



Public Health 3.0

A Call to Action to Create a 21st Century Public Health Infrastructure



Office of the Assistant Secretary for Health
U.S. Department of Health and Human Services

**PUBLIC
HEALTH
3.0**

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Letter from the Acting Assistant Secretary for Health

We have made great strides in the last several years to expand health care coverage and access to medical care and preventive services, but these successes have not yet brought everyone in America to an equitable level of improved health. Today, a person's zip code is a stronger determinant of health than their genetic code. In a nation as wealthy as the United States, it is unconscionable that so many people die prematurely from preventable diseases; even worse are the health disparities that continue to grow in many communities.

High-quality health care is essential for treatment of individual health conditions, but it is not the only tool at our disposal. In order to solve the fundamental challenges of population health, we must address the full range of factors that influence a person's overall health and well-being. From education to safe environments, housing to transportation, economic development to access to healthy foods—the social determinants of health are the conditions in which people are born, live, work, and age.

Public Health 3.0 recognizes that we need to focus on the social determinants of health in order to create lasting improvements for the health of everyone in America. Public health is what we do together as a society to ensure the conditions in which everyone can be healthy. We often think of the health care industry when we think of health, but building healthy communities requires strategic collaboration across all sectors. When we build a complete infrastructure of healthy communities, we can begin to close the gaps in health due to race or ethnicity, gender identity or sexual orientation, zip code or income.

For Public Health 3.0 to succeed, local and state public health leaders must step up to serve as Chief Health Strategists for their communities, mobilizing community action to strengthen infrastructure and form strategic partnerships across sectors and jurisdictions. These partnerships are necessary to develop and share sustainable resources and to leverage data for action that can address the most urgent community health needs.

Public Health 3.0 exemplifies the transformative success stories that many pioneering communities across the country have already accomplished. The challenge now is to institutionalize these efforts and replicate these triumphs across all communities for all people.

Our collaborative action must ensure, for the first time in history, that every person in America has a truly equal opportunity to enjoy a long and healthy life. This report outlines the initial steps we can take to get there. I hope you will join me in Public Health 3.0.

Sincerely,



A handwritten signature in black ink, appearing to read 'Karen B. DeSalvo'.

Karen B. DeSalvo, MD, MPH, MSc
Assistant Secretary for Health (acting)
U.S. Department of Health and Human Services

Executive Summary

Public health is what we do together as a society to ensure the conditions in which everyone can be healthy. Though there are many important sectors and institutions with a key role to play, the governmental public health infrastructure is an essential part of a strong public health system. But local public health agencies have been under extreme stress due to significant funding reductions during the Great Recession, changing population health challenges, and in certain circumstances changes brought on by the Affordable Care Act (ACA). In addition, they are increasingly working with others in the broader health system to address the social determinants of health in response to the mounting data on disparities by race/ethnicity, gender identity or sexual orientation, interpersonal violence and trauma, income, and geography.

To meet these new challenges head on, local public health has been reinventing itself in partnership with others in their communities, and is undergoing a transformation into a new model of public health we call Public Health 3.0 (PH3.0). In this model, pioneering local public health agencies are building upon their historic success at health improvement and are adding attention to the social determinants of health—the conditions in the social, physical, and economic environment in which people are born, live, work, and age¹—in order to achieve health equity. They do this through deliberate collaboration across both health and non-health sectors, especially with non-traditional partners, and, where appropriate, through assuming the role of Chief Health Strategist in their communities.

In 2016, the U.S. Department of Health and Human Services (HHS) Office of the Assistant

Secretary for Health (OASH) launched an initiative to lay out the vision for this new model of public health, to characterize its key components, and to identify what actions would be necessary to better support the emergence of this transformed approach to public health, with particular attention to the efforts needed to strengthen the local governmental public health infrastructure as a critical and unique leader in advancing community health and well-being.

To learn more, OASH visited five communities that are aligned with the PH3.0 vision. In these regional listening sessions, local leaders shared their strategies and exchanged ideas for moving PH3.0 forward. Attendees represented a diverse group of people working in public health and other fields, including philanthropy and nonprofit organizations, businesses, social services, academia, the medical community, state and local government agencies, transportation, and environmental services.

This report summarizes key findings from these regional dialogues and presents recommendations to carry PH3.0 forward, organized in the following five themes:

1. Strong leadership and workforce
2. Strategic partnerships
3. Flexible and sustainable funding
4. Timely and locally relevant data, metrics, and analytics
5. Foundational infrastructure

Recommendations

Based upon what we have heard and seen from the field, we put forth the following set of recommendations to realize the PH3.0 vision for all communities in the United States:

1. Public health leaders should embrace the role of **Chief Health Strategist for their communities**—working with all relevant partners so that they can drive initiatives including those that explicitly address “upstream” social determinants of health. Specialized Public Health 3.0 training should be available for those preparing to enter or already within the public health workforce.
2. Public health departments should engage with community stakeholders—from both the public and private sectors—to form vibrant, **structured, cross-sector partnerships** designed to develop and guide Public Health 3.0–style initiatives and to foster shared funding, services, governance, and collective action.
3. Public Health Accreditation Board (PHAB) criteria and processes for department **accreditation should be enhanced** and supported so as to best foster Public Health 3.0 principles, as we strive to ensure that every person in the United States is served by nationally accredited health departments.
4. Timely, reliable, granular (i.e., sub-county), and **actionable data** should be made accessible to communities throughout the country, and clear **metrics** to document success in public health practice should be developed in order to guide, focus, and assess the impact of prevention initiatives, including those targeting the social determinants of health and enhancing equity.
5. **Funding for public health should be enhanced and substantially modified**, and innovative funding models should be explored so as to expand financial support for Public Health 3.0–style leadership and prevention initiatives. Blending and braiding of funds from multiple sources should be encouraged and allowed, including the recapturing and reinvesting of generated revenue. Funding should be identified to support core infrastructure as well as community-level work to address the social determinants of health.





Introduction

Progress on Health Improvement

The United States has made enormous progress during the past century in improving the health and longevity of its population through effective public health actions and sizable investments in evidence-based preventive services and high-quality clinical care. In 2014, life expectancy at birth was 78.8 years, 10 years longer in lifespan than the 1950s.² Smoking rates among adults and teens are less than half what they were 50 years ago.³ The Affordable Care Act (ACA) has dramatically expanded health insurance coverage, reducing the uninsurance rate to a historic low of 9.1% in 2015, 16.2 million fewer uninsured Americans than in 2013.⁴ Continuous health insurance

reform efforts have also driven improvement in health care quality and have slowed the growth rate of health care costs.

Significant Health Gaps Remain

However, despite nearly \$3.0 trillion in annual health care spending—almost twice as much as a percentage of gross domestic product as the rest of the world—Americans have shorter lifespans and fare worse in many health indicators, including obesity and diabetes, adolescent pregnancy, drug abuse-related mortality, vaccination rates, injuries, suicides, and homicides.⁵ The Centers for Disease Control (CDC) recently reported that the historical steady gain in longevity in the United States has plateaued for three years in a row.⁶ Further, race/

ethnicity disparities persist in life expectancy, vaccination rates, infant mortality,⁷ and exposure to pollutants.⁸ Many of these vexing challenges require solutions outside of the health care system, and require more broad-based actions at the community level.

Figure 1
Short Distances to Large Gaps in Health



Source: Chapman DA, Kelly L, Woolf SH. Life Expectancy Maps. 2015-2016. VCU Center on Society and Health. <http://www.societyhealth.vcu.edu/maps>

Key Influence of Social Determinants of Health

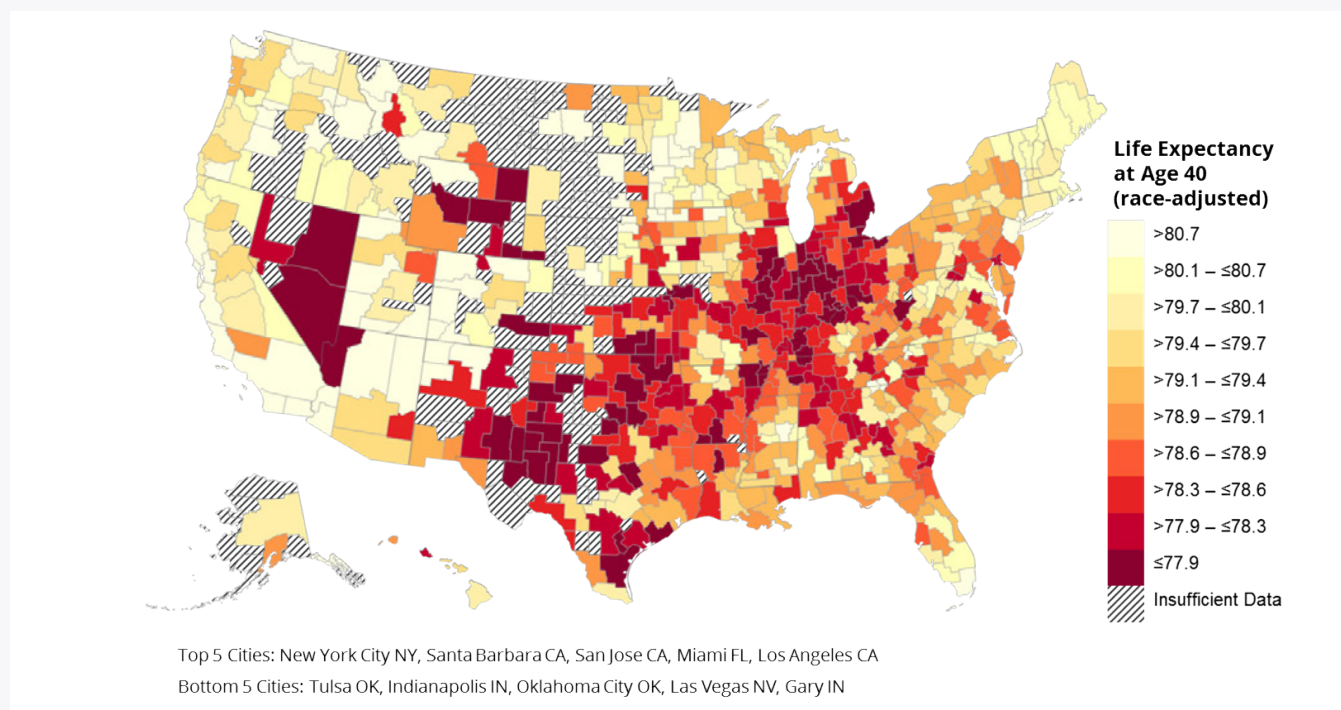
The lifespan of people living in different parts of the country is a powerful reminder that the opportunity to be healthy often depends more on one's zip code than one's genetic code. Researchers (Figure 2) found that the gap in life expectancy between people with the highest and lowest incomes is narrower in some communities but wider in others. Their data

