychometric Analysis

To understand the history and use of the original 10 EPHS, the initiative began with the development of an **environmental scan** (Appendix A). The environmental scan highlights how the EPHS have been used in practice, including in the development of the National Public Health Performance Standards Program,[5] as the foundation for the Public Health Accreditation Board's Standards and Measures,[6,7,8] and as a critical piece the Healthy People initiatives.[9,10] The environmental scan also outlines the many ways the EPHS have been used beyond their initial scope of defining public health as a whole, to provide more specific frameworks, such as

[5] Bakes-Martin R, Corso LC, Landrum LB, Fisher VS, Halverson PK. Developing national performance standards for local public health systems. J Public Health Manag Pract. 2005;11(5):418-421.
[6] Corso LC, Landrum LB, Lenaway D, Brooks R, Halverson PK. Building a bridge to accreditation – the role of the National Public Health Performance Standards Program. J Public Health Manag Pract. 2007;13(4):374-377.
[7] Exploring Accreditation Project. Final recommendations for a voluntary national accreditation program for state & local public health departments: summary document. Published September 12, 2006.
[8] Bender K, Kronstadt J, Wilcox R, Lee TP. Overview of the Public Health Accreditation Board. J Public Health Manag Pract. 2014;20(1):4-6.
[9] Centers for Disease Control and Prevention. Public Health Infrastructure. In: Healthy People 2010 Final Review. https://www.cdc.gov/nchs/data/hpdata2010/hp2010_final_review_focus_area_23.pdf. Accessed July 12, 2019.
[10] Public Health Infrastructure. Healthy People 2020 Web site. https://www.healthypeople.gov/2020/topicsobjectives/topic/public-health-infrastructure. Accessed July 12, 2019.

the 10 Essential Environmental Public Health Services,[11] the Ten Essential Public Health Services to Promote Maternal and Child Health in America,[12] and the five Essential Public Health Law Services.[13]

The Public Health Accreditation Board's (PHAB) Standards & Measures for the accreditation of state, Tribal, local, territorial, and army health departments are organized into 12 domains—the first 10 of which are based on the Essential Public Health Services. Since accrediting the first health department in 2013, PHAB has been compiling data on how health departments were assessed by a team of peer site visitors against these measures. As such, it is the only source of peer-reviewed data on health department capacity in these areas. In addition to the environmental scan, a **psychometric analysis** (Appendix B) using the Public Health Accreditation Board's (PHAB) standards and measures for health departments provided an analysis of accreditation to better understand how well the components within each EPHS—as defined through the PHAB standards—relate to each other. In other words, do the specific PHAB requirements within one domain correlate strongly with each other to describe one core concept? It also examines how well the domains correlate with each other and with the overall capacity of the health department.

Key findings from the psychometric analysis include:

- Collectively, the content described in the PHAB domains presents a cohesive picture of health department capacity. This is demonstrated through the factor analysis, showing one principal component. In addition, there are statistically significant correlations ($p<0.000$) across all pairings of domains. This interconnectedness among these domains supports the idea that the domains (and, by extension, the EPHS) paint a coherent picture of public health capacity.
- While all the domains are significantly correlated, some are more strongly correlated than others. For example, Domain 3 (Inform and Educate about Public Health Issues and Functions) tends to have stronger correlations with other domains. In contrast, Domains 8 (Maintain a Competent Public Health Workforce) and 12 (Maintain Capacity to Engage the Public Health Governing Entity) have weaker correlations with other domains.
- Within each domain, the standards are correlated with each other. This suggests that overall, each of the standards—or key components within the domain—represent concepts that are related to each other.
- The within-domain correlations are particularly strong for Domain 2 (Investigate Health Problems and Environmental Public Health Hazards to Protect the Community). On the

[11] 10 Essential Environmental Public Health Services. Centers for Disease Control and Prevention Web site. https://www.cdc.gov/nceh/ehs/10-essential-services/index.html. Reviewed October 19, 2016. Accessed July 12, 2019.

[12] The Child and Adolescent Health Policy Center at Johns Hopkins University. Public MCH Program Functions Framework: Essential Public Health Services to promote maternal and child health in America. http://www.amchp.org/programsandtopics/CAST-5/Documents/MCHPHFXFRA.pdf. Published 1995. Accessed July 12, 2019.

[13] Burris S, Ashe M, Blanke D, et al. Better health faster: the 5 essential public health law services. Public Health Rep. 2016;131(6):747-753.

other hand, Standard 5.4 (Maintain an All Hazards Emergency Operations Plan) has relatively weak correlations with the other standards within Domain 5 (Develop Public Health Policies and Plans).

Results of the environmental scan and psychometric analysis were used to inform work of *The Futures Initiative.*

Engaging the Public Health Field

The Futures Initiative engaged the public health field through a variety of input opportunities. All feedback on the EPHS and how they might be revised was considered, resulting in a revised version of the 10 EPHS that now centers equity, modernizes language, and incorporates concepts relevant to current and future public health practice.

To revise a framework so fundamental to the field, 30 public health experts and stakeholders brought their experience and expertise to guide the revision and serve on *The Futures Initiative* **Task Force** (Appendix C). Task Force participants included a range of subject matter experts, practitioners, thought leaders, and representatives of key stakeholder organizations. Over an 18-month period, the EPHS Task Force met four times to review and discuss data collected from the field and make decisions about updating the 10 EPHS. At the start, the Task Force adopted a set of principles to guide the work:

- **Equity-driven**: the process is guided by and is intentional about infusing equity to develop a framework that supports addressing inequities in areas such as poverty, racism, gender and other forms of oppression.
- **Transparent**: the process is guided by a Task Force that is varied and diverse in professional experience, areas of focus, identities, and backgrounds. The process is communicated through multiple channels, multiple times.
- **Inclusive**: the process is aimed at engaging public health practitioners, researchers, educators, funders, and policymakers to update the 1994 definition of the practice of public health. All comments from all areas of public health are considered during various stages of the process, including a public vetting period.
- **Data-informed/evidence driven**: the process is data-informed and evidence-driven, based on input and feedback from all areas of public health through a national, consensus-based approach.
- **Futuristic**: the process is forward-looking, considering innovative approaches and emerging issues related to protecting and promoting the health of the public.
- **Relevant**: the process is aimed at driving public health practice regardless of the organizational structure, practice setting, or the geopolitical environment.

Equity was noticeably missing in the original framework. Persistent health inequities give the field of public health a mandate to center equity in the core of public health work. To ensure that equity was given the attention and expertise it was due, the Task Force formed an Equity

Subcommittee. This Subcommittee met to define equity, draft and review components of the equity statement in the framework, and identify ways equity should be incorporated throughout the framework.

When the COVID-19 pandemic reached the United States, the Task Force deliberated on whether or not to pause the revision process, given that much of the field was extremely busy responding to the pandemic. However, Task Force members determined it was more important than ever to continue with the revision process to ensure a revised framework would be in place to guide the field, given the spotlight being shone on public health during the pandemic response. Meetings became virtual and the timeline was adjusted to allow for additional input from the field.

In addition to the Guiding Principles, a thorough **public feedback process** was an essential component of the EPHS revision. The broader public health field was engaged at multiple stages of the revision process, including initial feedback and for vetting the draft framework, and in a variety of settings, including live crowdsourcing events, in-person and virtual town halls, think tank discussions, and open web-based surveys. This crowdsourced process allowed for an unprecedented amount of feedback.

Feedback from the Public Health Field

Phase 1: Initial Feedback

From March to November 2019, 1,350 individuals provided input through a web-based survey and live polling at more than 20 in-person and online town halls and meetings, including:

- Five town hall meetings, including one in-person town hall at the 2019 APHA Annual Meeting, three webinar town halls, and one virtual town hall for Centers for Disease Control and Prevention staff, yielded responses from 455 individuals.
- Fifteen meetings or conference calls yielded 393 responses.
- A web-based survey yielded 602 individual responses.

Respondents represented health departments (local, state, and territorial), academia/research, non-profits or community-based organizations, federal agencies, and students. Respondents to the web-based survey and participants in four of the five town hall meetings were asked to provide an affiliation (Appendix D, Table 1). Forty-six percent of respondents were from local health departments, 15% from academia/research, and 12% each from state health departments and non-profit or community-based organizations.

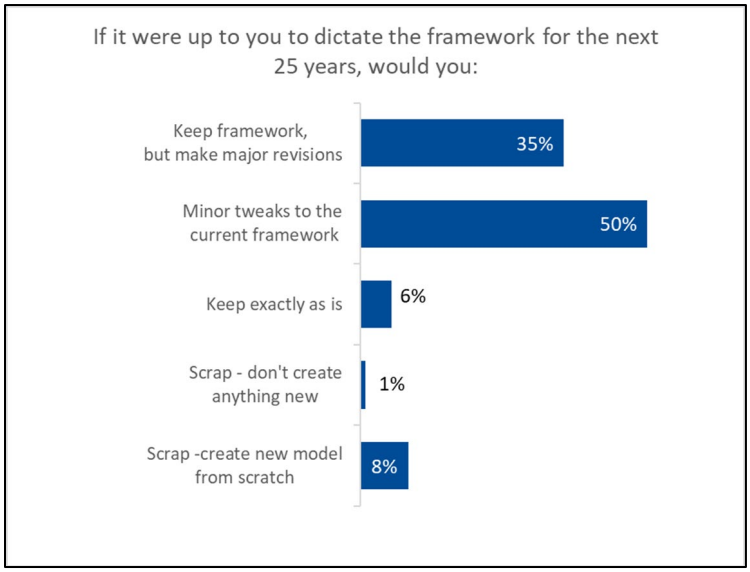
Slido and SurveyMonkey were used to collect responses during each feedback opportunity. Similar questions were asked of people who responded through any of the previously mentioned channels or meetings. However, a key difference was that meeting and town hall participants received a single question on changes and additions to the 10 EPHS, while respondents to the web-based survey received two questions (recommended changes to

specific EPHS and concepts that should be added). This was a practical decision, as participants in a live meeting or call had limited time to provide responses. In addition, the early meeting and town hall participants were not asked the questions about emerging challenges and public health functions to meet them.

Questions for Public Input

One of the most important questions during the initial phase of *The Futures Initiative* was to determine the public's view on the EPHS framework to determine if the field believed a revision was necessary. A majority of respondents indicated that the framework should be kept but revised to some degree **(Figure 2)**.

Figure 2: Survey Responses to Revise the 10 EPHS



The complete list of questions for meetings and town halls and the web-based survey are available in Appendix D.

Responses were aggregated and de-identified, so a single person could have provided input more than once (e.g., participated in a meeting and completed the web-based survey). Virtually all the participants in meetings and town halls reported that either they or their organizations had previously used the 10 EPHS. Approximately two-thirds of web-based survey respondents reported that they or their organization had used the 10 EPHS.

Setting the Context

The first questions for most participants (except participants in the earliest few meetings) asked participants what they saw as emerging public health challenges for the future and what public health functions are essential to meeting those challenges. These questions were intended to open up the respondent's thinking beyond the original framework and to connect the EPHS to the respondent's own public health practice.

Emerging Challenges

The open-ended question about emerging challenges elicited a wide range of responses (summarized in Appendix D, Table 2). Note that a single response often included many ideas and was coded to multiple themes. The themes are presented in four groupings. The themes most frequently cited in these responses (99 or more mentions) were climate change, inequality, mental health/substance abuse, social determinants of health, funding, "isms" (e.g., racism, sexism, ableism), healthcare, violence/trauma, workforce, and infectious disease.

Functions Needed to Address Emerging Challenges

Immediately after the question on emerging challenges, participants were asked to name the public health functions needed to address these emerging challenges. Some respondents interpreted this question as referring specifically to the 10 EPHS, naming one or more of them (and 60 responded "all of them"). Most respondents interpreted the question more generally, giving a wide range of responses that were coded into 20 themes. Again, most responses were coded to multiple themes. These themes are summarized in Appendix D, Table 3, grouped into clusters. The theme mentioned most frequently was traditional public health skills or programs (which was then sub-coded into six categories). Other frequently cited themes (more than 150 mentions) were collaboration, policy, workforce, informatics, community engagement, and equity. Many of these themes also appear in responses to questions about changes needed to the EPHS.

Responses for themes with more than 50 mentions were sub-coded; these results are summarized in Appendix E.

Responses to Questions about Changes to EPHS

EPHS Framework for Next 25 Years

Most respondents thought that the 10 EPHS should be changed to some degree (Appendix D, Table 4). Very few respondents (1%) wanted to scrap the model without creating anything new and few respondents wanted to keep it exactly as is (6%) or scrap the model and create a new one from scratch (8%). A large majority wanted to keep the framework, making either minor tweaks (50%) or major revisions (35%) to it.

Which EPHS Should be Changed?

For each of the 10 EPHS, between 19 and 44% of all respondents recommended making a change (Appendix D, Table 5). For brevity, each of the 10 EPHS will be referred to by its number and a single word (shown in bold blue font in Table 6). Forty-four percent of all respondents recommended changing ES 7 – Link, by far the largest percentage of all EPHS. Next most often recommended for changing were ES #8 – Workforce (34%), ES 9 – Evaluate (30%), ES #10 – Research (29%), and ES #5 – Policies (28%). Least often recommended for changing were ES #2 – Diagnose (19%) and ES #1 – Monitor (21%). There were few differences by method of obtaining input, except for ES #7 – Link. The percentage of respondents that recommended

changing ES #7 – Link ranged from 37% of the web survey respondents to 54% of the town hall participants.

Changes to EPHS

Participants in meetings and town halls were asked a single open-ended question about what changes or additions to the 10 EPHS were needed. Respondents to the web-based survey were asked two open-ended questions. The first asked for suggested changes to specific EPHS (with instruction to note the EPHS number for each suggestion); the second asked about concepts that should be added.

Because of the great overlap in themes, the data from the question on changes/additions to the EPHS is combined with the data on concepts that should be added (Appendix D, Table 6). Note that many comments included multiple ideas that were coded to multiple themes. Equity was by far the most frequently occurring theme for changes/additions, with over 300 mentions. The closely related theme of social determinants of health was mentioned 183 times. Themes of collaboration and community engagement were mentioned over 100 times, and policy was mentioned 90 times. Themes with 50 or more mentions were sub-coded; a tabulation is provided in Appendix E.

The top five themes above featured prominently in comments about changes needed to individual EPHS. Appendix D, Table 7 illustrates the EPHS for which the themes of equity, social determinants of health, and community engagement were frequently cited as needed changes/additions.

Many comments about changes needed to specific EPHS also mentioned concepts of policy/advocacy and partnership/collaboration. Partnership/collaboration is closely related to community engagement, but the responses coded to partnership/collaboration referred to partnering with organizations or were non-specific. Almost 200 comments included forms of the words “policy” or “advocacy,” and over 100 comments included forms of the words “partner” or “collaborate.”

Appendix D, Table 8 provides a tabulation of the number of comments about changes to specific EPHS. The responses to this question, asked only of web-based survey respondents were most frequently about EPHS #8 – Workforce (97), EPHS #7 – Link (93), and EPHS #5 – Policies (90). The relative frequencies are similar to those in the closed-ended question about which EPHS should be changed, but there are some differences. EPHS #7 – Link was by far most often cited as needing revision in the closed-ended question, while similar numbers of open-ended comments about changes were provided for EPHS #7 – Link, EPHS #8 – Workforce, and EPHS #5 – Policy. Appendix F includes tables with details about the types of changes recommended for each EPHS and their frequencies.

Phase 2: Reviewing Draft Revisions

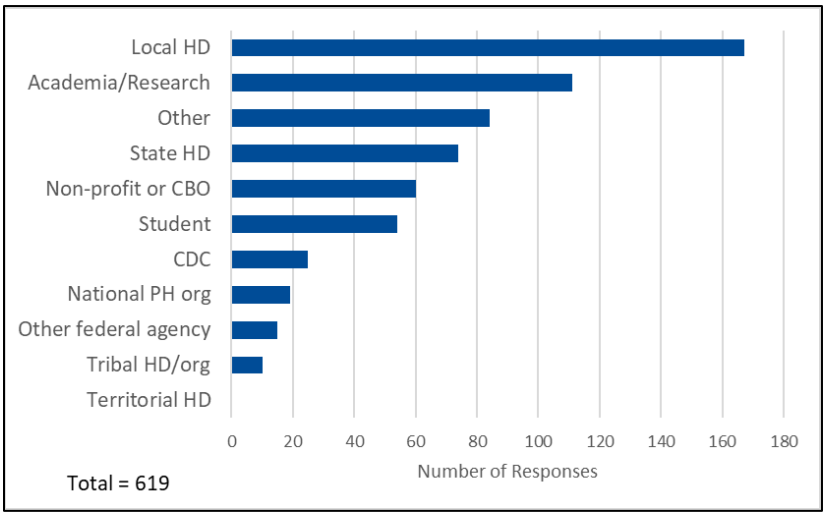
In March 2020, a draft revision of the 10 Essential Public Health Services, based on input from meeting participants, survey respondents, and the Task Force, was released for public vetting. Members of the public health community were invited to provide feedback on the revised draft via SurveyMonkey. English and Spanish versions of the web-based survey were available. The period for accepting comments was originally scheduled from March 2 to April 2, 2020 but was extended to May 22, 2020 to provide additional time for the field to respond due to the COVID-19 pandemic.

The web-based survey provided the draft text for an introductory statement on equity and each of the 10 EPHS (statement of service plus bullet point descriptors) and asked both closed-ended and open-ended optional questions regarding each. After providing feedback on any or all of the equity statement and the 10 EPHS, respondents were asked to provide their overall impressions about the draft via closed-ended questions and had the opportunity to provide additional comments about anything they thought was missing from the draft. Respondents were asked about their preference for the title "10 Essential Public Health Services" vs. "10 Essential Public Health Functions." Finally, respondents had the opportunity to provide any other open-ended comments and were asked to indicate their organizational affiliations.

In addition to employing their own communications channels, PHNCI and the de Beaumont Foundation requested assistance in publicizing the opportunity for comment from many public health organizations and the Task Force.

A total of 619 people completed the feedback survey; the organizational affiliation of the respondents is summarized in **Figure 3**. The largest number of responses came from local health department staff (167 responses of 27% of total) and people in academia or research organizations (110 or 18%).

Figure 3: Organizational Affiliation of Feedback Survey Respondents



Methodology for Analysis of Survey Responses

Responses to closed-ended responses were tabulated by SurveyMonkey. Responses to open-ended questions were downloaded into Excel for coding and analysis. Each open-ended response could contain several individual comments. The process for coding responses regarding the revised 10 EPHS involved the following steps:

- Determine whether each comment applied to the EPHS statement, applied to one of the bullet point descriptors, suggested specific additions to the descriptors, or was a more general comment.
- Group comments using these categories.
- Identify common themes using an iterative process, where uncoded comments were examined to determine if they fit into a previously identified theme or if additional themes could be identified.
- Tabulate themes for the EPHS statement, each bullet point, suggested additions, and general comments.

A similar process was used for responses regarding the equity statement and the other open-ended questions, omitting the first step of categorizing the individual comments within a response and producing a single tabulation for the final step.