showed significant variations in life expectancy and health risks across different regions in the country.⁹ Even within a city, life expectancy can vary by neighborhood. Mapping life expectancies in several cities across the United States, researchers illustrated that in some cases, life expectancy can differ by as much as 20 years in neighborhoods just a few miles apart from one another. These data suggest that investing in safe and healthy communities matters, especially for the most disadvantaged persons.¹⁰ Achieving the goal of Healthy People requires addressing social determinants of health, which includes both social and physical environments where people are born, live, work, and age.

Meanwhile, many pioneering communities are already taking action to do exactly that. These communities have built coalitions to address their priority health challenges such as tobacco use in public spaces; educational attainment and economic opportunity; community safety; substance use disorders and mental health conditions; healthy built environment; and hazardous exposures in and around their homes and neighborhoods.

These innovative, multi-sector approaches to health reflect an understanding of the conditions and factors that are associated with health. Scholars estimate that behavioral patterns, environmental exposure, and social circumstances account for as much as 60% of premature deaths.¹¹ These factors shape the contexts of how people make choices every day—and reflect the social and physical environments where these choices are made. Driven by policy incentives toward population health, our health care system is transforming from a system focused on episodic, non-integrated care toward one that is value-

Figure 2 | Geography of Life Expectancy in the Bottom Income Quartile



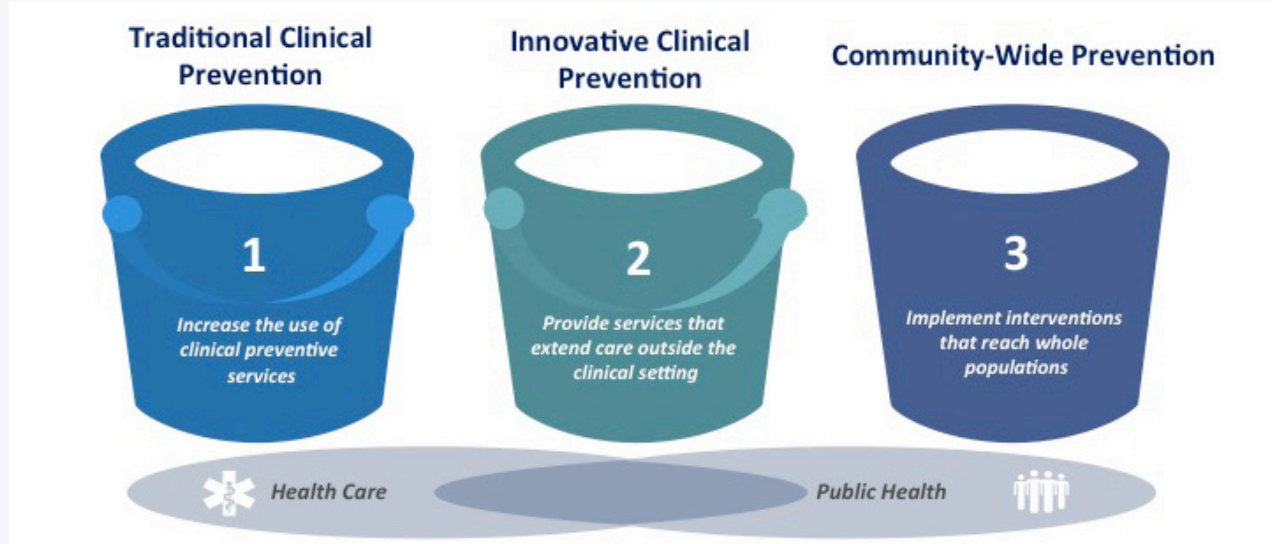
Source: The Health Inequality Project. <https://healthinequality.org>

based and increasingly community integrated.¹² There are tremendous opportunities for the health care and public health systems to be better integrated in order to produce substantial and lasting health for individuals, communities, and populations.¹³ The CDC developed a framework to conceptualize such integration spanning three “buckets” of prevention—traditional clinical preventive interventions, interventions that extend care outside the care setting, and total population or community-wide interventions to achieve the most promising results for population health (Figure 3. The Three Buckets of Prevention).¹⁴ Regarding to the second and the third “buckets”, CDC recently launched the Health Impact in 5 Years (HI-5) initiative, highlighting non-clinical, community-wide approaches addressing context factors or social determinants of health that have shown positive

health impacts within five years and evidence of cost effectiveness or cost savings. These resources showed that community-wide actions addressing upstream determinants are not only evidence-based and feasible, but also of good value.

However, public health and social services have been immensely underfunded. Compared to its spending on health care, the United States has made lower investments toward upstream, non-medical determinants of health—social services such as income support, education, transportation, interpersonal violence and trauma, controlling hazardous environmental exposure and housing programs—and this has had detrimental effects on health.¹⁵ States that spent more on social services and public health, relative to

Figure 3 | The Three Buckets of Prevention



Source: Auerbach, John. "The 3 buckets of prevention." *Journal of Public Health Management and Practice* 22.3 (2016):215-218

spending on medical care, had significantly better subsequent health outcomes.^{16,17} Unfortunately, the 2008 recession precipitated a large and sustained reduction in state and local spending on public health activities.¹⁸ Nearly two-thirds of the U.S. population in 2012 lived in jurisdictions in which their local health department reported budget-related cuts to at least one critical program area.¹⁹

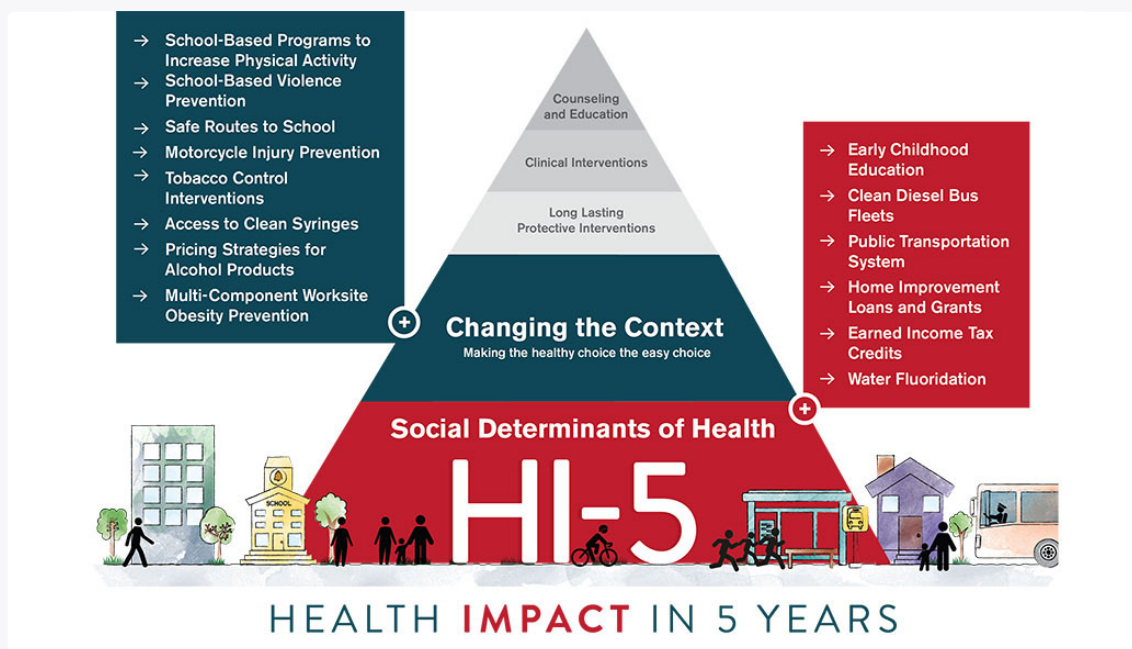
The 2002 Institute of Medicine (IOM) report *The Future of the Public's Health in the 21st Century*²⁰ called for strengthening governmental public health capabilities and requiring accountability from and among all sectors of the public health system. The need to strengthen the public health system, however, is often only revealed in the context of disasters and crises. For example, in the aftermath of Hurricane Katrina in the City of New Orleans, it became apparent that restoring health care services alone was insufficient in restoring New Orleans' health

system. For a community to address fundamental drivers of health while establishing readiness and resilience to crises, it requires strong public health infrastructure, effective leadership, usable data, and adequate funding. The water crisis in Flint, Michigan,²¹ painfully reminded us of the costly consequences when environmental determinants of public health are not at the center of decision-making that impacts the health and safety of the public.

It is clear that to improve the health of all Americans, we must address factors outside of health care. Doing so means we must build upon past successes in public health and continue to attend to those issues, but also expeditiously work in a multi-sector fashion to get closer to the true definition of public health:

Public health is what we do together as a society to ensure the conditions in which everyone can be healthy.²²

Figure 4 | Health Impact in 5 Years



Source: U.S. Centers for Disease Control and Prevention, Health Impact in Five Years. <http://www.cdc.gov/hi5>

Public Health 3.0: A Renewed Approach to Public Health

To meet these new challenges, state and local public health entities have been innovating in partnership with their local communities a new model of public health. In this approach, pioneering local communities are building upon their historic success at health improvement, and adding a focus on social and environmental determinants of health to achieve health equity. They do this through deliberate collaboration across sectors, especially with non-traditional partners, and through assuming the role of Chief Health Strategist in their communities.

This expanded mission of public health—to ensure the conditions in which everyone can be healthy—was underscored in the IOM report *The Future of Public Health*²³ nearly two decades ago, and

it remains salient today. Pioneering communities across the country are demonstrating how this can be achieved, particularly with local governmental public health in the lead or playing a prominent role. **We call this enhanced scope of practice Public Health 3.0.**

This evolved model of public health builds upon the extraordinary successes of our past. **Public Health 1.0** refers to the period from the late 19th century through much of the 20th century, when modern public health became an essential governmental function with specialized federal, state, local, and tribal public health agencies. During this period, public health systematized sanitation, improved food and water safety, expanded our understanding of diseases, developed powerful new prevention and treatment tools such as vaccines and antibiotics, and expanded capability in areas

such as epidemiology and laboratory science. This scientific and organizational progress meant that comprehensive public health protection—from effective primary prevention through science-based medical treatment and tertiary prevention—was possible for the general population.

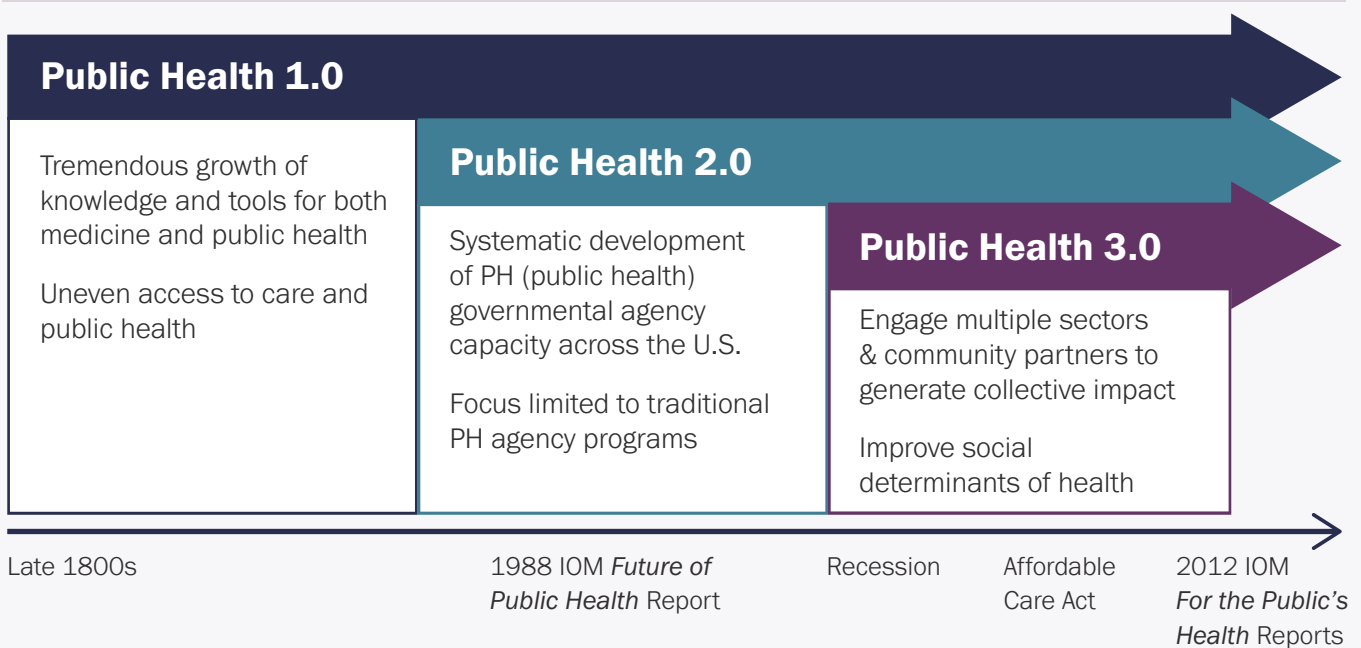
Public Health 2.0 emerged in the second half of the 20th century and was heavily shaped by the 1988 IOM report *The Future of Public Health*.²⁴ In that seminal report, the IOM described the many challenges faced by the American public health system. The report posited that public health authorities were encumbered by the demands of providing safety-net clinical care and unprepared to address the rising burden of chronic diseases and new threats such as the HIV/AIDS epidemic. The report’s authors declared, “This nation has lost sight of its public health goals and has

allowed the system of public health activities to fall into disarray.”

With this call to action, the field of public health defined a common set of goals and core functions, and developed and implemented target capacities and performance standards for governmental public health agencies at every level. During the 2.0 era, governmental public health agencies became increasingly professionalized and standardized.

Public Health 3.0 refers to a new era of enhanced and broadened public health practice that goes beyond traditional public department functions and programs. Cross-sector collaboration is inherent to the PH3.0 vision, and the Chief Health Strategist role requires high-achieving health entities with the skills and capabilities to drive such collective action.²⁵ Only through inter-organizational

Figure 5 | Evolution of Public Health Practices



Source: DeSalvo et. al. (2016) Public Health 3.0: Time for an Upgrade. AJPH

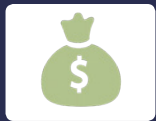
There are five critical dimensions in the enhanced scope of public health practice:



Strong leadership and workforce



Strategic partnerships



Flexible and sustainable funding



Timely and locally relevant data, metrics, and analytics



Foundational infrastructure

cooperation can policy and systems-level actions be taken to affect upstream determinants of health. Several pioneering U.S. communities are already experimenting with this expansive approach to public health, and several national efforts are also supporting this new approach.²⁶

Despite successes by many innovative local jurisdictions, these pioneering PH3.0 efforts face challenges in advancing and sustaining their work. At present, they have not had a shared, defining vision or framework. Many have developed in relative isolation, without opportunity to share best practices and lessons learned. There is not a central repository of tool kits or information to support their work. Finally, key elements needed

to support their efforts such as flexible funding and access to timely data are not readily or systematically available.

Current and future public health leaders will need to embrace the Chief Health Strategist role in their communities, collaborating with stakeholders who can positively affect social determinants of health. In many communities the local health officer will serve the role of Chief Health Strategist, but this may not necessarily always be the case—indeed Chief Health Strategists can come from other sectors. Developing strong strategic partnerships with players in other sectors is paramount to the success of this approach. PH3.0 will need both new sources of funding and flexible funding mechanisms to support its cross-sector, social determinants-oriented work. To guide community efforts, current, geographically specific, and granular data will be needed, as well as practical, readily accessible tools for data analysis and an enhanced informatics workforce capacity. Finally, a strengthened public health infrastructure needs to be designed and institutionalized, so that cross-sectoral collaborative efforts survive changes in public health, community, and political leadership.

This report describes examples of PH3.0 based on a series of regional meetings held by OASH across the United States.

Chief Health Strategist

...will lead their community's health promotion efforts in partnership with health care clinicians and leaders in widely diverse sectors, and be deeply engaged in addressing the causes underlying tomorrow's health imperatives. The emphasis will be on catalyzing and taking actions that improve community well-being, and playing a vital role in promoting the reorientation of the health system towards prevention and wellness.

Chief health strategists will participate in and support community-based coalitions that examine health data, set goals, and develop plans to improve health. They will enlist civic and other community leaders such as key local businesses and the Chamber of Commerce as well as leaders at the grassroots level to help carry out those plans.