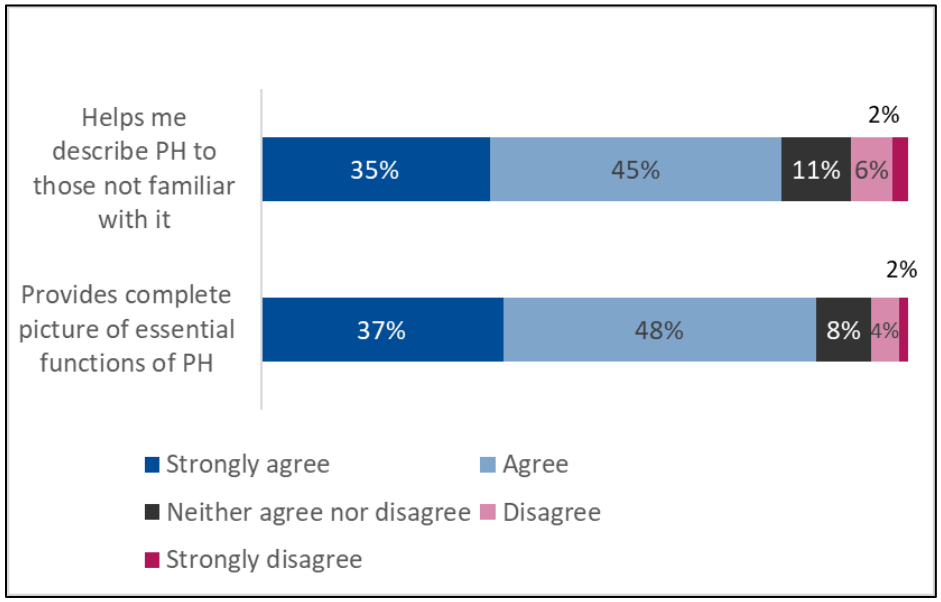
Overall Assessment of the Revised 10 EPHS

After reviewing and commenting (if desired) on each of the revised EPHS, respondents were asked to provide an overall assessment of the revised framework, using two closed-ended statements.

> *Respondents provided feedback to the following statements:*
>
> - *Taken as a whole, this framework provides a complete picture of the essential functions of public health (governmental and non-governmental).*
> - *This framework would help me describe public health to individuals who are not familiar with it.*

Response options for each question used a five-point agree/disagree scale. **Figure 4** summarizes the responses to these questions. A large majority of respondents agreed with each statement. Eighty-five percent of respondents agreed or strongly agreed that the revised 10 EPHS provides a complete picture of the essential functions of public health; 80% agreed or strongly agreed that the revised EPHS would help them describe public health to individuals who are not familiar with it.

Figure 4: Overall Assessment of Revised 10 Essential Public Health Services



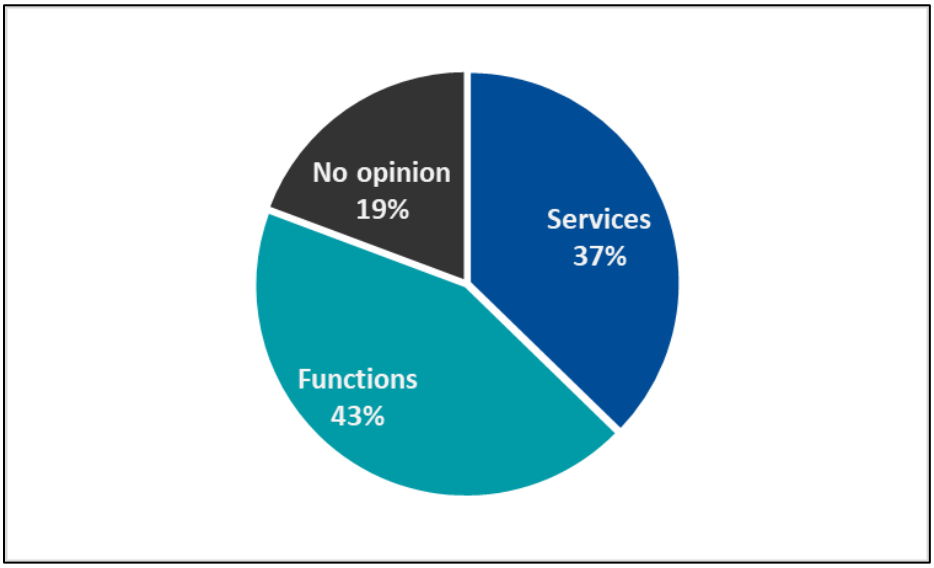
Respondents were also given an opportunity to provide input about the title "10 Essential Public Health Services:"

As we have gathered feedback to date, some have suggested that "functions" might be a more accurate descriptor than "services." At the same time, others point out that the 10 EPHS framework falls under the 3 Core Functions of Public Health. With regard to the title of the EPHS, which of the following would you recommend:

- *Keeping the name of the framework the same (Essential Public Health Services)*
- *Changing the name of the framework (Essential Public Health Functions)*
- *No opinion on keeping or changing the name of the framework*

Figure 5 illustrates the responses to this question. The responses showed a small preference for changing title to "functions" (43% of respondents) versus keeping the term "services" (37%). Nearly one in five respondents did not have an opinion regarding this choice.

Figure 5: Preferences for "Functions" vs. "Services" in Title

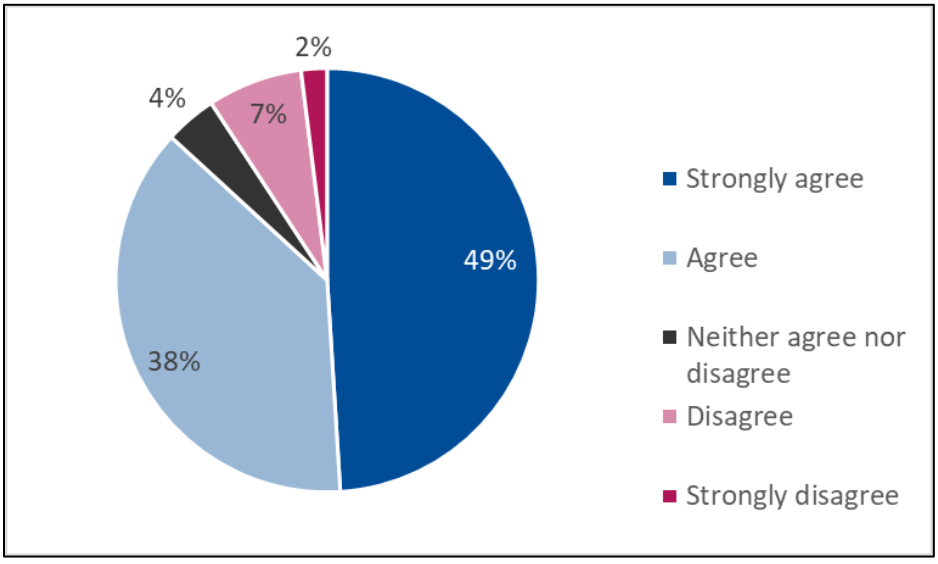


Opinions on Equity Statement

The draft of the revised 10 Essential Public Health Services included the addition of an equity statement, which would be included in the graphic and in the framework:

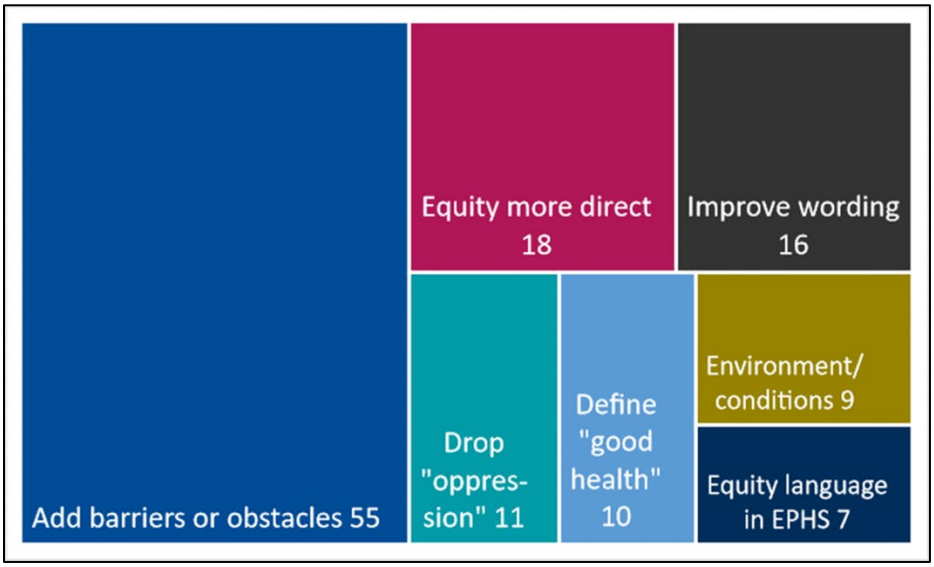
Respondents were asked to indicate the extent to which they agreed that the introductory statement on equity sufficiently positioned equity as a fundamental concept (using the same five-point agree/disagree scale). Their responses are shown in **Figure 6.**

Figure 6: Introductory Statement Sufficiently Positions Equity as a Fundamental Concept



Respondents were offered an opportunity to provide any comments to elaborate on their responses to the closed-ended questions. Key themes in these open-ended responses are summarized in **Figure 7.**

Figure 7: Main Themes in Comments about Equity Statement



A large majority (87%) agreed or strongly agreed that the introductory statement sufficiently positioned equity as a fundamental concept. Among those who provided comments, the most common were recommendations about adding additional barriers to the statement (most often disability) and about more explicitly referencing equity early in the statement. Other common themes in the comments about the equity statement were suggestions about improving or clarifying the wording, more explicitly referencing the importance of the environment or community conditions, and including equity language in the EPHS themselves as well as the introduction.

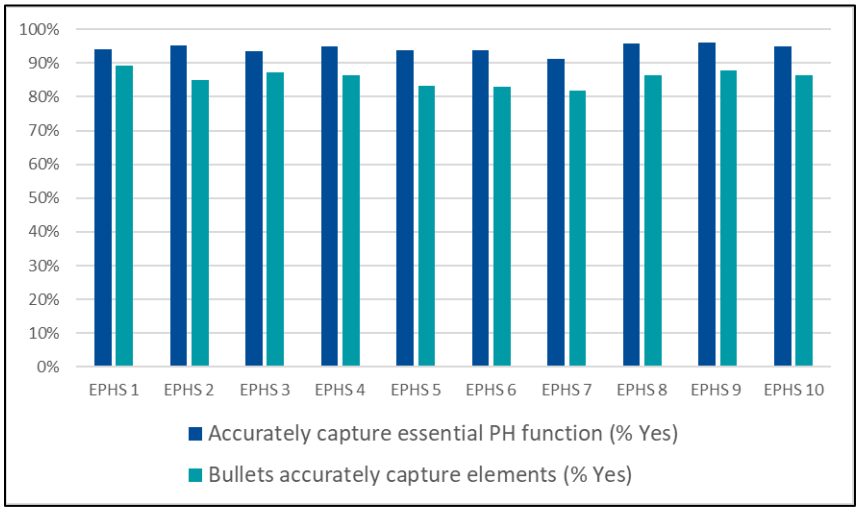
Revised 10 Essential Public Health Services

Figure 8 summarizes the data on the two closed-ended questions designed to capture the respondents' opinions on the revised text for each EPHS.

Respondents answered:

- *Does the proposed statement for this service accurately capture an essential public health function? (Yes/No)*
- *Do the proposed bullet point descriptors for this service accurately capture the elements of this function? (Yes/No)*

Figure 8: Summary of Responses on Revised 10 Essential Public Health Services (EPHS)



A large majority of respondents agreed with each statement for each of the 10 EPHS; the percentage of respondents agreeing that each statement accurately captures an essential public health function (91-96%) was slightly higher than the percentage agreeing that the bullet point descriptors accurately capture the elements of the function (82-89%). There was little variation in responses among the 10 EPHS.

Feedback on Revisions to Individual Essential Public Health Services

This section provides information on the responses to both closed-ended and open-ended survey questions about each of the 10 EPHS. The "most common" themes in the open-ended responses are included. The open-ended responses were quite varied. The "most common" themes shared below were typically noted by only 10 to 20 of the approximately 200 people who provided open-ended comments for each EPHS. This corresponds to approximately 5 to 10% of the open-ended comments or 2 to 3% of the 619 respondents.

Essential Public Health Service #1

The most common suggestions about improving EPHS #1 included improving the wording of the statement and some of the bullet points (especially bullet point 3), adding bullet points that describe use of the assessment, and clarifying the connection to health equity.

	Feedback from the Field
Statement	• Improve wording • Emphasize health of community
Bullet Points	• Bullet 5: Use term other than "non-traditional partners" • Some ideas could fit under other EPHS • Bullet 1 & Bullet 2 to EPHS #2 • Bullet 4 to EPHS #3 or #4 • Bullet 8 applies to all EPHS
Concepts to Add	• Taking actions based on assessment

	• Disaggregated data
General Concerns	• More emphasis on role of the community • Need clearer connection to health equity • Clearer use of words "data" and "information"

Essential Public Health Service #2

The most common suggestions about improving EPHS #2 included adding bullet points that describe addressing health problems and hazards, adding additional root causes to bullet point 4, using a word other than “diagnose” in the statement, and eliminating overlap with EPHS #1.

	Feedback from the Field

Statement	• Use a term other than "diagnose"
	• Root causes
	  • Public health has limited ability to address
	  • Not necessary to reference here

Bullet Points	• Reference other root causes in Bullet 4, including
	  • Environment (e.g., built environment, relationship between people and animals)
	  • Policy
	  • Social determinants of health
	• Data sources in Bullet 5
	  • Clarify "big"
	  • Include all data sources
	• Mention private labs in Bullet 3

Concepts to Add	• Bullets that describe the "address" aspect of statement • Emergency response
General Concerns	• Overlap with EPHS #1

Essential Public Health Service #3

The most common suggestions about improving EPHS #3 included adding bullet points that address community input on communications, health literacy, and countering misinformation; using the term “empower” in the statement (as in previous version); and noting the importance of accessibility for people with disabilities or low literacy in bullet point 4.

	Feedback from the Field
Statement	• Use term "empower" • Remove "communicate effectively"
Bullet Points	• Clarify that accessibility includes people with disabilities or low literacy (Bullet 4) • Avoid word "target" (Bullet 3) • Clarify term "asset-based" (Bullet 7)
Concepts to Add	• Community input on communications • Countering misinformation Health literacy

General Concerns	• Focus on political/structural reasons for inequity • More emphasis on two-way communication with communities

Essential Public Health Service #4

The most common suggestions about improving EPHS #4 included avoiding use of phrase "not traditionally" and specific partners in bullet point 1; emphasizing community leadership and voice in bullet point 3; adding a bullet point about building community capacity; and emphasizing goals, action, and collective impact.

	Feedback from the Field
Statement	• Clarify term "community"
Bullet Points	• Emphasize voice and leadership of community (Bullet 3) • Name specific partners (Bullet 1) • Use term other than "non-traditional partners" (Bullet 1)
Concepts to Add	• Building community capacity • Alignment for collective impact • Emphasis on goals and action • Advocacy
General Concerns	• Need more emphasis on public health in support role (rather than leader) • Reference the social, economic, environmental causes of inequities

Essential Public Health Service #5

The most common suggestions about improving EPHS #5 included several suggestions related to the phrase "historical injustices" in bullet point 1, clarifying the intended scope of "policies and plans," being more explicit about equity, adding a bullet point about advocacy, and avoiding overlap with other EPHS (especially EPHS #6).

	Feedback from the Field
Statement	• Improve wording • Include implementation

Bullet Points	• Bullet 2: Historical injustices - varied opinions
	  • Include new injustices
	  • Use different terminology
	  • Not needed
	• Bullet 4: Emphasize Health in All Policies
	• Bullet 7: Improve wording

Concepts to Add	• Advocacy • Health in All Policies

General Concerns	• Intended scope of "policies and plans"
	  • Differences among bullet point wordings (i.e., sometimes regulations and/or codes is included)
	  • Should include laws and ordinances

	• Include processes and practices • Equity - be explicit • Overlap with other EPHS (#6, #4, #1)

Essential Public Health Service #6

The most common suggestions about improving EPHS #6 included omitting bullet points 5 and 6, emphasizing that laws and regulations must be applied equitably, and adding bullet points about advocacy for laws and regulations.

	Feedback from the Field
Statement	• Alternative verb for "employ"
Bullet Points	• Omit certain bullets (most often Bullet 5, Bullet 6, Bullet 4) • B7: Emphasize Health in All Policies
Concepts to Add	• Ensure laws/regs are applied equitably • Advocacy for laws/regs • Evaluation & application of best practices • Develop new laws/regs • Update existing laws/regs
General Concerns	• Overlap with EPHS #5 • Overlap among bullet points

Essential Public Health Service #7

The most common suggestions about improving EPHS #7 included moving bullet point 5 to EPHS #8, adding diversity of the healthcare workforce to bullet point 5, and including population-based services in the statement. In addition, some commenters felt that it is not possible for public health to ensure either access to healthcare or the quality of the healthcare workforce.

	Feedback from the Field
Statement	• Public health cannot assure access to healthcare • Include population-based services
Bullet Points	• Bullet 5: Belongs under EPHS #8 • Bullet 5: Ensure diverse workforce
Concepts to Add	• Access - financial and other barriers • Specific services (e.g., behavioral health, public health laboratory, home-based services)
General Concerns	• Not possible for public health to ensure access to healthcare or quality of healthcare workforce • More explicit references to equity in bullet points

Essential Public Health Service #8

The most common suggestions about improving EPHS #8 included adding other competencies (most often cultural competency) to bullet point 1, noting in bullet point 3 that the entire

workforce (not only leadership) should be reflective of the community served, and adding a bullet point to describe actions that should be taken to improve workforce diversity.

	Feedback from the Field
Statement	• Alternative verbs • Both diversity and inclusion are important

Bullet Points	• Bullet 3: Workforce reflective of community (not leadership only)
	• Bullet 1: Additional competencies
	  • Cultural competency
	  • Several other suggestions

Concepts to Add	• Actions to improve diversity • Adequate compensation • Interdisciplinary collaboration
General Concerns	• Need more emphasis on diversity • Need more emphasis on cultural competency

Essential Public Health Service #9

The most common suggestions about improving EPHS #9 included adding a bullet point about community engagement in evaluation and research, adding a bullet point encouraging use of a variety of methods, and recognizing community knowledge as an important form of data in bullet point 3. Only two commenters objected to combining evaluation and research in a single EPHS. (In the original version of the EPHS, they are EPHS #9 and #10, respectively.)

	Feedback from the Field
Statement	• There were few comments beyond editing
Bullet Points	• Bullet 3: Community knowledge is important data source • Bullet 6: Evaluate laws
Concepts to Add	• Community engagement in evaluation and research • Encourage use of a variety of methods
General Concerns	• Not an essential service (not unique to public health) • Only two comments objected to combining research & evaluation

Essential Public Health Service #10

The most common suggestions about improving EPHS #10 included changing the language in bullet point 1 from “ensuring” to “advocating,” and adding bullet points that address equity, governance, and innovation. In addition, a few respondents felt that EPHS #10 is not unique to public health and thus should not be included as an EPHS.