Source: Public Health Leadership Forum, The High Achieving Health Department in 2020 as the Community Chief Health Strategist, 2015.
<http://www.resolve.org/site-healthleadershipforum/hd2020/>





The National Dialogue

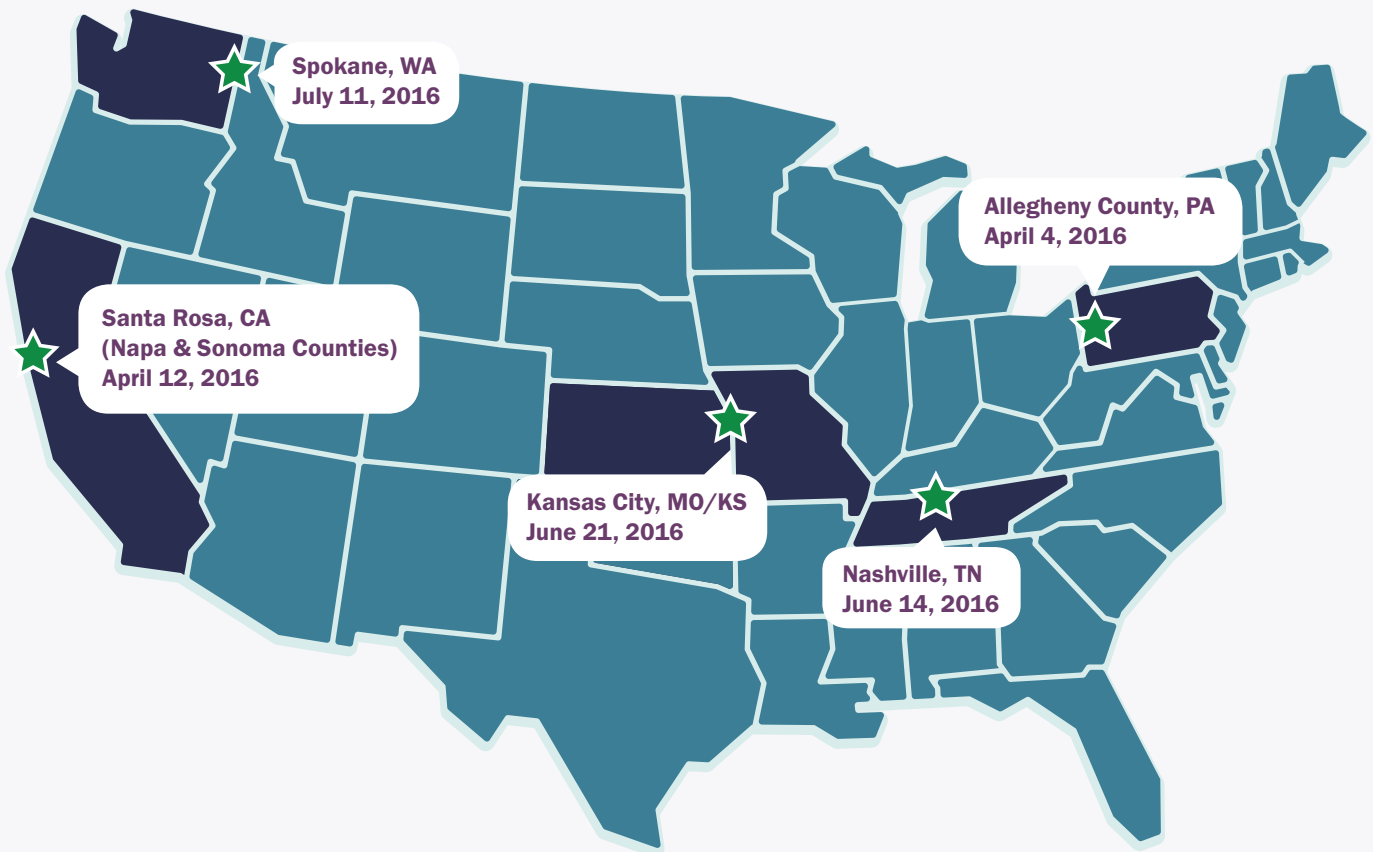
At the core of PH3.0 is the notion that local communities will lead the charge of taking public health to the next level and ensuring its continued success and relevance. In 2016, OASH engaged with stakeholders across a variety of sectors—state and local public health (including the Association for State and Territorial Public Health Officials [ASTHO] and the National Association of City and County Health Officials [NACCHO]), philanthropic and nonprofit groups, businesses, social service organizations, academia, the medical community, state and local government agencies, transportation, environmental services, and others. OASH also engaged directly with state and local health officers, both those who had seen success

in innovative, outside-the-box approaches to implementing public health practice and those who had experienced challenges.

Spotlight and Feedback: Public Health 3.0 Regional Meetings

Many communities across the U.S. are taking innovative approaches to public health and have developed cross-sector, collaborative structures to address the social, environmental, and economic determinants of health. Over spring and summer 2016, OASH leadership visited five of these geographically and demographically diverse communities.

Figure 6 | Five communities across the U.S. that are taking innovative approaches to public health.



The purpose of the regional meetings was three-fold:

1. For local leaders to share their knowledge, strategies, and ideas for moving PH3.0-style work forward
2. To hear about the successes and challenges for each of the five PH3.0 domains not only from host communities, but also from others in the region
3. To gather information about how the broader public health system could support local governmental public health as it transformed into a PH3.0 model

Meeting participants represented a wide array of expertise beyond public health and health

care. While the majority of participants were from the local communities, we welcomed people and organizations from across the regions. Though participants noted unique challenges and successes, many common themes emerged across the meetings. These key findings are summarized below.

Key Findings: Strong Leadership and Workforce

PH3.0 relies on not only a strong, diverse, and policy-oriented public health workforce, but also leaders who can work in new ways to build structured coalitions, leverage actionable data and evidence, and communicate new approaches

within and outside of the traditional health sector. Meeting participants discussed several strategies for developing new public health leaders and for inspiring the existing public health workforce to transform the public health system in their communities.

1. Building a strong public health workforce pipeline.

Participants noted the challenges in finding sufficient incoming talent and the high turnover rates in local public health. They suggested innovative approaches, enhanced partnerships, and new incentives to attract and retain talent. Academic institutions can establish mentorship programs, expand internships to include non-traditional opportunities, or work with federally funded job training programs. Opportunities also exist within primary education; some participants also suggested integrating public health into science, technology, engineering, and mathematics (STEM) curricula.



Public health is now more central to all the health sciences disciplines than ever before.”

— Participant, Spokane

For public health professionals already in the workforce, new benefits or incentives (both financial and non-financial) may encourage them to stay in the field. Public health entities should create opportunities for growth within their organizations and celebrate individual successes.

2. Leading for collective impact.²⁷

Strategic cross-sector partnerships drive PH3.0-style efforts, but the skills necessary to form and cultivate these partnerships may be foreign to public health practitioners who have long operated in silos. Existing opportunities for developing collaboration, leadership, and other essential skills should be explored. This can serve as a means to both grow expertise in the public health field and involve local stakeholders in achieving collective impact. In addition, public health and partners in other sectors can identify opportunities for exchanging skills and cross-pollinate their professional development activities. To build in-house capacity, participants suggested that public health entities also consider providing formal online training and certification opportunities.



With PH3.0, our existing leaders need to shift, to step out of the box of their own personality and be able to serve the team, serve the connections.”

— Participant, Santa Rosa

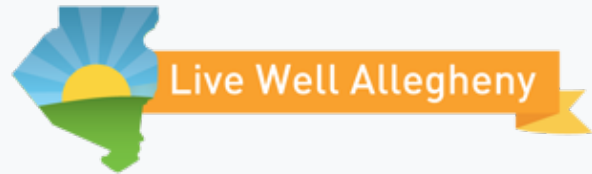
3. Thinking outside of the box.

Several participants noted the importance for public health leaders to think creatively in order to seize critical opportunities for growth. Forward-thinking businesses may serve as models for PH3.0. For example, the incubator system popularized by the technology industry allows established businesses to provide management training to help startup companies succeed. Similarly, participants suggested recruiting people who have skills, training, or education that are not traditional to the public health



Bright Spot of Innovation: *Live Well Allegheny*

In January 2014, Allegheny County Executive Rich Fitzgerald launched *Live Well Allegheny*, a response to county residents who expressed a desire to develop a healthier lifestyle.



The [*Live Well Allegheny*](#) campaign aims to improve the health and well-being of people in Allegheny County by addressing behaviors that lead to chronic diseases. The initiative, now led by the Board of Health and Allegheny Health Department Director Karen Hacker, asks county residents to increase physical activity, decrease cigarette smoking, and take a proactive role in managing their own health. Ultimately, the campaign will also incorporate efforts to improve mental wellness, personal and community safety, preparedness, quality of life, education, and health literacy.

Live Well Allegheny brings together local stakeholders across Allegheny County, including municipalities, school districts, government agencies, community-based organizations, academia, and the private sector, to improve the community's health. It includes programs such as *Live Well Communities*, *Live Well Schools*, *Live Well Restaurants*, and *Live Well Workplaces*. To achieve *Live Well* status, each community or entity must demonstrate its commitment to achieving campaign goals.

To date, *Live Well Allegheny* has:

1. 22 *Live Well* communities
2. 5 *Live Well* school districts (with more in progress)
3. 10 *Live Well* restaurants
4. 1 *Live Well* workplace
5. 112 partners committed to *Live Well*

For more information, read the [2014–2015 Live Well Allegheny Biannual Report](#).

field. Community advocates and organizers, for example, embody many qualities that could support PH3.0-style efforts: authentic community voices, relationships with community members, enthusiasm for effecting change, and the ability to grow a grassroots movement. Business and

entrepreneurial experience represent another example. In addition, by forging partnerships with non-traditional collaborators like universities and business mentorship programs, health departments can expand their capacity and their skill sets.

Key Findings: Strategic Partnerships

Participants identified building blocks for successful strategic partnerships across sectors, including key partnership attributes, strategies for engaging partners, and partners critical to PH3.0-style initiatives.

1. Establishing backbone entities for strategic planning and funding.

Participants noted that a politically neutral backbone entity is an essential component of any successful collaborative effort. The entity would convene and collect input from partners, mobilize funding, and drive action toward shared goals. Participants noted that backbone entities are most effective when they have political and social capital, including the public's trust and respect.

Participants warned against the pitfall of unstructured collaboratives in which group members only engage in discussion without committing to formal working partnerships. The backbone organization requires structure, including timelines, work plans, and most importantly, concrete mechanisms to pool and deploy funding and other resources.

“ It doesn't matter who you get into a room, if you don't have a doer, it will be a lot of ideas but not how you accomplish them. . . If people in the room don't have the power to implement, it's just going to be a lot of talk.”

— Participant, Nashville

2. Cultivating new and existing relationships.

Participants noted that PH3.0-style initiatives hinge on authentic and strong relationships to yield sustained collaboration and impact, and should align the values of each participating organization's missions.

Developing trust and communication takes time—particularly when cultivating new relationships. Participants suggested that convening organizations invest this time strategically. They urged conveners not to overlook seemingly minor steps like meeting face to face, clearly explaining each partner's value, setting expectations for how each partner will contribute, and setting deadlines for meeting the group's goals.

“ This is relational work, we're all people. It never hurts to take a one-off meeting, meet face to face with people.”

— Participant, Santa Rosa

3. Identifying collective goals and defining value.

Participants noted that collaborations are successful when they bring together entities with diverse, relevant expertise. Conveners should also consider non-traditional partners, who can often add important value and insight. At times, crises serve as opportunities to catalyze partnerships and stimulate collaborative efforts by producing a collective goal to resolve a pressing community challenge; that collective goal can inspire and drive collective action.



Bright Spot of Innovation: *Healthy Kansas City*

In 2014, more than 100 local stakeholders came together to identify ways for the business community to become active leaders in health. That initial strategy session led to [Healthy KC](#), a partnership of the Greater Kansas City Chamber of Commerce, Blue Cross Blue Shield of Kansas City, and other regional health organizations. The collaborative aims to create a culture of health in Greater Kansas City.



Healthy KC selects interventions based on local issues and community needs. In the Kansas City region, tobacco use among youth is a significant problem: nearly 25% of high school students in Missouri and Kansas are current tobacco users. In response, Healthy KC launched the [Tobacco 21 | KC](#) initiative, an offshoot of a national effort to increase the minimum age for the sale and purchase of tobacco products from 18 to 21. Healthy KC initially set a goal for five communities to adopt Tobacco21 ordinances by 2018, and they have vastly exceeded that goal: as of June 2016, 15 municipalities had jumped on board. Tobacco21 ordinances now cover 1.2 million people and have resulted in 1,000 fewer smokers each year.

Healthy KC credits effective partnerships with making Tobacco 21 | KC a success. Because local stakeholders—including the public health community, school districts, businesses, and chambers of commerce—have embraced and advocated for the initiative, city councils have been more willing to adopt these ordinances. The business industry has a vested interest in reducing tobacco use since each employee who smokes costs employers an average of more than \$6,000.

Healthy KC has also developed initiatives to promote mental health, workplace wellness, healthy eating, and active living.

Participants noted the importance of identifying the value a potential partner adds to the group, in addition to defining the expected return on investment for the partner. Several participants recommended proactively answering the question, “What’s in it for me?” For example, one participant described how Sonoma County successfully engaged the business community in health care

workforce development. Since the decrease in skilled workers is a key concern of the business community, the group was able to define the value proposition of growing the local pipeline for skilled health care professionals.

Participants identified other specific sectors that have not traditionally worked with public health but

are relevant to PH3.0-style collaboratives. These include but are not limited to:

- Behavioral health agencies
- Chamber of commerce and/or individual business owners or developers
- Community- and faith-based organizations
- Early care and education
- Elected officials and legislators
- Employers
- Funders
- Housing
- Human services
- Labor unions
- Media and marketing professionals
- Public safety and law enforcement
- Schools and departments of education
- Substance use disorder treatment programs
- Third-party payers
- Transportation
- Tribal entities

One participant noted that a critical partner may also be “the person you never thought to ask.” This can be a helpful reminder to think creatively about goals and who else has a stake in achieving them.



Partnerships don't evolve on their own—they take time, effort, commitment, and a common goal.”

— Participant, Kansas City

Key Findings: Flexible and Sustainable Funding

Funding enables groups to implement the programs, training, or infrastructure changes necessary to achieve a collective goal. However, local initiatives perpetually struggle to secure sufficient funding and resources, and many funding sources are categorical or disease specific. Strategies for leveraging sustainable and flexible funding that support PH3.0-style work were discussed.

1. Leveraging shared goals.

Participants suggested that the backbone entity should identify funders whose missions resonate with those of the initiative while cautioning against changing the mission or goal to fit a funding source. As with any partnership, developing and sustaining connections with funders takes time. In some cases, funders invested in an initiative may have over time become active partners.



We need flexible and smarter funding for shared goals. We need to identify shared goals on the front end so we don't head down parallel paths without conversation in between.”

— Participant, Spokane

Participants urged conveners to consider unconventional partners, such as venture capital firms committed to social change, and non-monetary resources, like access and influence. Backbone entities can also identify opportunities to re-allocate funds from existing public health

programs or capitalize on successful community projects already underway. By piggybacking on existing efforts, collaboratives can pool resources with partners working toward the same or different goal.²⁸ For example, a food waste rescue effort could meet the mission of hunger relief as well as reduce food waste.

2. Breaking funding silos.

Historically, public sectors have had access to distinct, narrowly defined federal, state, and local government funding streams. Before PH3.0, this approach was seen as effective: public health departments organized their service by conditions (e.g., HIV/AIDS, maternal and child health, diabetes), and funding streams supported that style of work. But this model tends to fall short when addressing social determinants of health or building capacity for readiness. A move from categorical, siloed funding to more flexible funding models also allows local leaders to respond more rapidly to emerging community needs.

Participants noted that the public health system should advocate for flexible spending dollars by stressing the efficiency in avoiding duplicated work. Communities may also pursue removing barriers to pooling funding across organizations and jurisdictions, which would enable programs to mix funds for collective efforts.

Participants noted that funder engagement is critical to sustaining funding. Collaboratives can, for example, leverage program evaluation results to show impact, and to collect and share data. In particular, capturing and documenting cost savings attributable to the initiative can be instrumental when seeking additional or continued funding; but data and analytic challenges exist.

3. Exploring alternative financing models.

Health care delivery system reform has catalyzed a shift from fee-for-service to pay-for-performance models. Several funding mechanisms, including Medicaid, now have ways to pay for population health outcomes. For financing public health, participants discussed the potential for pay-for-performance models and ones that blend and braid funding from public and private sources. One much-discussed example is the social impact bond model, where private funders invest in programs designed to yield a social impact and are repaid if and when the programs achieve desired outcomes.

Participants shared several suggestions for leveraging existing federal funding to advance population health, such as integrating prevention into Medicare Advantage. At the state level, the Medicaid Section 1115 waiver mechanism provides one potential funding source for transforming the payment and delivery system to improve population health. States could strategically use these waivers to implement demonstration projects that reduce the costs of care and then capture and reinvest these savings.



The chasm between primary care and public health is not built into the reimbursement structure. We need payment reform, a fundamental shift in how we reimburse care. The millennials coming into primary care are excited about bridging the chasm, but we need to bridge the funding gap.”

– Participant, Santa Rosa

Bright Spot of Innovation: California Accountable Communities for Health



California has embraced a new model for achieving health equity: accountable communities for health (ACH). An ACH is a multi-payer, multi-sector alliance of health care systems, providers, insurers, public health, community and social service organizations, schools, and other partners.

The California Endowment has identified criteria for a successful, sustainable ACH:

- Shared vision and goals
- Partnerships
- Leadership that spans many organizations and is pervasive throughout each organization
- A backbone organization that convenes and facilitates the group, and mobilizes funding
- Capacity to collect, analyze, and share data across sectors
- A wellness fund that serves as a vehicle for attracting and pooling resources
- A portfolio of interventions that addresses social determinants of health from many angles, including clinical and behavioral interventions, clinical-community linkages, community programs and resources, and public policy, systems, and environmental changes



The idea [behind ACHs] is that if we can save money in the health care system, we may be able to reinvest that funding in upstream prevention.”