	Feedback from the Field
Statement	• Clarify nature of "organization" (vs. system)
Bullet Points	• Bullet 1: Ensure vs. advocate
Concepts to Add	• Collaboration (with organization and community members) • Governance • Innovation/adaptation • Equity

General Concerns	• Varied opinions on adding this service to the EPHS
	  • Not an essential service
	  • Important/good addition

Key Themes across Essential Public Health Services

Some general themes can be identified when analyzing open-ended comments across all 10 EPHS. **Figure 9** illustrates the number of comments for six common themes for each EPHS and the total across all 10 EPHS. Cells highlighted in green represent more than 20 comments; cells highlighted in yellow represent 10 to 20 comments.

Figure 9: Cross-cutting Themes in Comments about 10 EPHS

	Essential Public Health Service										
Theme	1	2	3	4	5	6	7	8	9	10	Total - all EPHS
Wording	63	27	49	29	45	21	27	26	28	17	332
Equity	19	5	14	12	28	18	13	5	5	10	129
Community	10	3	14	26	5	2	0	3	31	7	101
Law/policy/advocacy	2	0	5	6	24	16	3	0	12	3	71
Overlap	17	4	0	4	14	9	15	3	0	4	70
Collaboration	17	7	0	16	8	0	3	13	0	5	69

By far the most common theme across all EPHS were comments about wording, either specific suggestions for wording changes or more general comments (e.g., too wordy, need to clarify). Comments suggesting more specific reference to equity were also common, notably for EPHS #5. Several EPHS had relatively large numbers of comments about further emphasizing the role of the community, especially EPHS #4 and #9. Three EPHS had relatively large numbers of comments about the importance of law, policy, or advocacy to public health, notably EPHS #5. Comments about overlap with other EPHS were relatively common for EPHS #1, #5, #6, and #7. Comments about collaboration were relatively common for EPHS #1, #4, and #8.

Responses to Final Questions

Missing from 10 EPHS Framework

After completing questions on the equity statement and each EPHS, respondents were asked whether anything was missing from the 10 EPHS framework. Many of these themes were similar to the concerns raised with respect to individual EPHS. The largest number of comments were around themes of equity and justice (including racism, human rights, and accessibility for disabled people). There were also some comments about specific public health programs that respondents thought were not sufficiently covered in the EPHS (including emergency response, environment, healthcare, mental health, and prevention). There were also some comments about cross-cutting concepts that respondents felt were missing or inadequately addressed (including advocacy, attention to outcomes, innovation, and sufficiency of resources).

One interesting theme in this group included several comments requesting a list of essential public health programs or questioning where public health programs generally fit within this

framework. Commenters could clearly identify monitoring, assessment, evaluation, policy, etc., but wondered where their organization's public health programs fit.

Any Other Feedback

Finally, respondents were invited to provide any other feedback about the framework. Again, most of the comments echoed themes from comments on the individual EPHS. By far the most common theme was requests for shorter and simpler language, with some suggestions that each service be identified succinctly by one or two words (like the previous version). Some themes unique to this question were:

- Suggestions for supplemental materials that respondents thought would be helpful, such as crosswalks to program-specific essential services (e.g., oral health, law) or a version more tailored to those outside of public health.
- Various opinions on development of a new graphic.
- Questions about the review cycle for this version.
- Comments about how the 10 EPHS would be used.

Feedback provided by the public during Phase 2 of data collection was incorporated into the draft of the EPHS and shared with the Task Force for consideration. The Task Force reviewed a report on public feedback and used it to revise the draft and finalize the language, with input from McCabe Message Partners (McCabe), a communications firm. McCabe supported the draft process by providing input on language use both for the vetting and final drafts.

Phase 3: Graphic Feedback

In June 2020, McCabe Message Partners (MMP)provided two design concepts that reflected the revisions in the text, the general tone and direction provided by the Task Force and open comment and vetting periods. McCabe worked with PHNCI to obtain feedback on the design concepts from the field.

Due to the impact of COVID-19, planned in-person focus groups shifted to a virtual model. MMP scheduled three, online feedback boards in an effort to make the process easier and safer for respondents. Each feedback board was available for 72 hours, and participants were able to join and answer questions whenever was most convenient for them. Participants were shown each graphic option and asked a series of questions, with the final question to indicate their preference.

Feedback Questions

1. *What is the message of this graphic?*
2. *When you first saw this graphic, where did your eye go to first?*
3. *What qualities about public health do you think this graphic conveys?*
4. *What do you like about this graphic?*
5. *What do you think is missing from the graphic?*
6. *What is your reaction to how health equity is represented?*
7. *Between the two graphic depictions of the models, which do you prefer?*

During the Phase 1 feedback surveys, participants were also asked at the time if they would be willing to give feedback to the graphic revisions. In total, 343 respondents agreed to be contacted again. MMP reached out to a subset of 120 respondents to determine interest and availability participating in one of three online feedback boards, scheduled between July 1 and July 13, 2020. The goal was to have 30 participants in each response cohort. Respondents were able to provide their first and second choice of dates.

Once date preferences were noted, each cohort of 30 was contacted by MMP, with background information and a unique log-in to access to QualBoard, the platform running the feedback boards, the graphics and questions. MMP monitored the feedback during the feedback period.

Finalizing the 10 EPHS Graphic

Once all three feedback boards were concluded, the qualitative feedback and presented general findings and recommendations to the Task Force on July 16, 2020. Key insights from the feedback included:

- Respondents preferred the graphic that evoked the previous 10 EPHS graphic;
- Equity needed to be at the center of the model; and
- Respondents liked the equity statement but wanted it more connected to the graphic.

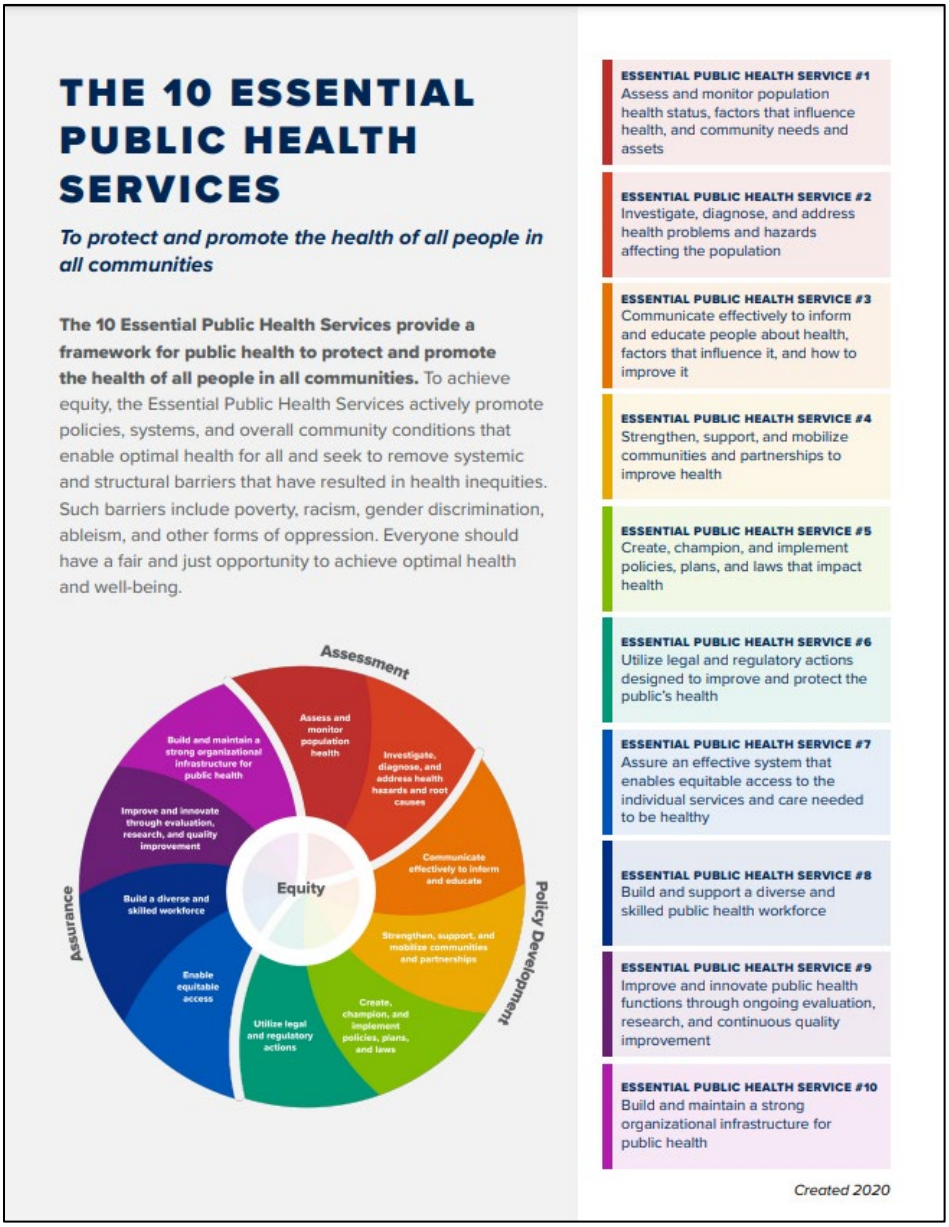
Following the July Task Force meeting, final design edits were applied to the selected graphic, which was shared with the Task Force for final review. In addition to the graphic, a suite of EPHS products, including a one-pager, PowerPoint presentation, social media assets, and a detailed narrative with the graphic and full text of the essential public health services and supporting activities were developed. The one-pager and full narrative were also created in Spanish.

Launching the 10 Essential Public Health Services

On September 9, 2020, the revised 10 Essential Public Health Services were shared with the field during a **virtual launch event**. Nearly 1,000 individuals attended the event, including members of the task force and guests from national organizations, governmental health departments, academia, federal agencies, and current public health students.

The revised framework, including the graphic (**Figure 10)** were revealed during the launch. Task Force members and other public health luminaries presented the framework and shared reflections on it, the process and the importance of the EPHS to the field. A question and answer session followed the presentations, from which an FAQ document was later derived.

Figure 10: The Revised 10 EPHS Graphic



Overview of Revisions to the 10 EPHS

A complete documentation of **changes made between the revised Essential Services and the original Essential Services** is available in Appendix G. Changes to the EPHS were made to modernize language, reflect current practice, and leave space for innovation and future needs.

Two major changes to the EPHS included the centering of equity in the framework and the addition of a new Essential Service, focused on building and maintaining a strong organizational infrastructure, found in EPHS #10.

Equity was noticeably missing from the original framework, and disparities in public health today reveal the need to bring it to the core of public health work. In recognition of public health's commitment to provide a fair and just opportunity for everyone to achieve optimal health and well-being, the framework now contains an equity statement, centers equity in the graphic, and incorporates equity throughout each Essential Service.[14] Throughout the revision process, the Task Force and feedback respondents emphasized the importance of incorporating equity throughout the framework so that it could guide current and future work. Appendix D, Table 6 demonstrates the frequency that respondents mentioned equity.

Essential public health service #10 now focuses on critical organizational infrastructure elements such as strong and ethical leadership, governance, decision-making; communications and planning capacities; strong systems in place; approaching work with accountability, transparency, and inclusiveness; and ensuring that resources are equitably allocated, among others. The revised language was added as a standalone essential service, building off system management concepts from the original language, to emphasize the importance of it across all the public health system. The revised framework moves the concepts of research, identification and monitoring of innovative solutions, linkages between public health practice and academia, health policy analyses, and public health systems research from here to revised EPHS #9.

A brief description of each essential service and additional changes are outlined below:

- **EPHS #1** focuses on assessing and monitoring population health. The revised language expands upon the methods by which this is done and recognizes root causes of inequities and the importance of disaggregated data and community voice. It further expands upon the concept of multi-sector collaboration and use of innovation, technology, and data.
- **EPHS #2** focuses on the role that public health plays in problems and hazards affecting the population. The revised language maintains reference to laboratory access, epidemiology, and public health threats and emergencies, while also highlighting the importance of real-time data, including from other sectors.
- **EPHS #3** focuses on the role of health education and communications for public health. The revised language reflects learnings from communication science and now includes concepts of risk communication, deployment of cultural and linguistically appropriate materials, multi-sector partnerships for communication, use of appropriate channels,

[14] Jarrah S, Khaldun J, Sellers K, Rich N. Brining the essential public health services to life. J Public Health Manag Pract. 2021;27(1):97-98.

and the importance of accuracy, timeliness, and two-way communication. It further emphasizes that efforts be asset-based and address equity.

- **EPHS #4** focuses on communities and partnerships. It highlights the importance of authentically engaging communities as partners and working with multi-sector partners, including those that influence health. It emphasizes the role that public health can play in convening, facilitating, and contributing expertise to solutions.
- **EPHS #5** focuses on policies, plans, and laws that impact health. The revised language includes mention of the role public health plays in both developing and championing policies, plans, and laws and using them to correct historical injustices and afford a fair and just opportunity for all people to achieve optimal health. It acknowledges the importance of including health in all policies and adds preparedness and community resilience. It maintains mention of community health improvement planning processes.
- **EPHS #6** focuses on legal and regulatory actions. The revised language adds the concept of equity and expands responsibilities around the legal and regulatory functions of the public health system to protect communities from unsafe food and water, hazardous conditions, and exposure-related diseases that can cause health crises. The revised framework moves language about licensing and monitoring the quality of healthcare services (like labs and nursing homes) and licensing and credentialing the healthcare workforce from the original EPHS #8 to here.
- **EPHS #7** focuses on the public health system's role in assuring equitable access to individual care services. The revised language adds engaging with health delivery systems (including behavioral and mental health services) and building relationships with payers and healthcare providers. The revised framework moves language about the healthcare workforce from the original EPHS #8 to here.
- **EPHS #8** focuses on the public health workforce. The revised language clarifies the public health system's role in building and supporting a diverse and skilled workforce that encompasses a spectrum of public health and cultural competencies. Added language also emphasizes the importance of fostering technical, strategic, and leadership skills at all levels to promote lifelong learning and to create a pipeline of future practitioners. The revised framework moves language about licensing and monitoring the quality of healthcare services (like labs and nursing homes) and licensing and credentialing the healthcare workforce from here to revised EPHS #6. It also moves language about the healthcare workforce from here to revised EPHS #7.
- **EPHS #9** focuses on public health innovation and improvement activities. The revised language moves away from evaluating the quality of personal health services to emphasize the public health system's role in innovating, evaluating, researching, and improving the quality and performance of public health functions. Added language also highlights the importance of engaging with the community and utilizing data to inform decision-making processes related to research. The revised framework moves the concepts of research, identification and monitoring of innovative solutions, linkages

between public health practice and academia, health policy analyses, and public health systems research from the original EPHS #10 to here.

- **EPHS #10** focuses on critical organizational infrastructure elements such as strong and ethical leadership, governance, decision-making; communications and planning capacities; strong systems in place; approaching work with accountability, transparency, and inclusiveness; and ensuring that resources are equitably allocated, among others. The revised language was added as a standalone essential service, building off system management concepts from the original language, to emphasize the importance of it across all the public health system. The revised framework moves the concepts of research, identification and monitoring of innovative solutions, linkages between public health practice and academia, health policy analyses, and public health systems research from here to revised EPHS #9.

The complete **comparison document** between the original EPHS and the revised 10 EPHS can be found in Appendix G.

The original EPHS was a document written by public health practitioners, and the revised EPHS remains a document written by the field, for the field. As the field continues to evolve, this guiding framework shall too.

Implementing the Revised 10 Essential Public Health Services

During the EPHS launch event, a free and easy-to-use **Essential Public Health Services toolkit** was made available for public use. Similar to the Essential Services, nobody owns the tool kit and anyone can access and share its resources. As the revised EPHS are adopted and implemented, additional resources created by the field may be added. PHNCI is responsible for updating the toolkit.

The toolkit includes resources to communicate about the EPHS within the field, with the greater community, and with external stakeholders; to update EPHS-related materials; and to educate future public health practitioners. At the time of this publication, the EPHS Toolkit includes:

- Downloadable 10 Essential Public Health Services graphic in English and Spanish
- Downloadable 10 EPHS Framework in English and Spanish
    - Including a detailed breakdown of each service and a brief one-pager
- 10 EPHS Launch Recording
- EPHS Presentation Slides
- Environmental Scan
- EPHS Task Force and Liaisons
- Citations
- Website Resources
- Email Resources

- Social Media Tools

As of March 2021, EPHS toolkit had over 23,000 views. That number is expected to grow as public health departments, organizations, and academic programs continue to update their content to reflect the revised 10 EPHS.

In the months following the EPHS launch, *The Futures Initiative* staff provided presentations to a variety of organizations to explore the revisions, engage public health professionals in the critical decision to center equity in the revised framework, connect the EPHS to the COVID-19 pandemic, and more. Staff also reached out to textbook publishers and authors about the revision; to ensure the next generation of public health practitioners are prepared with the knowledge they need to contribute, they need to learn about it. Since the revised framework was revealed, feedback has been positive as organization update their EPHS materials and discuss ways to bring the changes into practice.

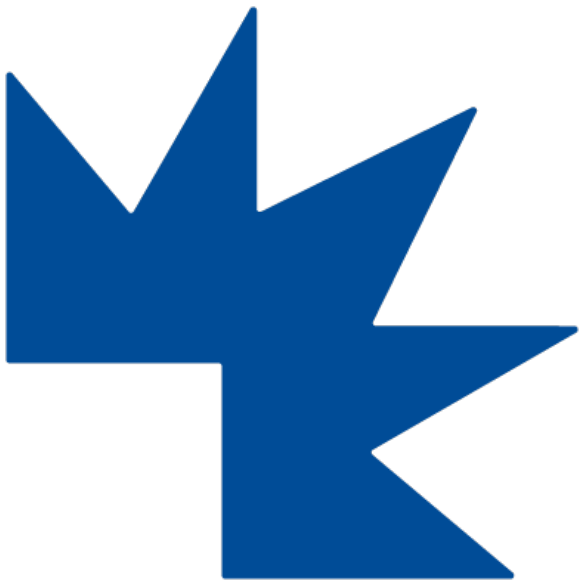
The 10 Essential Public Health Service in Action

Public health practitioners incorporate the EPHS into their daily work in a variety of ways. In the months following the launch of the revised framework, several blog posts and articles were released outlining different ways practitioners use the EPHS in their work. One such journal article was published in the Journal of Public Health Management & Practice and can be found in Appendix H.

The Future of the 10 Essential Public Health Services

Over the past 25 years, the 10 Essential Public Health Services has served as a guide to field practitioners and has become a recognizable symbol in public health. The revised framework (Appendix I) will continue to serve as a guide, providing a tool to explain public health to communities, stakeholders, and policy makers.

While the framework now holds space for future public health practice, further revisions may be necessary to meet the changing needs of the field. To address future needs, the de Beaumont Foundation plans on reconvening another task force of public health experts in five years. This task force will determine whether minor changes are necessary to keep the framework current. After that, the de Beaumont Foundation will monitor changes and bring together practitioners as necessary, with the expectation that an assessment will take place every five years.



Defining Public Health Practice: 25 Years of the 10 Essential Public Health Services

de Beaumont Foundation
Public Health National Center for Innovations
July 2019

de Beaumont
BOLD SOLUTIONS FOR HEALTHIER COMMUNITIES

phnci

Introduction

In 1994, in the midst of discussions of healthcare reform and lack of clarity about the role of public health, the Public Health Functions Steering Committee developed the 10 Essential Public Health Services (EPHS) as a means of communicating the key public health services needed to protect and promote the health of the public. In the 25 years since their development, the EPHS have become the definition of what public health is for those within the field and beyond. Developed through consensus of the major public health organizations and government agencies and designed to explain public health to policymakers and the public, the EPHS have become the foundation for public health work, operationalized by tools to measure the extent to which the EPHS are provided, taught in schools of public health and beyond to explain what public health is, laid the groundwork for initiatives like accreditation to ensure that the EPHS are available to all, served as the basis of research studies, and referenced in the international community as a successful model for organizing public health on a national scale. Health departments have organized themselves and aligned their activities around the EPHS, and public health disciplines and related fields have adapted the EPHS to describe and categorize their work, aligning it to a national model.

As the practice and political context continues to change, and new public health threats emerge, it is critical to have a common understanding both within the field and beyond of what public health is, what it does, and how it does it. For 25 years, the EPHS have provided that definition and guidance and is widely recognized and respected as the authoritative description of public health's role.

To commemorate the 25th anniversary of the EPHS and recognize its prominence in public health, this review aims to describe the history of the development of the EPHS as well as to highlight the scope and breadth of their impact on public health and beyond.

Methodology

This review brings together a variety of information sources and should not be considered an exhaustive or systematic literature review. That said, a scan of literature was conducted across the databases PubMed and Ovid using search terms "Essential Public Health Services" and "Essential Services." Abstracts were reviewed to determine if the article addressed the EPHS in a substantive way and were not considered if they made only cursory mention of the EPHS. Citations were selected to describe the development of the EPHS and to provide examples (not an exhaustive compilation) of how the EPHS have been utilized.

Additionally, information both about the history and use of EPHS were obtained through key informant interviews and discussions that arose during meetings and think tanks*. These meetings were not EPHS-focused, but in the course of conversation about the EPHS, participants often volunteered stories and resources that may not be found in the published literature. In order to capture the breadth of EPHS use, those have been included.

* PHAB think tanks convene thought leaders in public health to inform accreditation standards & measures. Think tank participants are comprised of public health professionals with subject matter expertise, PHAB staff, and a representative of PHAB's board of directors, brought together to deliberate a particular topic. –from: Ingram RC, Bender K, Wilcox R, Kronstadt J. A consensus-based approach to national public health accreditation. *J Public Health Manag Pract.* 2014;20(1):9-13.

This environmental scan is intended to provide a broad overview of the history, development, and use of the EPHS; however, it does not represent a comprehensive listing of every use of EPHS. Therefore, readers should understand that there are likely many more examples of EPHS use.

History of EPHS Development

In the 1988 report, *The Future of Public Health,* the Institute of Medicine (IOM) found a lack of consensus on what the public could reasonably expect from governmental public health departments and found significant disparities between jurisdictions' services, both in terms of types of services and level of service provision. The lack of agreed-upon public health mission also led to differences in which authorities or agencies provided services, a variety of organizational setups, and a concern that the services needed to keep the public healthy were not being provided. Similar to refrains heard today, the report identified that politics at all levels had an impact on the services provided and that public health's work was often taken for granted, only to be highlighted when facing a public health crisis rather than celebrating public health successes. The report also introduced the concept of the public health system, that is, organizations other than the governmental public health department that contributed to public health.[1]

The committee defined the mission of public health "as fulfilling society's interest in assuring conditions in which people can be healthy" (to be fulfilled by both private and public partners) (IOM report) as well as defined the specific role of governmental public health to fulfill three core functions: assessment, policy development, and assurance.

While the core functions were useful for public health professionals to describe public health infrastructure, they were not widely understood by the general public. This lack of understanding potentially created more distance between public health practitioners and the public they served,[2] making it harder for the public to appreciate public health's importance. A further step was needed to address this gap.[2] In 1993, President Clinton announced that healthcare reform would be comprehensive, leading public health advocates to try to "convince policy makers that a health care plan without public health would be a contradiction in terms."[3] The bill President Clinton sent to Congress in 1993 included the "Core Functions of Public Health." However, many outside of public health did not understand these core functions, and even within the field, various stakeholder groups (e.g., National Association of County and City Health Officials (NACCHO), Centers for Disease Control and Prevention (CDC), etc.) had different lists of how to address these functions. Alignment was needed in order to better communicate with each other, with policymakers, and with the public.

To address the need for public health to "speak with one voice", a working group on the core functions of public health was formed. The working group convened in spring 1994 and was comprised of representatives of the US Public Health Service's (PHS) Agencies (government agencies) and major public health organizations, and was led by the Director of the CDC and Deputy Assistant Secretary for Disease Prevention and Health Promotion.[3] This working group then charged a subgroup with developing a consensus list of the essential services of public health. The list was then reviewed and

revised by the Core Functions of Public Health Steering Committee[†], led by the Assistant Secretary for Health, Surgeon General, and including PHS Agency Heads and presidents of major public health organizations.[3] The leadership from the government agencies and broad representation of public health organizations allowed for broad acceptance of the Essential Public Health Services and the ownership of the framework by the field (Ron Bialek, MPP, oral communication, June 2019), and the language of the EPHS helped policymakers and the public understand public health.[4]

The Public Health Functions Steering Committee adopted, in Fall 1994, the Public Health in America Statement, including public health's vision and mission, a concise description of what public health does, and the Essential Services of Public Health [Box 1].

What are the 10 EPHS?

The Public Health in America Statement reads as follows:

Box 1: Public Health in America Statement

Vision: Health People in Healthy Communities

Mission: Promote Physical and Mental Health and Prevent Disease, Injury, and Disability

Public Health:
Prevents epidemics and the spread of disease
Protects against environmental hazards
Prevents injuries
Promotes and encourages healthy behaviors
Responds to disasters and assists communities in recovery
Assures the quality and accessibility of health services

Essential Public Health Services:
Monitor health status to identify community health problems
Diagnose and investigate health problems and health hazards in the community
Inform, educate, and empower people about health issues
Mobilize community partnerships to identify and solve health problems
Develop policies and plans that support individual and community health efforts
Enforce laws and regulations that protect health and ensure safety
Link people to needed personal health services and assure the provision of health care when otherwise available
Assure a competent public health and personal health care workforce
Evaluate effectiveness, accessibility, and quality of personal and population-based health services
Research for new insights and innovative solutions to health problems

[†] The Public Health Functions Steering Committee included the American Public Health Association, Association of Schools of Public Health, Association of State and Territorial Health Officials, Environmental Council of States, National Association of County and City Health Officials, National Association of State Alcohol and Drug Abuse Directors, National Association of State Mental Health Program Directors, Public Health Foundation, U.S. Public Health Service Agencies: Agency for Health Care Policy and Research, Centers for Disease Control and Prevention, Food and Drug Administration, Health Resources and Services Administration, Indian Health Services, National Institutes of Health, Office of the Assistant Secretary for Health, Substance Abuse and Mental Health Services Administration. (Public Health in America Statement, 1994/5).

When it was developed, the EPHS defined public health, its role, and provided accountability related to health outcomes,[3] and provided a starting point in giving structure to how public health could work in the community.[5] It represented a "return to the initial charge of public health" and indicated "a shift:

- in focus from treating disease to sustaining health; from solving isolated problems to creating a preferred future; from an individual's needs to a broader perspective on the health of populations;
- in strategy from treating illness to promoting prevention; from being focused on needs and problems to looking at community-wide assets and opportunities; from being reactive to being proactive;
- in guiding principles from managing individual health system components to supporting the dynamic interaction of these components [through] a systems and community approach to health; and setting expectations, outcomes, and accountability that can only be achieved through empowerment" (Public Health Competency Handbook)

In 1997, Harrell & Baker noted, "While no definition of public health's essential role in our nation's health system will ever be final, this statement of essential services can be used by the field as a tool for moving forward with greater clarity of purpose in a time of challenging changes."[3]

10 EPHS as a Basis for Other Initiatives

The EPHS described the processes by which public health achieved core functions and became the basis by which health departments could evaluate their performance and improve practice versus efforts prior to the EPHS development, which often focused on specific services instead of public health processes.[6]

Following the release of the EPHS, work began to operationalize the services described. In 1998, the CDC collaborated with five public health organizations – the American Public Health Association (APHA), Association of State and Territorial Health Officials (ASTHO), NACCHO, National Association of Local Boards of Health (NALBOH), and Public Health Foundation (PHF) – to translate the EPHS into practice by developing a national set of performance standards for public health.[7] The National Public Health Performance Standards Program (NPHPSP), which resulted from this collaboration, aimed to measure the capacity of the local and state public health system to deliver the EPHS, includes an assessment instrument for governance, highlighting the importance of policy and oversight,[8,9,10] and functioned as a tool to operationalize the EPHS.[5] The NPHPSP focuses on the public health system, emphasizing that the services should be provided everywhere, but who provides those services in each community may differ.[7] Additionally, the NPHPSP represent the "gold standard" of public health service, and the health departments and their partners then measure their level of service provision against that standard.[7,10] NPHPSP measurement instruments for local, state, and governance systems continue to be updated by ASTHO and NACCHO, in partnership with CDC and other national organizations. They are used by the field as a part of community health improvement planning processes, such as Mobilizing for Action through Planning and Partnerships (MAPP).[9]

In 2005, NACCHO released the Operational Definition of a Functional Local Health Department as a means of specifically defining the role of the local governmental public health department in providing each of the EPHS. Understanding that there are factors at the local level that make each local health department unique, the Operational Definition defines what everyone, no matter where they live, can reasonably expect from the local health department.[11]

In the 2003 report, *The Future of the Public's Health in the 21st Century,* the Institute of Medicine recommended the exploration of national accreditation for health departments and encouraged that accreditation build on existing frameworks such as the NPHPSP and the Operational Definition of a Functional Local Health Department.[12] The Exploring Accreditation Project recommended a model for the voluntary national accreditation program including 11 domains for accreditation standards, based largely on the EPHS.[13] The resulting Public Health Accreditation Board (PHAB) Standards & Measures were ultimately organized into 12 Domains, the first 10 addressing the 10 EPHS, with two domains added to address management/administration and governance.[14] Organization of the PHAB Standards & Measures around the EPHS also mirrored several states' accreditation efforts based on the EPHS[15] and reflected local health departments' adoption of the EPHS as a framework around which to base their work.[16] PHAB accreditation provided a way for health departments to benchmark their provision of the EPHS, allowing them to understand how well they are providing the EPHS and holding them publicly accountable for their performance.[8]

The PHAB Standards & Measures, with their basis in the EPHS, have been cross-walked with other public health initiatives and tools to foster alignment, identify and leverage areas of reinforcement, and to guide future work. Examples of those crosswalks include Public Health Emergency Preparedness Capabilities, the Baldridge Criteria for Excellence, Foundational Public Health Capabilities, the FDA Voluntary National Food Regulatory Program Standards, Prevention Status Reports, and the Community Guide.[17] Similarly, resources in the Public Health Foundation's (PHF) TRAIN system and those in PHQIX are categorized and searchable by PHAB Domains, Standards & Measures. Furthermore, the foundational public health services, developed to represent a minimum package of public health services to make the case for sustainable funding and to describe what is needed everywhere for public health to function anywhere[18] and are consistent with the categories for costs in the Public Health Uniform National Data System (PHUND$),[19] are also cross-walked and connected to PHAB Standards & Measures. Because the first 10 PHAB domains reflect the EPHS, these efforts continue to embed the EPHS throughout public health. Furthermore, to ensure a competent public health workforce, PHF developed the Core Competencies for Public Health Professionals, "a consensus set of foundational skills for the broad practice of public health as defined by the 10 Essential Services" and have developed a crosswalk to demonstrate how the competencies help to ensure that public health professionals can carry out the EPHS.[20]

The EPHS have also been embedded into the Healthy People initiatives beginning with Healthy People 2010, which included a focus area of Public Health Infrastructure with the goal to "ensure that Federal, Tribal, State, and local health agencies have the infrastructure to provide essential public health services effectively"[21] and references the NPHPSP. Healthy People2020 also lists out the EPHS on the page for the public health infrastructure topic area.[22]

The use of EPHS has broadened beyond its initial scope of defining public health practice as a whole. Disciplines within public health have modified the EPHS to address the specific activities unique to their work to ensure that they are in alignment with how the field is talking about public health. For example, environmental health has developed the 10 Essential Environmental Public Health Services,[23] which align with the EPHS but frame them in an environmental health-specific context. CDC has outlines resources to support the provision of each service,[24] and programs such as food safety have been evaluated to determine the most commonly provided services.[25] With funding from The John A. Hartford Foundation, the Trust for America's Health is partnering with the Florida Department of Health to implement an age-friendly public health initiative. They have been exploring how health departments can engage in efforts related to each of the EPHS in order to improve the health and well-being of aging adults.[26] Other examples of discipline-specific versions include the Ten Essential Public Health Services to Promote Maternal and Child Health in America[27] and The Essential Public Health Services to Promote Health and Oral Health in the United States,[28] as well as an adaptation of the EPHS to use as a tool to standardize their agencies reporting practices by medical examiners and coroners.[29]

The EPHS have also influenced conversations internationally. The World Health Organization (WHO) released its Essential Public Health Functions (EPHFs) in 1997, established through consensus Delphi methodology, and adapted globally. The EPHFs focus more on minimum services required and gap identification for developing countries, while the EPHS focus on building and improving capacity for existing services, but there is significant overlap and synergy between the two. Furthermore, the WHO cites the EPHS as a successful framework for assessing and improving public health services in the United States and notes its emerging use as an approach for lower- and middle- income countries to

build their public health capacity.[30] Furthermore, the EPHS informed the development of the Pan American Health Organization's EPHF model through the Public Health in the Americas initiative.[31] As another example of international scope, Israel has adapted the EPHS and the NPHPSP local instrument to support its public health system.[32]

EPHS in Practice

Since the release of the EPHS, health departments have utilized the framework to communicate about, assess, and improve their services in a variety of ways. The framework has allowed health departments to understand the scope of what they ought to be doing, identify gaps, and work to fill them. To better explain what public health does and to communicate the value of public health to the community, the Middle-Brook Health Commission, in New Jersey, revised its annual report to be based on the EPHS. Where before the report provided only numbers and tables, the revised format allowed the health department to share the story of its work in a more narrative style organized around the EPHS, cited in the report as a federally recognized framework and used as a way to educate the reader. Each chapter of the report is one of the EPHS (written communication, Kevin Sumner MPH, July 2019). In 2010, facing a budgetary crisis, the Kane County Health Department (IL) completely restructured its health department to ensure that essential services and core functions were being performed. The documentation for the restructured units' missions and goals were clearly linked to the EPHS and Core Functions, and all job description language was updated to reflect the EPHS/Core Functions.[33]
The EPHS have also been incorporated into state public health laws. Thirteen states – Alaska, Colorado, Connecticut, Illinois, Iowa, Minnesota, Montana, Nebraska, New Jersey, North Carolina, Texas, West Virginia, and Wisconsin – reference all 10 EPHS in their public health laws, while in Oregon, the EPHS are listed in laws other than public health statutes. Of these, eight states' laws also reference the core functions, and an additional five (Delaware, Kentucky, Maine, New York, and Washington) reference only the core functions. Some states, including Colorado, Iowa, Maine, North Carolina, Ohio, Oregon, and Vermont, reference either PHAB or state accreditation in their laws, which incorporate the EPHS. Additional states may reference individual services and/or spread them throughout regulations or may reference other initiatives (e.g., accreditation) that encompass the EPHS without calling them by name.[34] One state that lists the EPHS in its statutes is Connecticut, which states that "each district department of health and municipal health department shall ensure the provision of a basic health program that includes, but is not limited to, the following services for each community served by the district department of health and municipal health department" followed by a listing of the EPHS.[35] One Connecticut jurisdiction, historically focused only on environmental health, has leveraged the state requirement to engage its board in five-year strategic planning to use PHAB accreditation, due to its alignment with the EPHS, to move the health department toward its goal of meeting the EPHS (written correspondence, Jennifer Kertanis MPH, July 2019).

Additional examples of EPHS use include the local health districts in the state of Idaho, which utilized the EPHS as agreed upon terminology, measurement, and goals in conversations across the state as they developed a statewide strategic plan. With all seven health districts in Idaho using the same language and working toward the same statewide goal, they were able to reduce duplicative work and focus on ensuring that the districts had the capacity to provide the EPHS statewide.[8] In the Northern Kentucky Independent Health District, undergoing the MAPP process and using the EPHS as a framework for quality improvement allowed for health department leadership, health department staff, and community partners to have a better understanding of the public health system and each of their roles

in it. Recognition of the cross-cutting responsibilities of the EPHS led to organizational changes in the health department and led to planning processes being viewed with more credibility and visibility by others in the health department, the board of health, and the broader community.[8]

The EPHS have also been used to guide and evaluate health department efforts to combat specific issues faced by their communities like diabetes and obesity. For example, the CDC's Division of Diabetes Translation (DDT) utilized the EPHS model to define a vision and mission for diabetes prevention and used the EPHS framework to inform that processes necessary to tackle diabetes in a systematic fashion by delineating activities by essential service and using tools like the NPHPSP,[36] and obesity programs and services have been developed and evaluated according to the specific essential services to demonstrate where health departments are doing well or could make improvements (e.g., monitoring disease, developing relevant policies, etc.).[37] Roberts et al. have suggested use of the EPHS as a framework to guide how health departments approach abortion laws and activities by listing out specific activities that map to each service, for example, "plan and implement trainings for public health department health inspectors who inspect abortion facilities" as an activity under Essential Service #8: Assure a competent public health and personal healthcare workforce.[38] The EPHS has also been used to evaluate emergency preparedness and disaster response,[39,40,41] has been suggested as a model to formulate a response to climate change by listing out climate change-focused activities by essential service,[42] and has been used internationally for similar efforts.[43]

Many health departments display the 10 Essential Public Health Services on their websites for the public. One example is the Northern Kentucky Health Department, which features prominently the EPHS in a sidebar of related topics on their About Us page (HD website).[44] Other examples of the various ways health departments have incorporated the EPHS on their websites include:

- Including it as a topic along with other topics like accreditation and grants (Rhode Island Department of Health: Rhode Island Dept. of Health website);[45]
- Using it to help clarify public health to the community (Jefferson County, Kansas: HD website);[46] and
- Organizing the results of its public health system assessment by EPHS for public viewing (San Diego Local Public Health System Assessment).[47]

EPHS in Research and Teaching

Numerous studies analyze what factors (e.g., funding, governance, infrastructure) impact EPHS provision. For example, a forthcoming study evaluates the performance of health departments on the EPHS and describes the relationship between performance and institutional characteristics (M. Wallace, J. Sharfstein, and J. Lessler, unpublished data 2019). A significant study with a strong link to the EPHS is the National Longitudinal Survey of Public Health Systems (NALSYS, formerly NLSPHS). NALSYS has followed a nationally representative cohort of local public health systems since 1998 to examine over time public health activities, partnerships to achieve those activities, and their perceived effectiveness. NALSYS examines 20 public health activities, based upon the IOM's Core Functions and closely aligned to the EPHS.[48, 49]

The EPHS are also a critical component of the curricula in schools of public health. The Council on Education for Public Health, which accredits public health schools and programs, requires that schools and programs of public health ensure that all graduates are grounded in foundational public health

knowledge and specifically lists the EPHS as one of the required topic areas.[50] The environmental scan revealed several examples of how the EPHS have been incorporated into courses, including an introductory public health course that examined current public health events (e.g., Zika) through the lens of the EPHS, walking through each service and the activities that would address the issue. In the revised core coursework at the University of South Florida, the dean of the school teaches public health history, philosophies, and systems including the EPHS. One interviewee stated "That [the EPHS] is our foundation for teaching public health to those who are going to practice the profession" (oral communication, Tricia Penniecook MD, MPH, July 2019). The EPHS also appear in several textbooks, including special topic areas like public health leadership and public health nursing.[51,52]

Conclusion

Developed 25 years ago, the EPHS have become the foundation of public health practice, education and research. From informing initiatives like accreditation, to becoming the framework around which health departments organize their services, to being used as a tool for both health department evaluation and research studies, the EPHS have a wide reach beyond public health and beyond US borders. The EPHS have become so embedded in public health practice that when writing to support a minimum package of public health services, NACCHO specified that such a "minimum package should be built on the conceptual framework described by the three core public health functions, the ten essential public health services, the operational definition of a local health department, and the capacities needed for public health preparedness."[53] The EPHS continue to be widely utilized to explain and define public health both within the field and with outside stakeholders, policymakers, and the public to provide a clear description of the role of public health, even as the world around us changes. As we celebrate 25 years of the EPHS providing a common definition of public health practice, and work to revise the framework to ensure its relevance for the next 25 years and beyond, we should acknowledge and appreciate the vast impact it has had in the last quarter centu

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Appendix B: Psychometric Analysis

The Futures Initiative: the 10 Essential Public Health Services

A Psychometric Analysis of Accreditation Data

September 2019

As the public health field commemorates the 25th anniversary of the Essential Public Health Services (EPHS) and considers potential revisions to that framework, it is helpful to consider data about how health departments engage in the provision of those services. The Public Health Accreditation Board (PHAB) Standards & Measures for the accreditation of state, Tribal, local, territorial, and army health departments are organized into 12 domains—the first ten of which are based on the Essential Public Health Services. Since PHAB accredited the first health department in 2013, PHAB has been compiling data on how health departments were assessed by a team of peer site visitors against these measures. As such, it is the only source of peer-reviewed data on health department capacity in these areas. This report uses PHAB data to better understand how well the components within each EPHS—as defined through the PHAB standards—relate to each other. In other words, do the specific PHAB requirements within one domain correlate strongly with each other to describe one core concept? It also examines how well the domains correlate with each other and with the overall capacity of the health department.