— Karen Smith, Director and State Public Health Officer, California Department of Public Health

Sonoma County has worked to develop an ACH infrastructure, including data-sharing capabilities and a wellness fund. It has also built a financing framework that includes:

- Backbone funding (for facilitation, strategy development, and infrastructure needs)
- Pooled funding (for pilot testing programs including non-traditional funding methods and proof-of-concept work)
- Innovative loan funding (for scaling up programs and long-term investments)

In Napa County, the Live Healthy Napa County (LHNC) collaborative has made progress toward becoming an ACH. For example, with backbone support from the Napa County Health and Human Services Agency, LHNC has established a shared vision and goals and has nurtured partnerships. Under LHNC’s leadership, Napa County has developed a portfolio of interventions to address social determinants of health for priority issues, like overweight and obesity.

Key Findings: Timely and Locally Relevant Data, Metrics, and Analytics

Participants in all meetings highlighted the importance of reliable, diverse, real-time data to drive public health decision making. They noted several data obstacles, catalogued critical data types, and shared strategies for building local capacity to access, analyze, and apply data.

1. Addressing current data gaps and access challenges.

Public health practice relies on timely data that are locally relevant. Despite progress made in the national- and state-level survey infrastructure and the wide adoption of interoperable electronic

health records, local public health professionals continue to face challenges in obtaining access to critical data that can guide their actions and track impact. Participants noted the prevailing time lag in existing data systems. For instance, publicly available National Health and Nutrition Examination Survey data were often collected several years prior. Many participants urged substantial expansion of county- and sub-county-level data collection efforts to enable local efforts that are pertinent to the population they serve. Further, there needs to be a cultural shift in public agencies across the federal, state, and local levels in striving to make more raw, de-identified data available to researchers and the community in a more timely fashion to accelerate the translation of evidence to action.

Ancillary Event: Data, Metrics, and Analytics Roundtable, March 22, 2016

On March 22, 2016, OASH convened more than 40 thought leaders representing government, academia, and the private sector in Washington, DC to discuss the role of data in advancing public health.

Data, metrics, and analytics tools are critical to effective public health practice. Many local health departments currently rely on national data that are years old, were collected from labor-intensive surveys, or are not granular enough to inform local efforts. Even when public professionals can access essential data, they may struggle to link them to other data sets or use them effectively.

The full-day meeting focused on state and local health departments' data-related challenges and opportunities—and how the federal government can help modernize the data and analytics infrastructure. The group was unanimous that cross-sector partnerships can bolster the local public health data that professionals rely on. Panelists also highlighted innovative public health data initiatives across the country.

Roundtable participants developed an initial set of recommendations to collect, access, and use relevant data to support PH3.0 initiatives. The full meeting summary can be downloaded at: <https://www.healthypeople.gov/2020/tools-resources/public-health-3/resources>.

There are also substantial barriers to data sharing. In addition to significant variability in file formats and metrics of measurement, there is widespread misunderstanding of the Health Insurance Portability and Accountability Act requirements and a lack of expertise and capacity at the local level to handle the legal processes involved in data-sharing agreements across agencies and entities. Tracking individuals or linking individuals across different data systems is oftentimes impossible in the absence of unique personal identifiers. Participants suggested the need for best practices in data sharing that create interoperability standards while protecting privacy.



Granularity matters. We need community-level data to identify places with specific needs.”

– Participant, Allegheny

2. Exploring new types of data.

Data traditionally collected by local public health officials at times paint an incomplete picture of a community’s challenges and successes. Participants encouraged local leaders to explore alternative sources of data, including hospital and ambulatory care records, health insurance claims, and electronic health records. These data sources provide trends and patterns of health care utilization and admissions/discharges. They often contain sufficiently granular location information, and are made available with only a short lag time. Many communities, for example, are using this type of data for “hot spotting” areas

with high health care needs that may benefit from comprehensive preventive efforts.

To better understand community needs, participants also suggested taking advantage of data across sectors, especially data on upstream challenges related to income, education, housing, crime, interpersonal violence and trauma, environmental hazards, transportation, and education. Sources of these data include programs such as the Supplemental Nutrition Assistance Program (SNAP), the Homeless Management Information System, the American Community Survey, and the National Committee on Vital and Health Statistics (NCVHS) report, *Environmental Scan of Existing Domains and Indicators to Inform Development of a New Measurement Framework for Assessing the Health and Vitality of Communities*. Public health practitioners can also use cross-sector data to evaluate collaborative initiatives—for example, one could evaluate whether an intervention that promotes wellness among school-age youth results in improvement in educational attainment or graduation rate.



We need data on social determinants, prevention, and return on investment. We have to marry health economics with public health prevention and get people to take a long—not short—look.”

– Participant, Spokane



Bright Spot of Innovation: *Priority Spokane*

[Priority Spokane](#) serves as a catalyst for focused improvements in economic vitality, education, the environment, health, and community safety. The collaborative convenes diverse partners from across the county, including the Spokane Regional Health District, Spokane Public Schools, the City of Spokane, the Spokane Housing Authority, and Greater Spokane Incorporated. Priority Spokane also includes local and regional hospitals, universities, and foundations.



Identifying Public Health Priorities

According to Priority Spokane, public health priorities must affect a significant number of people in the community, affect various areas within the community, and be actionable. To address public health priorities, Priority Spokane analyzes data, develops and implements data-driven strategies, and evaluates progress.

In 2009, Priority Spokane analyzed graduation rates to identify educational attainment as a priority indicator. The collaborative conducted a study of 7,000 public school students over two years to understand when students were falling behind and dropping out. These findings pointed to three tipping points: low attendance, suspensions for disruptive behavior, and low course completion.

Taking Action

Equipped with these insights, Priority Spokane took action to create essential supports for students that would help them stay on track. For example, Priority Spokane advocated for new state laws that promote restorative rather than exclusionary discipline, developed a mentorship program with Gonzaga University, and worked with community partners to establish a community dashboard for monitoring progress. In five years, Spokane's graduation rate jumped from 60% to 80%.

In 2013, Priority Spokane again followed this process to work toward solving another countywide public health priority: mental health issues among school-age youth. Priority Spokane received a Culture of Health Prize from the Robert Wood Johnson Foundation in 2014, in recognition for its work advancing community health.

3. Supporting data sharing and analysis.

Barriers to sharing, analyzing, and interpreting data can impede local efforts to assess needs and evaluate programs. Participants noted that sharing and analyzing data across sectors is critical to achieving a person-centric and community-centric perspective. To incentivize data sharing, local leaders need to articulate how it can support a collective goal. For example, health departments aiming to address the issue of sedentary lifestyles within the community can use transportation and city planning data to inform their efforts. However, participants also suggested that governance is required to create a platform for exchanging data across sectors and institutionalize data-sharing capabilities.



Public health departments need access to whole-person data across multiple organizations and agencies—and the ability to analyze and take action.”

– Participant, Kansas City

Key Findings: Foundational Infrastructure

Participants from all meetings identified salient features of a PH3.0-capable local health department and shared ideas about how to make progress toward institutionalizing these features.

1. Creating a mission-based, collaborative infrastructure.

Participants underscored the importance of public health departments developing a clear mission and roadmap centered on community needs and involvement. Local health departments embracing PH3.0 should welcome community engagement both formally—for example, through community advisory boards—and informally. Community engagement means focusing not only on disseminating information to communities, but also on collecting information from communities.

According to participants, a PH3.0 public health department should reflect PH3.0 values—collaboration, equity, and commitment to addressing social determinants of health—in its mission statement, strategic plan, organizational chart, and new-hire orientations. State and local health departments should also include information technology and data capabilities (collecting, analyzing, disseminating, and acting on them) in their routine quality improvement process. In addition, participants noted that a PH3.0 health department is one whose financing mechanism allows for flexibility in its funding to respond to emerging health concerns.

2. Focusing on equity and cultural competence.

Participants explained that local and state health departments must adopt an equity lens through which they view the community and their work. Health departments can institutionalize this approach by training all staff in cultural competence. Participants suggested a few training options—for example, computer-based training on implicit (unconscious) bias—but also noted that

engaging with the community is the best training. Many agreed that making one person accountable for equity is not sufficient; rather, there has to be a department-wide cultural shift.



A PH3.0 infrastructure requires cultural humility and competency—a recognition that I don’t know what I don’t know.”

— Participant, Nashville

3. Articulating foundational infrastructure and the public health “brand.”

Participants defined PH3.0 health departments of the future as forward-thinking change makers. Several urged HHS to continue to communicate a PH3.0 model that communities can tailor to fit local culture and priorities. Departments can take other steps to institutionalize PH3.0 operations

and leadership, such as documenting processes for making decisions and taking collective action. Documentation helps to ensure the continuation of activities even as leaders come and go. Participants noted that the department’s structure can also promote a PH3.0 ethos; for example, departments can build cross-disciplinary teams internally or create a horizontal leadership structure. In addition, they could develop a center, unit, or program housed within the department dedicated to external relations, strategic development, and community engagement.

To foster a cultural shift to PH3.0 within departments, participants from local public health departments shared the experience of undergoing accreditation as a significant process for assessing their capacity to deliver essential public health services, improve quality, and enhance their accountability. Participants also called on the private sector to engage, collaborate, and create shared value. Emulating private sector



Bright Spot of Innovation: *Nashville Health*



Nashville is a thriving city with a robust health care delivery system—but many residents suffer from poor health. [NashvilleHealth](#) is a new collaborative founded by Senator William Frist, MD, that adds momentum and dimension to the county’s collective effort to improve health.

NASHVILLE *Health*

NashvilleHealth is guided by a simple mission: to substantially improve the health and well-being of Nashvillians.

In its first year, NashvilleHealth will focus on:

- Preventing and curbing tobacco use, since Tennessee has one of highest tobacco use rates in the nation (23%)
- Lowering high blood pressure rates, since high blood pressure can lead to several chronic health conditions
- Creating conditions in which children can be healthy, since behaviors adopted in childhood are predictors of wellness later in life

The collaborative will leverage resources and relationships to address these problems from several angles. To support this important work, NashvilleHealth is developing a framework for effecting change that is affordable, sustainable, and scalable.

NashvilleHealth aims to make Nashville one of the healthiest places to live in the state and the nation. The collaborative will use state and national health rankings to measure progress toward this goal—and will strive to make Nashville number 1.

business practices could take health departments a long way. These processes include implementing meaningful metrics, timelines, and deliverables. Participants also noted that certain skills that are traditionally thought of as valuable only in the private sector—such as sales and marketing—are useful in public health. The ability to approach a new partner, deliver a “sales” pitch, and forge new collaborative ventures is not only valuable—it is essential to PH3.0.



[PH3.0 health departments need] a culture of creativity and innovation: capable of storytelling, engagement practices, creative place making.”

— Participant, Santa Rosa



Recommendations to Achieve Public Health 3.0

The era of Public Health 3.0 is an exciting time of innovation. Without support from across the broader public health system, however, public health entities will not be able to achieve or sustain their transformation. Our recommendations reflect what we heard from the public health community across the country, from conversations with leaders, and from a review of prior reports that lay out a framework for strengthening public health. We propose five key recommendations that define the conditions needed to support health departments, and the broader public health system as it transforms.

We also propose specific actions that can be taken related to these broader recommendations.

- 1 Public health leaders should embrace the role of **Chief Health Strategist for their communities**—working with all relevant partners so that they can drive initiatives including those that explicitly address “upstream” social determinants of health. Specialized Public Health 3.0 training should be available for those preparing to enter or already within the public health workforce.

In many communities the local health officer will serve the role of Chief Health Strategist, but this may not necessarily always be the case—indeed Chief Health Strategists can come from other sectors. In the PH3.0 era, the public health workforce must acquire and strengthen its knowledge base, skills, and tools in order to meet the evolving challenges to population health, to be skilled at building strategic partnerships to bring about collective impact, to harness the power of new types of data, and to think and act in systems perspective. This will require a strong pipeline into the public health workforce, as well as access to ongoing training and mid-career professional development resources.

- a. Public health associations such as ASTHO and NACCHO should develop best practice models and training for current public health leaders looking to work as Chief Health Strategists.
 - b. The Health Resources and Services Administration (HRSA) should incorporate principles of Public Health 3.0 and social determinants of health in their workforce training programs, including the National Health Service Corps orientation, public health training center, and National Coordinating Center for Medicare and Medicaid Services Accountable Health Communities Model.
 - c. Local public health agencies should partner with public health training centers and academic schools and programs of public health to inform training that meets the local public health workforce needs.
 - d. The business and public health communities should jointly explore leadership development and workforce enrichment opportunities such as short-term fellowships or exchange programs, with a particular focus on the financial and operational capacity of local health departments. Academic institutions should encourage their faculty and administrations to develop meaningful partnerships with local public health departments and support service learning and internships for students from all disciplines in state and local health departments.
 - e. Academic institutions should encourage their faculty and administrations to develop meaningful partnerships with local public health departments and support service learning and internships for students from all disciplines in state and local health departments.
 - f. Local health departments should train their leaders and staff in the concept and application of the collective impact model of social change.
 - g. Public health should work with leadership institutes and business schools to establish professional development resources and opportunities.
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- 2** Public health departments should engage with community stakeholders—from both the public and private sectors—to form vibrant, **structured, cross-sector partnerships** designed to develop and guide Public Health 3.0-style initiatives and to foster shared funding, services, governance, and collective action.

Communities should create innovative and sustained organizational structures that include agencies or organizations across multiple sectors but with a shared vision, which allows blending and braiding of funding sources, capturing savings for reinvestment over time, and a long-term roadmap for creating health, equity and resilience in communities. In some communities the local health department will lead, but others may lead these efforts.

- a. Local public health agencies should form cross-sector organizational structures aimed at achieving a collective vision of community health that are capable of receiving and sharing resources and governance.
- b. HHS should work with others to develop a report defining the key characteristics of successful local public health models that address social determinants

of health through cross-sector partnerships and recommending pathways to wide adoption.

- c. The Assistant Secretary for Preparedness and Response (ASPR) and the CDC should work with state and local health entities to ensure synchronization between health care practices, coalitions, and public health entities. Pre-crisis collaboration is essential to improve sharing of limited resources, improve timely and accurate communication, and improve sharing of data relevant to preparedness planning and response.
- d. Local public health leaders should engage with elected officials to create cross-jurisdictional organizational structures or partnerships for all community development efforts.
- e. Public health entities should partner with environmental health agencies to address the environmental determinants of health.



- f. HHS should continue to develop tools and resources (such as the HI-5) that identify system-level drivers of health disparities, connecting health and human services, and work with communities to translate evidence to action.
- g. HRSA should recommend that health centers to document collaboration with their state and/or local health department.
- h. Health care providers should identify clear mechanisms to engage with local public health as part of their effort to achieve the three-part aim of better care, smarter spending, and healthier people.
- i. The Centers for Medicare and Medicaid Services (CMS) and ASPR should work together to ensure state and local public health entities engage health care providers during times of crisis or disaster. Preparedness measures are essential to healthier and more resilient people.
- j. The Substance Abuse and Mental Health Services Administration should encourage state mental health and substance use disorder agencies and other grantees to collaborate with state, local, and tribal public health entities in achieving PH3.0 goals.
- k. The Agency for Health care Research & Quality should ensure linkages between primary care and public health via the Primary Care Extension Program and evaluate outcomes.
- l. The National Institutes of Health should continue its community participatory research and engagement efforts, such as the Clinical and Translational

Science Awards and the Partnerships for Environmental Public Health, to accelerate translation of evidence to community action, as well as to generate new knowledge in the evaluation and implementation of public health interventions.

- m. Public health leaders should pursue local partnerships to ensure population health is central in all community development efforts.

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- 3** Public Health Accreditation Board (PHAB) criteria and processes for department **accreditation should be enhanced** and supported so as to best foster Public Health 3.0 principles, as we strive to ensure that every person in the United States is served by nationally accredited health departments.

As of August 2016, 324 local, state, and tribal health departments have been accredited or in progress for accreditation, covering roughly 80% of the U.S. population. The vision of ensuring every community is protected by a local or a state health department (or both) accredited by PHAB requires major investment and political will to enhance existing infrastructure. While research found accreditation supports health departments in quality improvement and enhancing capacity, the health impact and return on investment of accreditation should be evaluated on an ongoing basis.

- a. HHS should assess opportunities to incentivize PHAB accreditation through federal programs and policies.

- b. HHS should require state and local health departments receiving federal grants to indicate their PHAB accreditation status, including applications in progress or plans to apply in the future.
- c. The federal government should partner with the private sector to create a learning community for local health departments seeking to engage in PH3.0 work with a particular focus on collective impact models to address the social determinants of health.
- d. Resources to support the accreditation process and maintenance should be more readily available from public and private funding sources.
- e. PHAB should continue to evolve accreditation expectations by incorporating Public Health 3.0 concepts.
- f. Philanthropic organizations supporting local public health activities and social interventions should require grant applicants to collaborate with local health departments.
- g. ASTHO and NACCHO should accelerate their support of state and local health departments moving to accreditation.
- h. PHAB and its strategic partners should continue to enable pathways to accreditation for small and rural health departments.
- i. States should assess the efficiency and effectiveness of their local health departments, including addressing jurisdictional overlaps and exploring opportunities for shared services mechanisms.

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- 4** Timely, reliable, granular-level (i.e., sub-county), and **actionable data** should be made accessible to communities throughout the country, and clear **metrics** to document success in public health practice should be developed in order to guide, focus, and assess the impact of prevention initiatives, including those targeting the social determinants of health and enhancing equity.

The public and private sectors should work together to enable more real-time and geographically granular data to be shared, linked, and synthesized to inform action while protecting data security and individual privacy. This includes developing a core set of metrics that encompasses health care and public health, particularly the social determinants of health, environmental outcomes, and health disparities.

- a. HHS should utilize opportunities such as Healthy People 2030, NCVHS's population health subcommittee, the Evidence-Based Policymaking Commission, and the census to elevate metrics related to social determinants to be leading health indicators, to define community-level indicators that address the social determinants of health, and to explore models to leverage administrative data.
- b. NCVHS should advise the secretary of HHS to incentivize the integration of public health and clinical information.
- c. CDC should continue its work with the private sector to make sub-county-level data including health, health

care, human services, environmental exposure, and social determinants of health available, accessible, and usable.