Key Findings

Based on the analyses described in the following pages, several key themes emerge:

- Collectively, the content described in the PHAB domains presents a cohesive picture of health department capacity. This is demonstrated through the factor analysis, showing one principal component. In addition, there are statistically significant correlations ($p<0.000$) across all pairings of domains. This interconnectedness among these domains supports the idea that the domains (and, by extension, the EPHS) paint a coherent picture of public health capacity.
- While all the domains are significantly correlated, some are more strongly correlated than others. For example, Domain 3 (Inform and Educate about Public Health Issues and Functions) tends to have stronger correlations with other domains. In contrast, Domains 8 (Maintain a Competent Public Health Workforce) and 12 (Maintain Capacity to Engage the Public Health Governing Entity) have weaker correlations with other domains.
- Within each domain, the standards are correlated with each other. This suggests that overall each of the standards—or key components within the domain—represent concepts that are related to each other.
- The within-domain correlations are particularly strong for Domain 2 (Investigate Health Problems and Environmental Public Health Hazards to Protect the Community). On the other hand, Standard 5.4 (Maintain an all hazards emergency operations plan) has relatively weak correlations with the other standards within Domain 5 (Develop Public Health Policies and Plans).

This report begins with background information about PHAB and a description of the methodology. It is followed by findings related to the factor analysis and then correlations across domains and within domains.

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Background

The national accreditation program, administered by the Public Health Accreditation Board, is designed to improve and protect the health of the public by advancing and ultimately transforming the quality and performance of governmental public health departments. With support from the Centers for Disease Control and Prevention (CDC) and the Robert Wood Johnson Foundation, PHAB developed a consensus set of standards for public health and launched the accreditation program in 2011.
Since February 2013, when the first health departments were accredited, through July 2019, PHAB has accredited:

- 36 state health departments;
- 229 local health departments;
- 3 Tribal health departments; and
- 1 integrated system (comprised of 67 local health departments in one centralized state).

Health departments' conformity with each measure is assessed in a Site Visit Report, which is prepared by peer reviewers and forms the basis of the Accreditation Committee's determination of accreditation status. The assessments reflect how well, in the professional judgement of volunteer reviewers, health departments are able to provide documentation of the specific requirements in the Standards & Measures (https://www.phaboard.org/wp-content/uploads/2019/01/PHABSM_WEB_LR1.pdf).

There are approximately 100 measures, which are organized into standards, and then into 12 domains. The domains are based on the 10 Essential Public Health Services (EPHS), plus administration and management and the health department's relationship with its governing entity. PHAB describes those concepts in this way: "Domains are groups of standards that pertain to a broad group of public health services….Standards are the required level of achievement that a health department is expected to meet. Measures provide a way of evaluating if the standard is met.[1] This analysis focuses on the domains because they are representations of the EPHS, as well as on the standards as a means of exploring the connectiveness between the core components within those domains.

Methodology

This analysis is based on 311 state and local health departments whose performance against the Standards and Measures had been assessed as of July 2019. (Note: some of the health departments in this analysis were still progressing through the accreditation process.)

Peer reviewers assess each of the measures as being Fully Demonstrated, Largely Demonstrated, Slightly Demonstrated, or Not Demonstrated. For the basis of this analysis, these assessments were translated into numeric values—with Fully Demonstrated assigned the value 4 and Not Demonstrated assigned the value 1. All of the assessments are at the measure level; however, to better understand the domains, those measure scores were aggregated in the following manner.

[1]Public Health Accreditation Board. Public Health Accreditation Board Standards & Measures. December 2013. https://www.phaboard.org/wp-content/uploads/2019/01/PHABSM_WEB_LR1.pdf

- For each of the 12 domains, a domain score was generated for each health department by averaging its scores for all the measures within the domain.
- For each of the 32 standards, a standard score was generated for each health department by averaging its scores for all the measures within the standard.
- An overall performance score was generated for each health department by averaging its scores for all measures.

A factor analysis was conducted utilizing data from all domains. This analysis attempts to collapse variables by assessing their interdependencies (covariances) and using the strength of those relationships to infer underlying common concepts.
Next, several correlation matrices were generated.

- The correlation between each domain and the overall performance score. This further highlights the relationships between performance on a particular domain with the performance of the health department overall.
- A correlation matrix across the domains, showing how the performance of each domain relates to the performance of every other domain.
- For each domain, a correlation matrix for the standards within that domain. This illustrates how well the key facets within the domain align.

There are several limitations to consider related to these measure data. First, the assessments are based on the specific requirements in the Standards & Measures. Thus, it is possible that some of the variation in performance on these measures may be related to those requirements and how they are assessed rather than underlying capacities. PHAB is in the process of compiling recommendations that will inform a revision of the Standards & Measures. Second, the number of measures in each standard and the number of standards in each domain varies. If a domain has only two standards, for example, there is limited analysis on how the concepts within that domain relate to each other. Third, for some measures, there is limited variation in the distribution of assessments—for example, there are several measures where more than 90% of health departments were assessed as Fully Demonstrated. If a standard has a limited number of measures and health departments predominantly received the same assessment for those measures, it may be difficult to identify statistically significant correlations. When there is limited variation in a variable entered into a correlation matrix it may be harder to detect patterns in the relationships between that variable and other variables. Fourth, although the first 10 domains are based on the 10 EPHS, they are not identical to them. In particular, PHAB's Domain 9 has more of an emphasis on quality improvement and performance management than it does on evaluation, as stated in EPHS #9. Finally, these data are only from health departments that are seeking voluntary accreditation. As such, these results may not be generalizable to all health departments. Because these health departments have prepared for accreditation, there may be less variation in their assessments, which would affect the analysis of the relationships between the domains.

Results

Descriptive Statistics

Table 1 presents the 12 domains, along with the average score for all the measures within each domain. A score of 4 represents Fully Demonstrated. ***When reviewing the score, it is important to note that this analysis is based on these initial assessments of conformity***. However, more than 40% of health departments are required to complete an Action Plan and demonstrate progress on these measures before they are accredited. As such, information on the initial assessment does not reflect the current capacity of accredited health departments. Instead, it reflects the areas in which health departments initially faced challenges.

Table 1. Mean scores for each domain

Domain	Mean Score
1: Conduct and disseminate assessments focused on population health status and public health Issues facing the community	3.5
2: Investigate Health Problems and Environmental Public Health Hazards to Protect the Community	3.6
3: Inform and Educate about Public Health Issues and Functions	3.5
4: Engage with the Community to Identify and Address Health Problems	3.6
5: Develop Public Health Policies and Plans	3.4
6: Enforce Public Health Laws	3.6
7: Promote Strategies to Improve Access to Health Care	3.5
8: Maintain a Competent Public Health Workforce	3.6
9: Evaluate and Continuously Improve Processes, Programs, and Interventions	3.4
10: Contribute to and Apply the Evidence Base of Public Health	3.5
11: Maintain Administrative and Management Capacity	3.7
12: Maintain Capacity to Engage the Public Health Governing Entity	3.6

Table 2 presents the 32 standards, along with the average score for measures within each standard.

Table 2. Mean scores for each standard

Standard	Mean Score
1.1: Participate in or lead a collaborative process resulting in a comprehensive community health assessment	3.5
1.2: Collect and maintain reliable, comparable, and valid data that provide information on conditions of public health importance and on the health status of the population	3.5
1.3: Analyze public health data to identify trends in health problems, environmental public health hazards, and social and economic factors that affect the public's health	3.5
1.4: Provide and use the results of health data analysis to develop recommendations regarding public health policies, processes, programs, or interventions	3.6
2.1: Conduct timely investigations of health problems and environmental public health hazards	3.6
2.2: Contain/mitigate health problems and environmental public health hazards	3.5
2.3: Ensure access to laboratory and epidemiological/environmental public health expertise and capacity to investigate and contain/mitigate public health problems and environmental public health hazards	3.6
2.4: Maintain a plan with policies and procedures for urgent and non-urgent communications	3.6
3.1: Provide health education and health promotion policies, programs, processes, and interventions to support prevention and wellness	3.3
3.2: Provide information on public health issues and public health functions through multiple methods to a variety of audiences	3.7
4.1: Engage with the public health system and the community in identifying and addressing health problems through collaborative processes	3.5
4.2: Promote the community's understanding of and support for policies and strategies that will improve the public's health	3.7
5.1: Serve as a primary and expert resource for establishing and maintaining public health policies, practices, and capacity	3.6
5.2: Conduct a comprehensive planning process resulting in a Tribal/state/community health improvement plan	3.3
5.3: Develop and implement a health department organizational strategic plan	3.4
5.4: Maintain an all hazards emergency operations plan	3.4
6.1: Review existing laws and work with governing entities and elected/appointed officials to update as needed	3.4
6.2: Educate individuals and organizations on the meaning, purpose, and benefit of public health laws and how to comply	3.8
6.3: Conduct and monitor public health enforcement activities and coordinate notification of violations among appropriate agencies	3.5
7.1: Assess health care service capacity and access to health care services	3.4
7.2: Identify and implement strategies to improve access to health care services	3.6
8.1: Encourage the development of a sufficient number of qualified public health workers	3.8
8.2: Ensure a competent workforce through the assessment of staff competencies, the provision of individual training and professional development, and the provision of a supportive work environment	3.6

9.1: Use a performance management system to monitor achievement of organizational objectives	3.4
9.2: Develop and implement quality improvement processes integrated into organizational practice, programs, processes, and interventions	3.3
10.1: Identify and use the best available evidence for making informed public health practice decisions	3.7
10.2: Promote understanding and use of the current body of research results, evaluations, and evidence-based practices with appropriate audiences	3.6
11.1: Develop and maintain an operational infrastructure to support the performance of public health functions	3.6
11.2: Establish effective financial management system	3.8
12.1: Maintain current operational definitions and statements of public health roles, responsibilities, and authorities	3.9
12.2: Provide information to the governing entity regarding public health and the official responsibilities of the health department and of the governing entity	3.6
12.3: Encourage the governing entity's engagement in the public health department's overall obligations and responsibilities	3.3

Factor Analysis

The factor analysis, conducted using data from the 12 domains, indicates a strong, single factor that underlies all of the variance in the data. In fact, this single factor is responsible for 50% of the variance across the resulting scores from the 12 domains. The next factor identified is only tied to 7%. This large difference indicates that the data is measuring one component across all health departments. Further, this result supports the concept that the domains represent one coherent concept of health department capacity.

Analysis Across the Domains

Looking across the domains, the aggregate score for each domain is highly correlated with the health department's overall score. As shown in the last row of Table 3, the Pearson's R ranges from 0.527 for Domain 5 (Develop Public Health Policies and Plans) to 0.798 for Domain 3 (Inform and Educate about Public Health Issues and Functions). In total, eight of the 12 domains (Domains 1,2,3,4,5,6,9,11) have a correlation of at least 0.7 with the overall score, suggesting that the concepts in those domains are well linked to the health departments' overall assessment of capacity.

Each domain is also statistically significantly correlated ($p<0.000$) with every other domain, although there is considerably more variation in the strength of that correlation. The most highly correlated ($r=0.606$) pair of domains is Domain 2 (Investigate Health Problems and Environmental Public Health Hazards to Protect the Community) and Domain 6 (Enforce Public Health Laws). Whereas Domain 6 and Domain 8 (Maintain a Competent Public Health Workforce) have the weakest correlation ($r = 0.267$). In general, Domain 3 has strong correlations with many other domains, which may suggest that the function of informing and educating the public may have particularly strong overlap with other functions. On the other hand, Domains 8 and 12 (12: Maintain Capacity to Engage the Public Health Governing Entity) have weaker correlations with the other domains.

Table 3. Correlation matrix for 12 domains

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	dom1	*dom2*	*dom3*	*dom4*	*dom5*	*dom6*	*dom7*	*dom8*	*dom9*	*dom10*	*dom11*	*dom12*	*overallscore*
dom1	1.000	0.510	0.581	0.576	0.582	0.455	0.500	0.372	0.507	0.456	0.549	0.381	0.786
		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
dom2	0.510	1.000	0.571	0.545	0.396	0.606	0.413	0.315	0.379	0.385	0.469	0.367	0.740
	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
dom3	0.581	0.571	1.000	0.584	0.549	0.527	0.522	0.414	0.563	0.490	0.516	0.435	0.798
	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
dom4	0.576	0.545	0.584	1.000	0.456	0.447	0.438	0.392	0.437	0.470	0.502	0.321	0.709
	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
dom5	0.582	0.396	0.549	0.456	1.000	0.455	0.453	0.364	0.554	0.435	0.521	0.385	0.754
	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
dom6	0.455	0.606	0.527	0.447	0.455	1.000	0.454	0.267	0.457	0.365	0.544	0.363	0.728
	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
dom7	0.500	0.413	0.522	0.438	0.453	0.454	1.000	0.318	0.409	0.394	0.514	0.306	0.676
	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000
dom8	0.372	0.315	0.414	0.392	0.364	0.267	0.318	1.000	0.442	0.339	0.369	0.298	0.527
	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
dom9	0.507	0.379	0.563	0.437	0.554	0.457	0.409	0.442	1.000	0.349	0.462	0.428	0.721
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
dom10	0.456	0.385	0.490	0.470	0.435	0.365	0.394	0.339	0.349	1.000	0.404	0.343	0.601
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
dom11	0.549	0.469	0.516	0.502	0.521	0.544	0.514	0.369	0.462	0.404	1.000	0.426	0.736
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
dom12	0.381	0.367	0.435	0.321	0.385	0.363	0.306	0.298	0.428	0.343	0.426	1.000	0.581
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
overallscore	0.786	0.740	0.798	0.709	0.754	0.728	0.676	0.527	0.721	0.601	0.736	0.581	1.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Each cell presents the Pearson's R correlation coefficient above the p value. All p values less than 0.05 are highlighted in blue. For each row, the strongest correlation is highlighted in green and the weakest correlation is highlighted in yellow.

Analysis Within the Domains

A correlation matrix was generated for each domain to describe the relationships of standards within that domain. The number of standards within each domain ranges from 2 (which means that there is only 1 pair of standards in the correlation matrix) to 4 (which means there are 6 pairs in the correlation matrix). The set of correlation matrices is available in the Appendix.

In all cases, the correlations between standards within each domain is statistically significant ($p<0.000$) and the correlation is at least 0.200.

Table 4 provides an overview of the strength of the correlations within each domain. It shows the number of pairs within each domain that have correlations within several ranges. The cells that are color coded represent the most common correlation. For example, Domain 2 has a total of six pairs, five of which are very highly correlated; the remaining standard pair is more moderately correlated.

In total, there are 11 within-domain standard pairs that have a correlation of at least 0.500. Standards generally have stronger correlations with other standards in their domain than with standards in other domains. In a correlation matrix that includes all 32 standards (not shown), no between-domain pair of standards is correlated at the 0.500 level. In addition, approximately one-quarter of the between-domain pairs are not significantly correlated or are correlated at levels below 0.200. That is not the case for any of the within-domain pairs.

Table 4. Summary of strength of correlations between pairs of standards within each domain

Domain	Number of pairs of standards with correlations between….				# of pairs in domain
	0.200 & 0.299	0.300 & 0.399	0.400 & 0.499	0.500 & 0.599	
Domain 1		1	2	**3**	6
Domain 2			1	**5**	6
Domain 3				**1**	1
Domain 4			**1**		1
Domain 5		**5**		1	6
Domain 6		1	**2**		3
Domain 7			**1**		1
Domain 8	**1**				1
Domain 9				**1**	1
Domain 10		**1**			1
Domain 11		**1**			1
Domain 12	**3**				3

Domains 2, 3, 4, 7, and 9 have consistently moderate/strong correlations within the domains. This suggests that health departments who are assessed highly in one of the standards, are also assessed highly in the other standards within the domain. This supports the idea that the domain is capturing one core concept.

Below are additional details about the remaining seven domains:

- Domain 1: All but one of the six pairs has a moderate or strong correlation. The one relatively weaker correlation is between Standards 1.1&1.4; however, even that pair has a correlation of r = 0.381, suggesting relative consistency in the assessments of the standards throughout this domain.
- Domain 5: Although the correlation between Standards 5.2&5.3 is strong (r=0.533), the remaining pairs have lower correlations (ranging between 0.303 & 0.394). In particular, Standard 5.4 has lower correlations with the other three standards in the domain. This may suggest that while health departments generally perform similarly on a range of tasks related to policies and plans, their performance on the standard related to emergency preparedness may be a little different. One hypothesis is that the investment in preparedness funding over the years has affected health departments ability to plan within that particular area more than their general policy work, their community health improvement planning, or strategic planning.
- Domain 6: Standards 6.1&6.2 have a moderately weak correlation (0.362). Standard 6.2 has one of the highest average scores, so this finding may be related, in part, to limited variation in the assessments for that standard.

- Domain 8: Standards 8.1&8.2 (the only pair in this domain), have the weakest correlation (0.203) of all the within-domain pairs. However, it is important to note that Standard 8.1 is one of only two standards with just one measure in it. In addition, health departments performed particularly well on this measure—with a mean score of 3.8, it is the second highest mean score of all the standards. As such, the lack of statistical significance may be more related to the consistently high performance on this measure.
- Domain 10: Standards 10.1&10.2 (the only pair in this domain) have a relatively weak correlation of 0.332. Standard 10.1 is the other standard that has only one measure for local health departments.
- Domain 11: Standards 11.1&11.2 (the only pair in this domain) has a similar correlation of 0.316. Domain 11 is not one of the EPHS. It contains an assortment of measures related to administration & management, including information systems, financial systems, ethics, among others.
  Domain 12: The correlations between the three standards in Domain 12 range from 0.230 to 0.293. This is the other domain that does not correspond with any of the EPHS. These measures pertain to the relationship between the health department and its governing entity. Standard 12.1 has the highest mean score of all the measures. As such, the lack of statistical significance may be related to the consistently high performance on this measure. In addition, it should be explored whether performance on this measure is correlated strongly with type of governing entity. In which case, it's possible the type of governing entity is driving the variation in performance on this measure, which would have less of an effect in other domains.

Conclusion

This analysis suggests that collectively the concepts represented by the EPHS (as operationalized in the PHAB domains) present a coherent picture of health department capacity. There are strong correlations between many of these domains, particularly between Domain 3 (Inform and Educate about Public Health Issues and Functions) and the other domains.

In addition, the concepts within each of the domains are well aligned. Standards within the same domain tend to have stronger correlations with each other than with the standards in other domains. One standard, which has slightly weaker correlations with the other standards in its domain relates to emergency preparedness planning. This raises the question about where emergency preparedness most closely fits within the EPHS and PHAB frameworks. Because the EPHS do not specifically call out emergency preparedness as its own service, PHAB also does not have one domain dedicated to preparedness. Instead, requirements about preparedness are spread throughout the domains, with this planning standard representing only one of the places in PHAB framework where health departments demonstrate relevant capacities.

Because the PHAB is based on the EPHS framework, these findings may provide insights for consideration in the revisiting of the EPHS.

Appendix

Below are the correlation matrices for standards within each of the domains.

Domain 1

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	1.1	*1.2*	*1.3*	*1.4*
Standard 1.1	1.000	0.450 0.000	0.428 0.000	0.381 0.000
Standard 1.2	0.450 0.000	1.000	0.583 0.000	0.523 0.000
Standard 1.3	0.428 0.000	0.583 0.000	1.000	0.568 0.000
Standard 1.4	0.381 0.000	0.523 0.000	0.568 0.000	1.000

Domain 2

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	2.1	*2.2*	*2.3*	*2.4*
Standard 2.1	1.000	0.528 0.000	0.592 0.000	0.450 0.000
Standard 2.2	0.528 0.000	1.000	0.503 0.000	0.564 0.000
Standard 2.3	0.592 0.000	0.503 0.000	1.000	0.544 0.000
Standard 2.4	0.450 0.000	0.564 0.000	0.544 0.000	1.000

Domain 3

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	3.1	*3.2*
Standard 3.1	1.000	0.571 0.000
Standard 3.2	0.571 0.000	1.000

Domain 4

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	4.1	*4.2*
Standard 4.1	1.000	0.401 0.000
Standard 4.2	0.401 0.000	1.000

Domain 5

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	5.1	*5.2*	*5.3*	*5.4*
Standard 5.1	1.000	0.390 0.000	0.394 0.000	0.326 0.000
Standard 5.2	0.390 0.000	1.000	0.533 0.000	0.303 0.000
Standard 5.3	0.394 0.000	0.533 0.000	1.000	0.346 0.000
Standard 5.4	0.326 0.000	0.303 0.000	0.346 0.000	1.000

Domain 6

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	6.1	*6.2*	*6.3*
Standard 6.1	1.000	0.362 0.000	0.474 0.000
Standard 6.2	0.362 0.000	1.000	0.438 0.000
Standard 6.3	0.474 0.000	0.438 0.000	1.000

Domain 7

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	7.1	*7.2*
Standard 7.1	1.000	0.476 0.000
Standard 7.2	0.476 0.000	1.000

Domain 8

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	8.1	*8.2*
Standard 8.1	1.000	0.203 0.000
Standard 8.2	0.203 0.000	1.000

Domain 9

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	9.1	*9.2*
Standard 9.1	1.000	0.544 0.000
Standard 9.2	0.544 0.000	1.000

Domain 10

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	10.1	*10.2*
Standard 10.1	1.000	0.332 0.000
Standard 10.2	0.332 0.000	1.000

Domain 11

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	11.1	*11.2*
Standard 11.1	1.000	0.316 0.000
Standard 11.2	0.316 0.000	1.000

Domain 12

Pearson Correlation Coefficients, N = 311
Prob > |r| under H0: Rho=0

	12.1	*12.2*	*12.3*
Standard 12.1	1.000	0.230 0.000	0.277 0.000
Standard 12.2	0.230 0.000	1.000	0.293 0.000
Standard 12.3	0.277 0.000	0.293 0.000	1.000

Appendix C: Task Force

10 Essential Public Health Services Futures Initiative
Task Force Roster
September 2019

TASK FORCE MEMBERS

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FEDERAL LIAISONS

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Appendix D: Feedback from the Public Health Field

Table 1: Organizational Affiliations of Web-based Survey and Town Hall Respondents

Affiliation	**# Respondents**	**% Respondents**
Local health department	467	46.3%
State health department	118	11.7%
Tribal health department or Tribal organization	0	0.0%
Territorial health department	1	0.1%
Federal agency	51	5.1%
Non-profit or community-based organization	123	12.2%
Academia/Research	151	15.0%
Student	33	3.3%
Other	76	7.5%
Total	1009	

Complete List of Questions for Meetings and Townhalls

- What do you see as the emerging public health challenges in the future?
- What public health functions are essential to meet emerging challenges?
- What one word do you see when you think of the 10 Essential Public Health Services?
- In what ways have the 10 EPHS been useful?
- If it were up to you to dictate the framework for the next 25 years, would you: (closed-ended)
- Which Essential Service(s) would you recommend changing? (closed-ended)
- What concept(s) would you change or add?

Complete List of Questions for the Web-based Survey:

- What public health functions are essential to meet emerging challenges?
- What do you see as the emerging public health challenges in the future?
- If it were up to you to dictate the framework for the next 25 years, would you (closed-ended):
- Which Essential Service(s) would you recommend changing? (closed-ended)
- If you recommend changing one or more of the Essential Services, please list the change you would recommend.
- What concept(s) would you add?
- Has your organization used the 10 EPHS? If yes, please describe how it has been used
- Is there anything else you would like to tell us about the 10 EPHS?

Table 2: Emerging Challenges

Themes	Number of Responses
Societal Issues	
Inequity	253
Social Determinants of Health	222
Isms (e.g., racism, sexism, ableism)	143
Violence/trauma	118
Poverty/income inequality	85
Politics	56
Social Cohesion	54
Aging	46
Migration	31
Food Security/Nutrition	22
Healthcare or Disease Related Issues	
Mental Health/Substance Abuse	214
Infectious disease	125
Healthcare	115
Chronic disease	74
Misinformation	27
Vaccines	26
Occupational health	5
Environmental Issues	
Climate Change	276
Environmental Health	51
Organizational Issues	
Funding	222
Workforce	166
Collaboration	77
Technology	50
Data	40
Law/Policy/Advocacy	36
Emergency Prep/Response	27
Innovation	19

Table 3: Public Health Functions Needed to Meet Emerging Challenges

Themes	Number of Responses
Infrastructure/Systems Focus	
Collaboration	282
Workforce	208
Funding	107
Leadership	58
Systems thinking	38
Organizational/Business skills	19
Community Focus	
Community engagement	188
Equity	152
Organizing	20
Policy Focus	
Policy	274
Advocacy	87
Politics	26
Law	11
Programs Focus	
Traditional PH skills or programs	341
Informatics	203
Innovation	134
Communication	125
Evaluation/Assessment	116
Planning	33
Prevention or population focus	14

Table 4: Changes to EPHS Framework

If it were up to you to dictate the framework for the next 25 years, would you:	All Responses	Meetings	Town Halls	Web Survey
Scrap the 10 EPHS and create a new model from scratch	8%	11%	6%	9%
Scrap the 10 EPHS and don't create anything new	1%	3%	0%	1%
Keep it exactly as is	6%	1%	2%	10%
Make some minor tweaks to the current framework	50%	57%	54%	43%
Keep framework, but make major revisions to it	35%	28%	37%	37%

Table 5: Which EPHS Would You Recommend Changing?

Essential Public Health Services	All Respondents	Meetings	Town Halls	Web-based Survey
1: Monitor health status to identify and solve community health problems	21%	18%	21%	23%
2: Diagnose and investigate health problems and health hazards in the community	19%	15%	17%	23%
3: Inform, educate, and empower people about health issues	28%	22%	26%	32%
4: Mobilize community partnerships to identify and solve health problems	24%	21%	22%	26%
5: Develop **policies** and plans that support individual and community health efforts	28%	24%	26%	30%
6: Enforce laws and regulations that protect health and ensure safety	24%	24%	22%	25%
7: Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable	44%	42%	54%	37%
8: Assure a competent public and personal healthcare **workforce**	34%	32%	34%	35%
9: Evaluate effectiveness, accessibility, and quality of personal and population-based health services	30%	31%	31%	29%
10: Research for new insights and innovative solutions to health problems	29%	29%	30%	27%
N/A - Not interested in changing anything	16%	12%	8%	25%

Table 6: Suggested Changes and Additions (General)

Theme	Number of Responses
Equity	327
Social determinants of health	183
Partnership/Collaboration	123
Community engagement	102
Policy	90
Business/Organizational Functions	75
Healthcare	75
Informatics	71
Simplify/Clarify	57
Innovation	51
Communication	37
Leadership	32
Performance management	26
Broaden role of law	26
Emergency Preparedness	26
Prevention	22
Policy/Systems/Env Changes	20
Climate change	18
Foundational Public Health Services	16
Marketing	15
Public health awareness	11
Planning	11
Conditions to be healthy	11

Table 7: Common Themes in Changes Needed to Individual EPHS

EPHS	Equity	Social Determinants of Health	Community Engagement
1: Monitor	X	X	X
2: Diagnose	X	X	X
3: Inform	X	X	X
4: Mobilize	X	X	X
5: Policies	X	X	X
6: Enforce	X		
7: Link	X	X	
8: Workforce	X	X	X
9: Evaluate	X		X
10: Research	X	X	X

Table 8: Numbers of Comments re Recommended Changes to Specific EPHS

Essential Public Health Service	**Number of Comments**
1 - Monitor health status to identify community health problems	53
2 - Diagnose and investigate health problems and health hazards in the community	50
3 - Inform, educate, and empower people about health issues	83
4 - Mobilize community partnerships to identify and solve health problems	63
5 - Develop policies and plans that support individual and community health efforts	90
6 - Enforce laws and regulations that protect health and ensure safety	53
7 - Link people to needed personal health services and assure the provision of healthcare when unavailable	93
8 - Assure a competent public health and personal healthcare workforce	97
9 - Evaluate effectiveness, accessibility, and quality of personal and population-based health services	67
10 - Research for new insights and innovative solutions to health problems	79

Appendix E: Details about Sub-Coding

Table 1: Public Health Functions Needed to Meet Emerging Challenges – Sub-coding

Responses for themes with more than 50 mentions were sub-coded; these results are summarized in Table 1. Note that responses that were limited to the main theme title (or a synonym) with little or no elaboration (e.g., health equity, strong leadership, data, skilled workforce, etc.) were not sub-coded.

Theme	**Number of Responses**
Community Engagement	**188**
Empowerment	37
Mobilization	12
Focus on most affected communities	16
Priority setting/decision-making	12
Research	9
Trust/relationship building	8
Listening	5
Policy	**274**
Systems/structural	25
Partnerships	8
Equity/SDoH	14
Health in all policies	22
Data-driven	7
Policy analysis	15
Enforcement	10
Collaboration	**282**
Community partnerships	68
Multi-sectoral	69
Healthcare system	20
Other private sector	6
Academic	2
Interdisciplinary/interprofessional	11
Communication	2
Informatics	**203**
Timely data	13
Data sharing/integration	33
Communication/access to data	27
Data for policy/decision-making	16

Equity	**152**
Racism	45
Power/advantage	33
Social determinants of health	26
Education of staff & others	12
Equity lens/framework	32
Evaluation/Assessment	**116**
Evaluation	51
Community Assessment	9
Needs Assessment	6
QI/Performance Mgmt	18
Advocacy	**87**
Justice/equity/SDoH	7
Value of/funding for PH	5
Funding	107
Flexible funding	10
Stable/consistent funding	8
Specific areas/programs to fund	7
Traditional PH skills or programs	**341**
Surveillance/Epi	148
Education/Promotion	110
Provide or link to services	68
Emergency Preparation/Response	22
Environmental Health	19
Regulation/Enforcement	20
Leadership	**58**
Health strategist/multi-sector	12
Transformative/adaptive	9
Innovation	**134**
Research (unspecified)	32
Evidence-based practice or policy	28
Flexibility/change/emerging issues	21
Translating/disseminating research	16
Technology	16

Workforce	**208**
Cultural competency	10
Other specific skills	30
Specific occupations	4
Pay	6
Diversity in workforce	7
Communication	**125**
Social media	12
Marketing/branding	24
Narrative	7

Table 2: Changes/Additions to EPHS – Sub-coding

Responses for themes with more than 50 mentions were sub-coded; these results are summarized in Table 2. Note that responses that were limited to the main theme title (or a synonym) with little or no elaboration (e.g., health equity, social determinants of health, data, policy development, etc.) were not sub-coded.

Theme/sub-theme	Freq
Partnership/Collaboration	123
Multi-sectoral	54
Community partnerships	14
Other private sector	10
Interdisciplinary/professional	9
Healthcare system	5
Academic	5
Informatics	71
Data sharing/integration	10
Policy/decision-making	5
Timely data	2
Innovation	51
Evidence-based practice/policy	12
Flexibility/change/emerging issues	7
Translate/disseminate research	7
Research (unspecified)	3
Technology	2
Equity	327
Racism	58
Power/advantage	58
Equity lens/framework	44
Social determinants of health	17
Education of staff & others	10
SDoH	183
Other specific SDoH	19
Racism	11
Environment	9
Defining 'health'	6
Justice	2
Bus/Org Functions	74

Funding	15
Work processes	12
Workforce	8
Governance	5
Policy	101
Health in All Policies	39
Advocacy	23
Equity/SDoH	7
Systems/structural	3
Enforcement	11
Policy analysis	2
Partnerships	1
Data-driven	1
Community Engagement	102
Empowerment	36
Focus on most affected communities	16
Priority setting/decision-making	10
Organizing	10
Mobilization	6
Research	2
Trust/relationship building	2
Listening	2
Simplify/Clarify	56
Specific terminology suggestions	23
Define PH, healthcare, other sectors	6
Reduce number	5
Cohesion of the framework	3
Reduce redundancy	2
Include EH and other specific areas	1
Healthcare	80
Remove healthcare/personal health	30
Clarify PH role	13
Mental/Behavioral Health	11
Integration with healthcare	8
Affordability/cost of care	5
Universal Coverage	4

Table 3: Recommended Changes to Specific EPHS

Recommended Changes	Freq
1 - Monitor health status to identify community health problems	**53**
1.1 - Monitor upstream factors/SDoH	18
1.2 - Disaggregate health status for subgroups	10
1.3 - Involve community members	8
1.4 - Communicate results	5
1.5 - Merge with other EPHS	10
1.6 - Partner with other organizations	3
2 - Diagnose and investigate health problems and health hazards in the community	**50**
2.1 - Focus on root causes	10
2.2 - Expand "hazards" definition including SDoH	15
2.3 - Involve community members	5
2.4 - Focus on groups with disproportionate impact	3
2.5 - Merge with other EPHS	4
2.6 - Lose term "diagnose"	9
3 - Inform, educate, and empower people about health issues	**83**
3.1 - Term "empower"	14
3.11 Use other terminology	8
3.12 Clarify meaning	6
3.2 - Focus on roots & upstream causes	19
3.3 - Focus on policy/advocacy	6
3.4 - Less focus on individual behavior	12
3.5 - Merge with other EPHS	5
3.6 - Roles of community	13
3.7 - Health literacy	6
3.8 - Comm strategies or audiences	18
4 - Mobilize community partnerships to identify and solve health problems	**63**
4.1 - PH should not lead	6
4.2 - Community members	21
4.3 - Cross-sector collaboration	15
4.4 - Focus upstream/systems level	14
4.5 - Policy/advocacy	5
4.6 - Merge with other EPHS	5
5 - Develop policies and plans that support individual and community health efforts	90
5.1 - Equity focus	17
5.2 - Structural/system reforms	22

5.3 - Social determinants of health	10
5.4 - Health in all policies	14
5.5 - Community engagement	9
5.6 - Advocacy	10
5.7 - State/federal levels	**9**
5.8 - Merge with other EPHS	2
5.9 - Action/implementation	8
6 - Enforce laws and regulations that protect health and ensure safety	**53**
6.1 - Problems/issues with enforcement	17
6.11 - PH cannot/does not enforce	4
6.12 - PH should not enforce	6
6.13 - Unintended consequences	3
6.2 - Merge with law/policy-making	10
6.3 - Equity	12
7 - Link people to needed personal health services and assure the provision of healthcare when unavailable	**93**
7.1 - Healthcare not PH responsibility	10
7.2 - PH has limited role in HC delivery	10
7.3 - PH has role in HC but not delivery	23
7.4 - Linkages to other services (SDoH)	29
7.5 - Need for universal HC access	15
7.6 - Quality of care	8
7.7 - Merge with other services	3
8 - Assure a competent public health and personal healthcare workforce	**97**
8.1 - Eliminate personal HC workforce	17
8.2 - Inclusion/diversity	21
8.3 - Cultural competency or equity-related	12
8.4 - Other specific competencies/skills	16
8.5 - Financial resources	8
8.6 - Formal education system	9
8.7 - Delete this service	3
8.8 - State how to assure	6
8.9 - Include workforce re SDoH	4
9 - Evaluate effectiveness, accessibility, and quality of personal and population-based health services	**67**
9.1 - Role of PH in HC evaluation	20
9.11 Eliminate HC services eval	10

9.12 Clarify PH role in HC eval	6
9.2 - Evaluation of policy/systems efforts	6
9.3 - Equity	10
9.4 - PM/QI	11
9.5 - Community engagement	6
9.6 - Financial resources	3
9.7 - Merge or delete	8
9.8 - Difficult to do well	6
10 - Research for new insights and innovative solutions to health problems	**79**
10.1 - LHD role in research	15
10.2 - Community engagement	10
10.3 - Broaden "health problems"	13
10.4 - Use of evidence base/implementation	13
10.5 - Equity	6
10.6 - Partnerships	11
10.7 - Informal research	7
10.8 - Share results/data	6
10.9 - Merge or delete	3

Appendix F: 10 EPHS for Public Vetting

EPHS #1 for Vetting

Assess and monitor health status, factors that influence health, needs, and assets to understand and improve population health and well-being.
This service includes: • Identifying threats to population health and assessing health needs and community assets • Using data and information to determine the root causes of health disparities and inequities • Working with the community to understand community health status, assets, needs, key influences, and community narrative • Being transparent and inclusive with all partners and the community • Collaborating with and facilitating data sharing with all partners, including non-traditional partners • Collecting, monitoring, and analyzing data on health and factors that influence health, including disproportionately affected populations to identify threats, patterns, and emerging issues • Using innovative technology, data collection methods, and data sets • Utilizing various methods and technology to interpret and communicate data to diverse audiences

Question	**Percentage**		**Frequency**	
	Yes	**No**	**Yes**	**No**
Proposed **statement** for this service accurately captures an essential public health function	94%	6%	565	35
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	89%	11%	535	65

EPHS #2 for Vetting

Diagnose, investigate, and address health problems and hazards affecting the population, including the identification of root causes.
This service includes: • Anticipating and preventing emerging health threats through epidemiologic identification • Monitoring real-time health status and patterns to identify acute outbreaks, chronic diseases, and injuries • Using public health laboratory capabilities and modern technology to conduct rapid screening and high-volume testing

- Analyzing and utilizing inputs from multiple sectors and sources to consider social, economic, and environmental root causes of health status
- Identifying, analyzing, and distributing information from new, big, and real-time data sources

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	95%	5%	564	29
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	85%	15%	508	89

EPHS #3 for Vetting

Communicate effectively to inform and educate people about health, including factors that influence it and how to improve it.