- d.** HHS should work with public health leadership and the private sector to develop a non-proprietary tool to support geographic information systems and other analytic methods for front-line public health providers.
- e.** Health systems and other electronic health data repositories should prioritize data sharing at the federal, state, and local level with the goal of achieving a learning health system inclusive of public health by 2024 as described in the Office of the National Coordinator for Health Information Technology (ONC) Nationwide Interoperability Roadmap.
- f.** The HHS Office for Civil Rights should continue to develop guidance for the public health system to provide clarity on private and secure data use, as well as guidance to promote civil rights compliance to address those social determinants which are the product of discriminatory practices.
- g.** ONC and the Administration for Children and Families should continue to establish clear data and interoperability standards for data linkage between health and human services sectors.
- h.** HHS should continue to identify gaps in the collection of data relating to race/ethnicity, language, gender identity or sexual orientation in existing surveys. When feasible, governmental and nongovernmental stakeholders at all levels—federal, state, local, and tribal—should collect standardized, reliable data concerning disparities.
- i.** HHS should facilitate linking environmental and human services data to health.



5 Funding for public health should be enhanced and substantially modified, and innovative funding models should be explored so as to expand financial support for Public Health 3.0–style leadership and prevention initiatives. Blending and braiding of funds from multiple sources should be encouraged and allowed, including the recapturing and reinvesting of generated revenue. Funding should be identified to support core infrastructure as well as community-level work to address the social determinants of health.

To secure sufficient and flexible funding in a constrained and increasingly tightening funding environment, local public health needs a concrete definition of the minimum capabilities, the costs of delivering these services, and a structured review of funding streams to prioritize mandatory services and infrastructure building.

- a. The CMS and private payers should continue to explore efforts to support population-level health improvements that address the social determinants of health.
- b. HHS should explore transformation grants for state and local health departments to evolve toward PH3.0 structure, analogous to the State Innovation Model (SIM) grants to support health care system transformation.
- c. State governments receiving funds through SIM or Medicaid Waiver processes should be required to document their health department

accreditation status, and their strategies for addressing the social determinants in partnership with their local public health departments.

- d. States should maximize their use of the funding through the Health Services Initiative option under the Children’s Health Insurance Program to advance their public health priorities for low-income children.
- e. HHS should enhance its coordination both within the department and with other agencies, developing and executing cross-agency efforts to strategically align policies and programs that address the social determinants of health.
- f. Public and private funders should explore options to provide more flexibility for accredited health departments to allocate funds toward cross-sector efforts including partnership development and collective impact models in addressing the social determinants.
- g. Communities should examine how to best use the ACA’s community benefits requirement for nonprofit hospitals by coordinating the alignment of the data collection process and pooling resources, and how these can be used to advance and provide funding for public health.
- h. Public health agencies and academic institutions should periodically calculate the funding gap—the difference between the costs of providing foundational capabilities by each local health department and its current funding level—and communicate these figures in the context of forging partnerships and expanding funding sources.



Conclusion

The Public Health 3.0 framework leverages multi-sector collaboration to address the non-medical care and social determinants in communities, with local public health entities at the core, serving as Chief Health Strategists in their communities.

This sort of cooperation across the broader health system will be necessary to assure health equity for everyone, regardless of race/ethnicity, gender identity or sexual orientation, zip code, or income. At the local level, this effort will require a Chief Health Strategist, and local public health is best suited to serve in that role. For local public health leaders and entities to step up to this challenge, they will need to build upon their past successes and transform their agencies.

The exciting news is that many public health leaders and communities across the United States are doing just that. They are forging a new framework for public health that is leveraging new partnerships and resources to create the conditions in which everyone can be healthy. To ensure that these innovative PH3.0-style health agencies and communities can sustain their work and spread the model to other communities, all parts of the public health system will need to not only invest appropriately in public health, but support its ongoing transformation. Only then, through the collective actions of our society, can we ensure the conditions in which everyone can be healthy. The time is now to create the robust public health infrastructure needed to improve the public's health; the time is now for Public Health 3.0.

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Endnotes

- ¹ Secretary's Advisory Committee on Health Promotion and Disease Prevention Objectives for 2020. Healthy People 2020: An Opportunity to Address the Societal Determinants of Health in the United States. July 26, 2010. Available from: <http://www.healthypeople.gov/2010/hp2020/advisory/SocietalDeterminantsHealth.htm>
- ² Kochanek KD, Murphy SL, Xu JQ, Tejada-Vera B. Deaths: Final data for 2014. National vital statistics reports; vol 65 no 4. Hyattsville, MD: National Center for Health Statistics. 2016. http://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf
- ³ U.S. Department of Health and Social Services. (n.d.). The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Retrieved from <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/fact-sheet.html>
- ⁴ Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, January–June 2015 <http://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201511.pdf>
- ⁵ National Academy of Medicine. (2013). *U.S. Health in International Perspective: Shorter Lives, Poorer Health*. Washington, DC: National Academies Press.
- ⁶ Life expectancy at birth and at age 65 remained the same in 2012, 2013, and 2014. Murphy, S. L., Kochanek, K. D., Xu, J., & Arias, E. (2015). Mortality in the United States, 2014. *NCHS Data Brief 229*. <http://www.cdc.gov/nchs/data/databriefs/db229.pdf>. Kochanek, K. D., Murphy, S. L., Xu, J., & Arias, E. (2014). Mortality in the United States, 2013. *NCHS Data Brief 178*. <http://www.cdc.gov/nchs/data/databriefs/db178.pdf>
- ⁷ National Center for Health Statistics, Centers for Disease Control and Prevention, eds. *Health, United States, 2015, with special feature on Racial and Ethnic Health Disparities*. Hyattsville, MD, 2016.
- ⁸ Whitehead, LaToria. "The road towards environmental justice from a multifaceted lens." *Journal of environmental health* 77.6 (2015): 106-109.
- ⁹ Institute for Health Metrics and Evaluation. (n.d.). U.S. Health Map. Retrieved from <http://www.healthdata.org/data-visualization/us-health-map>
- ¹⁰ Resources for evidence-based interventions to address community health and safety issues are available from such sources as The Guide to Community Preventive Services.
- ¹¹ McGinnis, J. M., Williams-Russo, P., & Knickman, J. R. (2002). The Case For More Active Policy Attention To Health Promotion. *Health Affairs* 21(2), 78–93.
- ¹² Halfon, N., et al. (2014). Applying a 3.0 transformation framework to guide large-scale health system reform. *Health Affairs* 33(11), 2003–2011.
- ¹³ Institute of Medicine. (2012). *Primary Care and Public Health: Exploring Integration to Improve Population Health*. Washington, DC: The National Academies Press.
- ¹⁴ Auerbach, J. (2016). The 3 buckets of prevention. *Journal of Public Health Management and Practice* 22(3), 215–218.
- ¹⁵ Bradley, E. H., et al. (2011). Health and social services expenditures: associations with health outcomes. *BMJ Quality & Safety* 20(10), 826–831.
- ¹⁶ Rogan, E., & Bradley, E. (2016). Investing in Social Services for States' Health: *Identifying and Overcoming the Barriers*. New York: Milbank Memorial Fund.
- ¹⁷ Bradley, E. H., et al. (2016). Variation In Health Outcomes: The Role Of Spending On Social Services, Public Health, And Health Care, 2000–09. *Health Affairs* 35(5), 760–768.
- ¹⁸ Mays, G., & Hogg, R. (2015). Economic shocks and public health protections in US metropolitan areas. *American Journal of Public Health* 105(S2), S280–S287.
- ¹⁹ National Association of County and City Health Officials. (2012). Local health department job losses and program cuts: findings from the January 2012 survey. Retrieved from <http://www.naccho.org/topics/infrastructure/lhdbudget/upload/research-brief-final.pdf>

- 20** Institute of Medicine. (2002). *The Future of the Public's Health in the 21st Century*. Washington, DC: The National Academies Press.
- 21** Frist, B., & DeSalvo, K. (2016). What The Flint Water Crisis Reveals About Public Health. *Forbes*. Retrieved from <http://www.forbes.com/sites/billfrist/2016/02/11/what-the-flint-water-crisis-reveals-about-public-health/>
- 22** Institute of Medicine. (1988). *The Future of Public Health*. Washington, DC: The National Academies Press. doi:10.17226/1091
- 23** Institute of Medicine. (1988). *The Future of Public Health*. Washington, DC: The National Academies Press. doi:10.17226/1091
- 24** Institute of Medicine. (1988). *The Future of Public Health*. Washington, DC: The National Academies Press. doi:10.17226/1091
- 25** RESOLVE. (n.d.) The High Achieving Health Department in 2020 as the Community Chief Health Strategist. Retrieved from <http://www.resolve.org/site-healthleadershipforum/hd2020/>
- 26** Koo, D., O'Carroll, P., Harris, A., & DeSalvo, K. (2016). An Environmental Scan of Recent Initiatives Incorporating Social Determinants in Public Health. *Preventing Chronic Disease* **13**.
- 27** Kania, John, and Mark Kramer. "Collective impact." (2011): 36-41.
- 28** Robinson, T. N. (2010). Save the world, prevent obesity: piggybacking on existing social and ideological movements. *Obesity* **18**(S1), S17–S22.



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