This service includes:

- Developing and disseminating accessible health information and resources, including through collaboration with multi-sector partners
- Communicating with accuracy and necessary speed
- Using appropriate communications channels—social media, peer-to-peer networks, mass media, and other channels—to effectively reach the target populations
- Developing and deploying culturally and linguistically appropriate and relevant communications, which includes working with stakeholders and influencers in the community to create effective and culturally resonant materials
- Employing the principles of risk communication to engage when appropriate
- Actively engaging in two-way communication to build trust with populations served and ensure effectiveness of prevention and health promotion strategies
- Ensuring public health communications efforts are asset-based when appropriate and do not reinforce narratives that are damaging to disproportionately affected populations

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	94%	6%	557	38
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	87%	13%	525	76

EPHS #4 for Vetting

Strengthen, support, and mobilize the community and partnerships to improve population health.
This service includes: • Convening and facilitating multi-sector partnerships and coalitions that include sectors not traditionally associated with health (e.g., planning, transportation, housing, education, etc.) • Fostering and building authentic relationships with a diverse group of partners that reflect the community and the population and build on their strengths • Including and involving community members and organizations in the development of public health solutions • Learning from and supporting existing community partnerships and contributing public health expertise

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	95%	5%	566	30
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	86%	14%	518	82

EPHS #5 for Vetting

Create and champion policies and plans that improve and protect the public's health, remove obstacles to optimal health, and support the resilience of the entire population.
This service includes: • Developing plans, policies, codes, and regulations that guide the practice of public health • Systematically examining and improving existing policies, plans, and regulations to correct historical injustices • Ensuring that new policies, plans, and regulations provide a fair and just opportunity for all to achieve good health • Providing input into policies, plans, and regulations to ensure that health impact is considered • Continuously monitoring and developing policies, plans, and regulations that increase public health and community preparedness against health and environmental threats • Collaborating with all partners, including non-traditional partners, to develop and support plans and policies • Working across partners and with the community for systematic and continuous community-level and state-level health improvement strategy and planning, implementing, evaluating, and improving

Question	**Percentage**		**Frequency**	
	Yes	**No**	**Yes**	**No**
Proposed **statement** for this service accurately captures an essential public health function	94%	6%	552	36
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	83%	17%	498	100

EPHS #6 for Vetting

Employ legal and regulatory actions to protect and ensure the public's health and safety.
This service includes: • Ensuring that applicable laws and regulations are followed to protect the public's health • Preventing and mitigating public health hazards • Conducting enforcement activities that may include, but are not limited to: sanitary codes, especially in the food industry; full protection of drinking water supplies; and timely follow-up of hazards, preventable injuries, and exposure-related diseases identified in occupational and community settings

- Licensing and monitoring the quality of healthcare services (e.g., laboratory, nursing homes, and home healthcare)
- Reviewing new drug, biologic, and medical device applications
- Licensing and credentialing the healthcare workforce
- Including health considerations in laws and regulations from other sectors (e.g. zoning)

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	94%	6%	552	37
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	83%	17%	491	100

EPHS #7 for Vetting

Assure an effective system that enables equitable access, by all people, to the individual services and care needed to be healthy.

This service includes:

- Connecting the population to needed health and social services that support the whole person, including preventive services
- Ensuring access to high-quality and cost-effective healthcare and services, including behavioral and mental health services, that are culturally and linguistically appropriate
- Addressing and removing barriers to care
- Building relationships with payers and healthcare providers, including the sharing of data across partners to foster health and well-being
- Ensuring a trained and qualified healthcare workforce

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	91%	9%	544	52
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	82%	18%	487	109

EPHS #8 for Vetting

Build and support a diverse and skilled public health workforce.
This service includes: • Providing education and training that encompass a spectrum of public health competencies, including technical, strategic, and leadership skills • Ensuring that the public health workforce is the appropriate size to meet the public's needs • Building a public health workforce with leadership that reflects the community • Incorporating public health principles in non-public health curricula • Cultivating and building active partnerships with academia and other professional training programs and schools to assure community-relevant learning experiences for all learners • Promoting a culture of lifelong learning in public health, drawing from academic and non-traditional settings • Building a pipeline of future public health practitioners • Fostering leadership skills at all levels

Question	**Percentage**		**Frequency**	
	Yes	**No**	**Yes**	**No**
Proposed **statement** for this service accurately captures an essential public health function	96%	4%	571	25
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	87%	13%	513	80

EPHS #9 for Vetting

Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement.
This service includes: • Building and fostering a culture of quality in public health delivery and in public health research • Linking public health research with public health practice • Using research, evidence, practice-based insights, and other forms of data to inform decision-making • Contributing to the evidence base of effective public health practice • Assessing quality and performance of programs, plans, and services • Continuously evaluating policies and systems to ensure programs and policies are contributing to health and not creating undue harm

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	96%	4%	575	24
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	88%	12%	521	72

EPHS #10 for Vetting

Build and maintain a strong organizational infrastructure to support public health.
This service includes: • Ensuring that appropriate, needed resources are allocated for public health • Exhibiting effective, ethical leadership and decision-making • Effectively managing financial and human resources • Employing communications and strategic planning capacities and skills • Having robust information technology services that are current and meet privacy and security standards

Question	Percentage		Frequency	
	Yes	No	Yes	No
Proposed **statement** for this service accurately captures an essential public health function	95%	5%	553	29
Proposed **bullet point descriptors** for this service accurately captures the elements of this function	86%	14%	513	81

Appendix G: Comparison between the Original EPHS and the 2020 EPHS

The Futures Initiative: the 10 Essential Public Health Services

Changes Made between the Revised Essential Services and the Original Essential Services

September 2020

The original 10 Essential Public Health Services (EPHS) framework was developed in 1994 by a federal working group and serves as the description of the activities that public health systems should undertake in all communities. Organized around the three core functions of public health – assessment, policy development, and assurance – the colorful, circular framework is a familiar graphic in the public health field and has provided a roadmap of goals for carrying out the mission of public health in communities around the nation. However, the public health landscape has shifted dramatically over the past 25 years, and many public health leaders agreed it was time to revisit how the framework can better reflect current and future practice and how it can be used to create communities where people can achieve their best possible health.

The Futures Initiative, a partnership between the de Beaumont Foundation, PHNCI, and a Task Force of public health experts, formed in Spring 2019 to bring the Essential Services national framework in line with current and emerging public health practice needs. This effort engaged the public health field through a variety of input opportunities, including live crowdsourcing events, in-person and virtual townhalls, think tank discussions, and open questionnaires. All direct feedback on the Essential Services and how they might be revised was considered, resulting in a revised version of the 10 EPHS that now centers equity and incorporates concepts relevant to current and future public health practice.

The table that follows show the revised EPHS language from 2020 side-by-side with the original EPHS language from 1994, as well as a narrative that highlights the changes made between the two versions.

ES	Revised EPHS (2020)	Original EPHS (1994)	Changes Made
1	Assess and monitor population health status, factors that influence health, and community needs and assets – Maintaining an ongoing understanding of health in the jurisdiction by collecting, monitoring, and analyzing data on health and factors that influence health to identify threats, patterns, and emerging issues, with a particular emphasis on disproportionately affected populations. – Using data and information to	Monitor health status to identify and solve community health problems – Accurate, periodic assessment of the community's health status, including identification of health risks, determinants of health, and determination of health service needs; attention to the vital statistics and health status indicators of groups that are at higher risk than the total population; and identification of community assets that support the local public health system (LPHS) in	Essential service #1 focuses on assessing and monitoring population health. The revised language expands upon the methods by which this is done and recognizes root causes of inequities and importance of disaggregated data and community voice. It further expands upon the concept of multi-sector collaboration and use of innovation, technology, and data.

	determine the root causes of health disparities and inequities. – Working with the community to understand health status, needs, assets, key influences, and narrative. – Collaborating and facilitating data sharing with partners, including multi-sector partners. – Using innovative technologies, data collection methods, and data sets. – Utilizing various methods and technology to interpret and communicate data to diverse audiences. – Analyzing and using disaggregated data (e.g., by race) to track issues and inform equitable action. – Engaging community members as experts and key partners.	promoting health and improving quality of life. – Use of appropriate methods and technology, such as geographic information systems (GIS), to interpret and communicate data to diverse audiences. – Collaboration among all LPHS components, including private providers and health benefit plans, to establish and use population health registries, such as disease or immunization registries.	
2	Investigate, diagnose, and address health problems and hazards affecting the population – Anticipating, preventing, and mitigating emerging health threats through epidemiologic identification. – Monitoring real-time health status and identifying patterns to develop strategies to address chronic diseases and injuries.	Diagnose and investigate health problems and health hazards in the community – Epidemiologic investigations of disease outbreaks, patterns of infections, chronic diseases, injuries, environmental hazards, and other public health threats and emergencies. – Active infectious disease epidemiology programs. – Access to a public health laboratory capable of	Essential public health service #2 focuses on the role that public health plays in problems and hazards affecting the population. The revised language maintains reference to laboratory access, epidemiology, and public health threats and emergencies, while also highlighting the importance of real-time data, including from other sectors.

	– Using real-time data to identify and respond to acute outbreaks, emergencies, and other health hazards. – Using public health laboratory capabilities and modern technology to conduct rapid screening and high-volume testing. – Analyzing and utilizing inputs from multiple sectors and sources to consider social, economic, and environmental root causes of health status. – Identifying, analyzing, and distributing information from new, big, and real-time data sources.	conducting rapid screening and high-volume testing.	
3	Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it – Developing and disseminating accessible health information and resources, including through collaboration with multi-sector partners. – Communicating with accuracy and necessary speed. – Using appropriate communications channels (e.g., social media, peer-to-peer networks, mass media, and other channels) to effectively reach the intended populations.	Inform, educate, and empower people about health issues – Health information, health education, and health promotion activities designed to reduce health risk and promote improved health. – Health communication plans and activities such as media advocacy and social marketing. – Accessible health information and educational resources. – Health education and health promotion program partnerships with schools, faith-based communities, work sites, personal care providers, and others to implement and reinforce health promotion programs and messages.	Essential public health service #3 focuses on the role of health education and communications for public health. The revised language reflects learnings from communication science and now includes concepts of risk communication, deployment of cultural and linguistically appropriate materials, multi-sector partnerships for communication, use of appropriate channels, and the importance of accuracy, timeliness, and two-way communication. It further emphasizes that efforts be asset-based and address equity.

	– Developing and deploying culturally and linguistically appropriate and relevant communications and educational resources, which includes working with stakeholders and influencers in the community to create effective and culturally resonant materials. – Employing the principles of risk communication, health literacy, and health education to inform the public, when appropriate. – Actively engaging in two-way communication to build trust with populations served and ensure accuracy and effectiveness of prevention and health promotion strategies. – Ensuring public health communications and education efforts are asset-based when appropriate and do not reinforce narratives that are damaging to disproportionately affected populations.		
4	Strengthen, support, and mobilize communities and partnerships to improve health – Convening and facilitating multi-sector partnerships and coalitions that include sectors that influence health (e.g., planning,	Mobilize community partnerships and action to identify and solve health problems – Identifying potential stakeholders who contribute to or benefit from public health and increasing their awareness of the value of public health.	Essential service #4 focuses on communities and partnerships. It highlights the importance of authentically engaging communities as partners and working with multi-sector partners including those that influence health. It emphasizes the role that public health can play in convening, facilitating,

	transportation, housing, education, etc.). – Fostering and building genuine, strengths-based relationships with a diverse group of partners that reflect the community and the population. – Authentically engaging with community members and organizations to develop public health solutions. – Learning from, and supporting, existing community partnerships and contributing public health expertise.	– Building coalitions, partnerships, and strategic alliances to draw upon the full range of potential human and material resources to improve community health. – Convening and facilitating partnerships and strategic alliances among groups and associations (including those not typically considered to be health-related) in undertaking defined health improvement projects, including preventive, screening, rehabilitation, and support programs.	and contributing expertise to solutions.
5	Create, champion, and implement policies, plans, and laws that impact health – Developing and championing policies, plans, and laws that guide the practice of public health. – Examining and improving existing policies, plans, and laws to correct historical injustices. – Ensuring that policies, plans, and laws provide a fair and just opportunity for all to achieve optimal health. – Providing input into policies, plans, and laws to ensure that health impact is considered. – Continuously monitoring and developing policies, plans, and laws that improve public health and preparedness and	Develop policies and plans that support individual and community health efforts – Effective local public health governance. – Development of policy, codes, regulations, and legislation to protect the health of the public and to guide the practice of public health. – Systematic LPHPS and state-level planning for health improvement in all jurisdictions. – Alignment of LPHS resources and strategies with community health improvement plans.	Essential public health service #5 focuses on policies, plans, and laws that impact health. The revised language includes mention of the role public health plays in both developing and championing policies, plans, and laws and using them to correct historical injustices and afford a fair and just opportunity for all people to achieve optimal health. It acknowledges the importance of including health in all policies and adds preparedness and community resilience. It maintains mention of community health improvement planning processes.

	strengthen community resilience. – Collaborating with all partners, including multi-sector partners, to develop and support policies, plans, and laws. – Working across partners and with the community to systematically and continuously develop and implement health improvement strategies and plans, and evaluate and improve those plans.		
6	Utilize legal and regulatory actions designed to improve and protect the public's health – Ensuring that applicable laws are equitably applied to protect the public's health. – Conducting enforcement activities that may include, but are not limited to sanitary codes, especially in the food industry; full protection of drinking water supplies; and timely follow-up on hazards, preventable injuries, and exposure-related diseases identified in occupational and community settings. – Licensing and monitoring the quality of healthcare services (e.g., laboratory, nursing homes, and home healthcare).	Enforce laws and regulations that protect health and ensure safety – Assurance of due process and recognition of individuals' civil rights in all procedures, enforcement of laws and regulations, and public health emergency actions taken under the board of health or other governing body's authority. – Review, evaluation and revision of laws and regulations designed to protect health and safety, reflect current scientific knowledge, and utilize best practice for achieving compliance. – Education of persons and entities obligated to obey and agencies obligated to enforce laws and regulations to encourage compliance. – Enforcement activities in a wide variety of areas of public health concern under authority granted by	Essential public health service #6 focuses on legal and regulatory actions. The revised language adds the concept of equity and expands responsibilities around the legal and regulatory functions of the public health system to protect communities from unsafe food and water, hazardous conditions, and exposure-related diseases that can cause health crises. The revised framework moves language about licensing and monitoring the quality of healthcare services (like labs and nursing homes) and licensing and credentialing the healthcare workforce from the original EPHS #8 to here.

	– Reviewing new drug, biologic, and medical device applications. – Licensing and credentialing the healthcare workforce. – Including health considerations in laws from other sectors (e.g., zoning).	local, state, and federal rule or law including, but not limited to: abatement of nuisances, animal control, childhood immunizations and other vaccinations, food safety, housing code, local sanitary code, on site wastewater disposal (septic systems), protection of drinking water, school environment, solid waste disposal, swimming pool and bathing area safety and water quality, tobacco control, enforcement activities during emergency situations, and vector control.	
7	Assure an effective system that enables equitable access to the individual services and care needed to be healthy – Connecting the population to needed health and social services that support the whole person, including preventive services. – Ensuring access to high-quality and cost-effective healthcare and social services, including behavioral and mental health services, that are culturally and linguistically appropriate. – Engaging health delivery systems to assess and address gaps and barriers in accessing needed health services,	Link people to needed personal health services and assure the provision of health care when otherwise unavailable – Assuring the identification of populations with barriers to personal health services. – Assuring identification of personal health service needs of populations with limited access to a coordinated system of clinical care. – Assuring the linkage of people to appropriate personal health services through coordination of provider services and development of interventions that address barriers to care (e.g., culturally and linguistically appropriate staff and materials, transportation services).	Essential public health service #7 focuses on the public health system's role in assuring equitable access to individual care services. The revised language adds engaging with health delivery systems (including behavioral and mental health services) and building relationships with payers and healthcare providers. The revised framework moves language about the healthcare workforce from the original EPHS #8 to here.

	including behavioral and mental health. – Addressing and removing barriers to care. – Building relationships with payers and healthcare providers, including the sharing of data across partners to foster health and well-being. – Contributing to the development of a competent healthcare workforce.		
8	Build and support a diverse and skilled public health workforce – Providing education and training that encompasses a spectrum of public health competencies, including technical, strategic, and leadership skills. – Ensuring that the public health workforce is the appropriate size to meet the public's needs. – Building a culturally competent public health workforce and leadership that reflects the community and practices cultural humility. – Incorporating public health principles in non-public health curricula. – Cultivating and building active partnerships with academia and other professional training programs and schools to assure community-	Assure competent public and personal health care workforce – Education, training, and assessment of personnel (including volunteers and other lay community health workers) to meet community needs for public and personal health services. – Efficient processes for licensure of professionals. – Adoption of continuous quality improvement and life-long learning programs that include determinants of health. – Active partnerships and strategic alliances with professional training programs to assure community-relevant learning experiences for all students. – Continuing education in management and leadership development programs for those charged with administrative/executive roles.	Essential public health service #8 focuses on the public health workforce. The revised language clarifies the public health system's role in building and supporting a diverse and skilled workforce that encompasses a spectrum of public health and cultural competencies. Added language also emphasizes the importance of fostering technical, strategic, and leadership skills at all levels to promote lifelong learning and to create a pipeline of future practitioners. The revised framework moves language about licensing and monitoring the quality of healthcare services (like labs and nursing homes) and licensing and credentialing the healthcare workforce from here to revised EPHS #6. It also moves language about the healthcare workforce from here to revised EPHS #7.

	relevant learning experiences for all learners. – Promoting a culture of lifelong learning in public health. – Building a pipeline of future public health practitioners. – Fostering leadership skills at all levels.		
9	Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement – Building and fostering a culture of quality in public health organizations and activities. – Linking public health research with public health practice. – Using research, evidence, practice-based insights, and other forms of information to inform decision-making. – Contributing to the evidence base of effective public health practice. – Evaluating services, policies, plans, and laws continuously to ensure they are contributing to health and not creating undue harm. – Establishing and using engagement and decision-making structures to work with the community in all stages of research.	Evaluate effectiveness, accessibility, and quality of personal and population-based health services – Assurance of ongoing evaluation and critical review of health program effectiveness, based on analysis of health status and service utilization data. – Assurance of the provision of information necessary for allocating resources and reshaping programs.	Essential public health service #9 focuses on public health innovation and improvement activities. The revised language moves away from evaluating the quality of personal health services to emphasize the public health system's role in innovating, evaluating, researching, and improving quality and performance of public health functions. Added language also highlights the importance of engaging with the community and utilizing data to inform decision-making processes related to research. The revised framework moves the concepts of research, identification and monitoring of innovative solutions, linkages between public health practice and academia, health policy analyses, and public health systems research from the original EPHS #10 to here.

	– Valuing and using qualitative, quantitative, and lived experience as data and information to inform decision-making.		
10	Build and maintain a strong organizational infrastructure for public health – Developing an understanding of the broader organizational infrastructures and roles that support the entire public health system in a jurisdiction (e.g., government agencies, elected officials, and non-governmental organizations). – Ensuring that appropriate, needed resources are allocated equitably for the public's health. – Exhibiting effective and ethical leadership, decision-making, and governance. – Managing financial and human resources effectively. – Employing communications and strategic planning capacities and skills. – Having robust information technology services that are current and meet privacy and security standards. – Being accountable, transparent, and inclusive with all partners and the community in all aspects of practice.	Research for new insights and innovative solutions to health problems – Identification and monitoring of innovative solutions and cutting-edge research to advance public health. – Linkages between public health practice and academic/research settings. – Epidemiological studies, health policy analyses and public health systems research.	Essential public health service #10 focuses on critical organizational infrastructure elements such as strong and ethical leadership, governance, decision-making; communications and planning capacities; strong systems in place; approaching work with accountability, transparency, and inclusiveness; and ensuring that resources are equitably allocated, among others. The revised language was added as a standalone essential service, building off system management concepts from the original language, to emphasize the importance of it across all the public health system. The revised framework moves the concepts of research, identification and monitoring of innovative solutions, linkages between public health practice and academia, health policy analyses, and public health systems research from here to revised EPHS #9.

The 10 Essential Public Health Services provide a framework for public health to protect and promote the health of all people in all communities. To achieve equity, the Essential Public Health Services actively promote policies, systems, and overall community conditions that enable optimal health for all and seek to remove systemic and structural barriers that have resulted in health inequities. Such barriers include poverty, racism, gender discrimination, ableism, and other forms of oppression. Everyone should have a fair and just opportunity to achieve optimal health and well-being.	The revised framework adds a new statement to elevate the importance of equity in public health practice. The concept is centered within the framework itself to highlight the overarching goal of protecting and promoting the health of all people in all communities. Equity is embedded in each essential service statement and corresponding language to address the social, structural, environmental, and political determinants of health, and to emphasize how critical authentic and active community engagement is in identifying and solving community health problems.

Appendix H: JPHMP Bringing the Essential Public Health Services to Life

GETTING PRACTICAL

Bringing the Essential Public Health Services to Life

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For more than a quarter century, the 10 Essential Public Health Services (EPHS) have given public health practitioners a common framework for assessment, policy development, and assurance. This framework has served public health, but the field must adapt to meet the changing needs of our communities.

That is why 25 years after the original framework was released in 1994, the de Beaumont Foundation and the Public Health National Center for Innovations (PHNCI) convened a task force of public health experts to review and revise the 10 EPHS. The updated version was released in September 2020, marking a milestone in public health history and practice.

The revised version of the Essential Services features several significant changes, most notably that the framework is now centered on equity. Putting equity at the core of the 10 EPHS reflects public health's commitment to ensuring that all people can achieve optimal health, as well as recognition of the importance of the social determinants of health. Although the task force prioritized equity from its first convening, the death of George Floyd and the resulting summer of racial justice protests reassured us of the need to center equity in our field's practice.

As participants in the 10 EPHS revision process, we encourage local and state health departments to leverage the framework to strengthen partnerships, align priorities, and lead with equity in all they do. We offer the following recommendations for public health agency leaders to infuse guidance from the 10 EPHS into their strategies and operations:

- *Communicate the value of public health*. Public health professionals need to communicate the scope and importance of their work, which can be challenging. With the 10 EPHS, practitioners have a starting point for conversations about the functions and responsibilities of public health that can be easily understood by people without a background in the field. Our nation's unequal response to COVID-19 makes clear how important it is that elected officials and the public

understand and trust public health. The simple, colorful graphic representing the 10 EPHS is especially helpful when explaining to community members the various ways that their health department serves them.

- With the framework, public health professionals can also advocate for the resources needed to run health departments. The COVID-19 pandemic has demonstrated how necessary the services provided by state and local health departments are to community health and wellness. When communicating with policy makers, the framework is a powerful visual aid in making the case for funding that is sufficient for health departments to function.
- *Build an equitable culture.* The 10 EPHS framework encourages public health professionals to take an equitable approach to organizing resources and structuring their organizations. When evaluating people and initiatives, agency leaders should view these processes through a lens of equity. That requires self-reflection on the part of staff to question internal and systemic biases; all members of the organization should question whether their actions are promoting a more equitable culture or inadvertently causing harm. Systemic change in communities begins with the work carried out within our own agencies.
- *Strengthen professional development*. With the rapidly changing nature of their field, public health professionals never stop learning. The 10 EPHS can be incorporated into opportunities for workforce development, both formal and informal. Education around the framework can benefit staff at all levels, whether used as an introduction to basic health department responsibilities or as a refresher for seasoned professionals. By incorporating the 10 EPHS into professional development, staff members can learn more about how their roles intersect, as well as the unique value that their colleagues bring to their organizations.
- The framework can also guide partnerships with universities and training programs. It is our hope that as more health departments promote the 10 EPHS, clinical and public health training programs will adopt the framework into their own curricula.
- *Standardize reporting.* When leading with the 10 EPHS in mind, public health professionals can better organize and report on their work, as well as explain their roles and those of partners. In addition, agency leaders can gain a better understanding of priorities within their organizations.
- The 10 EPHS framework underscores the numerous responsibilities that health departments have to their communities, which go far beyond direct services. There is more to the work of public health agencies than is often publicized, making the 10 EPHS particularly useful for reporting on impact. Hospitals played a critical role in responding to the COVID-19 pandemic, for instance, but it is not their role to prevent community transmission and enact protective policies; that is the role of state and local public health departments.
- *Inform strategic planning and engagement*. With the 10 EPHS framework, health department leaders can ensure that their strategic plans align with the services that are truly essential to the communities they serve. The framework can also help divisions within a department plan for all the ways that specific division can serve the public.

- In addition, the framework underscores the need to assess which people and groups are represented in decision making that affects entire communities. The 10 EPHS remind practitioners to work alongside the community members with lived experience, taking an equitable approach to the way programs are delivered and being transparent with all participants in decision-making processes.

No matter one's role within a public health agency, the 10 EPHS are valuable to all who protect and promote the health of their communities. But the 10 EPHS are most useful when consistently employed, meaning that professionals must commit to integrating the framework into their agencies' strategies, processes, and policies for the greatest impact on communities.

It is no secret that public health is underfunded and underresourced at a time when support is needed most. The 10 EPHS can help you recognize and communicate the impact of your work, which makes an invaluable difference in the health of communities every day.

For more information and to view the 10 Essential Public Health Services, visit ephs.phnci.org/toolkit.

Appendix I: The 10 Essential Public Health Services

THE 10 ESSENTIAL PUBLIC HEALTH SERVICES

To protect and promote the health of all people in all communities

The 10 Essential Public Health Services provide a framework for public health to protect and promote the health of all people in all communities. To achieve equity, the Essential Public Health Services actively promote policies, systems, and overall community conditions that enable optimal health for all and seek to remove systemic and structural barriers that have resulted in health inequities. Such barriers include poverty, racism, gender discrimination, ableism, and other forms of oppression. Everyone should have a fair and just opportunity to achieve optimal health and well-being.

ESSENTIAL PUBLIC HEALTH SERVICE #1
Assess and monitor population health status, factors that influence health, and community needs and assets

ESSENTIAL PUBLIC HEALTH SERVICE #2
Investigate, diagnose, and address health problems and hazards affecting the population

ESSENTIAL PUBLIC HEALTH SERVICE #3
Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it

ESSENTIAL PUBLIC HEALTH SERVICE #4
Strengthen, support, and mobilize communities and partnerships to improve health

ESSENTIAL PUBLIC HEALTH SERVICE #5
Create, champion, and implement policies, plans, and laws that impact health

ESSENTIAL PUBLIC HEALTH SERVICE #6
Utilize legal and regulatory actions designed to improve and protect the public's health

ESSENTIAL PUBLIC HEALTH SERVICE #7
Assure an effective system that enables equitable access to the individual services and care needed to be healthy

ESSENTIAL PUBLIC HEALTH SERVICE #8
Build and support a diverse and skilled public health workforce

ESSENTIAL PUBLIC HEALTH SERVICE #9
Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement

ESSENTIAL PUBLIC HEALTH SERVICE #10
Build and maintain a strong organizational infrastructure for public health

Created 2020

ESSENTIAL PUBLIC HEALTH SERVICE #1

Assess and monitor population health status, factors that influence health, and community needs and assets

THIS SERVICE INCLUDES:

- **Maintaining an ongoing understanding of health** in the jurisdiction by collecting, monitoring, and analyzing data on health and factors that influence health to identify threats, patterns, and emerging issues, with a particular emphasis on disproportionately affected populations
- **Using data and information** to determine the root causes of health disparities and inequities
- **Working with the community** to understand health status, needs, assets, key influences, and narrative
- **Collaborating and facilitating data sharing** with partners, including multi-sector partners
- **Using innovative technologies**, data collection methods, and data sets
- **Utilizing various methods and technology** to interpret and communicate data to diverse audiences
- **Analyzing and using disaggregated data** (e.g., by race) to track issues and inform equitable action
- **Engaging community members** as experts and key partners

Created 2020 2

ESSENTIAL PUBLIC HEALTH SERVICE #2

Investigate, diagnose, and address health problems and hazards affecting the population

THIS SERVICE INCLUDES:

- **Anticipating, preventing, and mitigating emerging health threats** through epidemiologic identification
- **Monitoring real-time health status and identifying patterns** to develop strategies to address chronic diseases and injuries
- **Using real-time data** to identify and respond to acute outbreaks, emergencies, and other health hazards
- **Using public health laboratory capabilities and modern technology** to conduct rapid screening and high-volume testing
- **Analyzing and utilizing inputs** from multiple sectors and sources to consider social, economic, and environmental root causes of health status
- **Identifying, analyzing, and distributing information** from new, big, and real-time data sources

ESSENTIAL PUBLIC HEALTH SERVICE #3

Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it

THIS SERVICE INCLUDES:

- **Developing and disseminating accessible health information** and resources, including through collaboration with multi-sector partners
- **Communicating with accuracy and necessary speed**
- **Using appropriate communications channels** (e.g., social media, peer-to-peer networks, mass media, and other channels) to effectively reach the intended populations
- **Developing and deploying culturally and linguistically appropriate and relevant communications** and educational resources, which includes working with stakeholders and influencers in the community to create effective and culturally resonant materials
- **Employing the principles of risk communication, health literacy, and health education** to inform the public, when appropriate
- **Actively engaging in two-way communication** to build trust with populations served and ensure accuracy and effectiveness of prevention and health promotion strategies
- **Ensuring public health communications and education efforts are asset-based** when appropriate and do not reinforce narratives that are damaging to disproportionately affected populations

Created 2020 4

ESSENTIAL PUBLIC HEALTH SERVICE #4

Strengthen, support, and mobilize communities and partnerships to improve health

THIS SERVICE INCLUDES:

- **Convening and facilitating multi-sector partnerships** and coalitions that include sectors that influence health (e.g., planning, transportation, housing, education, etc.)
- **Fostering and building genuine, strengths-based relationships** with a diverse group of partners that reflect the community and the population
- **Authentically engaging with community members** and organizations to develop public health solutions
- **Learning from, and supporting, existing community partnerships** and contributing public health expertise

ESSENTIAL PUBLIC HEALTH SERVICE #5

Create, champion, and implement policies, plans, and laws that impact health

THIS SERVICE INCLUDES:

- **Developing and championing policies, plans, and laws** that guide the practice of public health
- **Examining and improving existing policies, plans, and laws** to correct historical injustices
- **Ensuring that policies, plans, and laws provide a fair and just opportunity for all** to achieve optimal health
- **Providing input into policies, plans, and laws** to ensure that health impact is considered
- **Continuously monitoring and developing policies, plans, and laws** that improve public health and preparedness and strengthen community resilience
- **Collaborating with all partners**, including multi-sector partners, to develop and support policies, plans, and laws
- **Working across partners and with the community** to systematically and continuously develop and implement health improvement strategies and plans, and evaluate and improve those plans

ESSENTIAL PUBLIC HEALTH SERVICE #6

Utilize legal and regulatory actions designed to improve and protect the public's health

THIS SERVICE INCLUDES:

- **Ensuring that applicable laws are equitably applied** to protect the public's health
- **Conducting enforcement activities** that may include, but are not limited to sanitary codes, especially in the food industry; full protection of drinking water supplies; and timely follow-up on hazards, preventable injuries, and exposure-related diseases identified in occupational and community settings
- **Licensing and monitoring the quality of healthcare services** (e.g., laboratory, nursing homes, and home healthcare)
- **Reviewing new drug, biologic, and medical device applications**
- **Licensing and credentialing the healthcare workforce**
- **Including health considerations in laws from other sectors** (e.g., zoning)

ESSENTIAL PUBLIC HEALTH SERVICE #7

Assure an effective system that enables equitable access to the individual services and care needed to be healthy

THIS SERVICE INCLUDES:

- **Connecting the population to needed health and social services** that support the whole person, including preventive services
- **Ensuring access to high-quality and cost-effective healthcare and social services**, including behavioral and mental health services, that are culturally and linguistically appropriate
- **Engaging health delivery systems** to assess and address gaps and barriers in accessing needed health services, including behavioral and mental health
- **Addressing and removing barriers to care**
- **Building relationships with payers and healthcare providers**, including the sharing of data across partners to foster health and well-being
- **Contributing to the development of a competent healthcare workforce**

ESSENTIAL PUBLIC HEALTH SERVICE #8

Build and support a diverse and skilled public health workforce

THIS SERVICE INCLUDES:

- **Providing education and training** that encompasses a spectrum of public health competencies, including technical, strategic, and leadership skills
- **Ensuring that the public health workforce is the appropriate size** to meet the public's needs
- **Building a culturally competent public health workforce and leadership** that reflects the community and practices cultural humility
- **Incorporating public health principles in non-public health curricula**
- **Cultivating and building active partnerships with academia and other professional training programs** and schools to assure community-relevant learning experiences for all learners
- **Promoting a culture of lifelong learning in public health**
- **Building a pipeline of future public health practitioners**
- **Fostering leadership skills at all levels**

ESSENTIAL PUBLIC HEALTH SERVICE #9

Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement

THIS SERVICE INCLUDES:

- **Building and fostering a culture of quality** in public health organizations and activities
- **Linking public health research with public health practice**
- **Using research, evidence, practice-based insights, and other forms of information to inform decision-making**
- **Contributing to the evidence base** of effective public health practice
- **Evaluating services, policies, plans, and laws continuously** to ensure they are contributing to health and not creating undue harm
- **Establishing and using engagement and decision-making structures** to work with the community in all stages of research
- **Valuing and using qualitative, quantitative, and lived experience as data and information** to inform decision-making

Created 2020 10

ESSENTIAL PUBLIC HEALTH SERVICE #10

Build and maintain a strong organizational infrastructure for public health

THIS SERVICE INCLUDES:

- **Developing an understanding of the broader organizational infrastructures and roles** that support the entire public health system in a jurisdiction (e.g., government agencies, elected officials, and non-governmental organizations)
- **Ensuring that appropriate, needed resources are allocated equitably** for the public's health
- **Exhibiting effective and ethical leadership, decision-making, and governance**
- **Managing financial and human resources effectively**
- **Employing communications and strategic planning capacities and skills**
- **Having robust information technology services** that are current and meet privacy and security standards
- **Being accountable, transparent, and inclusive** with all partners and the community in all aspects of practice

The 10 Essential Public Health Services Glossary

Community is a group of people who have common characteristics; communities can be defined by location, race, ethnicity, age, occupation, interest in particular problems or outcomes, or other similar common bonds. Ideally, there would be available assets and resources, as well as collective discussion, decision-making and action. (Turnock, BJ. *Public Health: What It Is and How It Works.* Jones and Bartlett, 2009)

Equity is defined as a fair and just opportunity for all to achieve good health and well-being. This requires removing obstacles to health such as poverty and discrimination and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and healthcare. It also requires attention to health inequities, which are differences in population health status and mortality rates that are systemic, patterned, unjust, and actionable, as opposed to random or caused by those who become ill.

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The bibliographic citation for this definition is: Preamble to the Constitution of WHO as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100) and entered into force on 7 April 1948. The definition has not been amended since 1948.

Healthcare sector is defined as entities that provide clinical services, mental health services, oral health services, provide or pay for services for individuals, or facilitate the provision of services to individuals. Entities in this sector may include hospitals, health systems, health plans, health centers, behavioral health providers, oral health providers, etc.**Law(s)** refer to the aggregate of statutes, ordinances, regulations, rules, judicial decisions, and accepted legal principles that the courts of a particular jurisdiction apply in deciding controversies brought before them. The law consists of all legal rights, duties, and obligations that can be enforced by the government (or one of its agencies) and the means and procedures for enforcing them. *(Garner, B.A. editor. Black's Law Dictionary. 8th ed. West Group; 2004)*

Law(s) refer to the aggregate of statutes, ordinances, regulations, rules, judicial decisions, and accepted legal principles that the courts of a particular jurisdiction apply in deciding controversies brought before them. The law consists of all legal rights, duties, and obligations that can be enforced by the government (or one of its agencies) and the means and procedures for enforcing them. *(Garner, B.A. editor. Black's Law Dictionary. 8th ed. West Group; 2004)*

Population health is the health outcomes of a group of individuals, including the distribution of such outcomes within the group. The field of population health includes health outcomes, patterns of health determinants, and policies and interventions that link these two. Population health approaches are community or policy non-clinical approaches that aim to improve health and wellbeing of a group of individuals. This differs from population health management which refers to improving clinical health outcomes of individuals through improved care coordination and patient engagement supported by appropriate financial and care models. *(Adapted from Kindig and Stoddart).*

Created 2020

The 10 Essential Public Health Services Glossary

Public health is defined as the science of protecting the safety and improving the health of communities through education, policy making and research for disease and injury prevention. (CDC Foundation).

Research is a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalized knowledge. (United States Department of Health and Human Services. *Healthy People 2020*. Washington, DC)

- Community-based Participatory Research (CBPR) is a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community, has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities. (W. K. Kellogg Foundation, Community Health Scholars Program, 2001 quotes from Minkler M, and Wallerstein N, editors. *Community-Based Participatory Research for Health*. San Francisco, CA: Jossey-Bass Inc.; 2003)

To view the complete 10 Essential Public Health Services, visit https://phnci.org/uploads/resource-files/EPHS-English.pdf.

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