Innovation

in Governmental Public Health: Building a Roadmap

phnci

What is Public Health Innovation?

Public health innovation refers to the development of a new process, policy, product, or program that increases quality, impact, and efficiency.

Why Innovate Now?

The need for innovation in governmental public health practice is clear. Emerging public health threats require rapid response, as illustrated with Zika virus-induced birth defects, the opioid epidemic, and the increase in number and type of natural disasters. At the same time, there is a growing body of evidence on how a community's social and physical environments significantly impact the health of people living and working in the community, thus highlighting the need to address these determinants of health to achieve health equity. Effective interventions require cross-sector partnership, and the rapidly changing context for health care delivery means that health departments must be nimble for partnerships across public health and health care sectors to be effective. Innovation may help health departments address these emerging threats and make the most of new opportunities for collaboration.

A variety of common challenges pose barriers to innovation in governmental public health, not the least of which have been repeated budget cuts. In addition, many public health departments have outmoded technology or have policies that restrict their ability to use social media and other modern communication methods. Moreover, many departments have tremendous amounts of data, but they are buried in siloes created by traditional government funding requirements for compliance in separate processes and databases.

Despite these challenges, there are bright spots in innovation in public health, with emerging innovations that are picked up and adapted and adopted by other departments. Emerging technologies are continually changing the way people communicate and how other industries operate, and these 21st century changes need to be incorporated into public health. Public health practice must be transformed in order to remain relevant, improve people's lives, and ensure that funds are used in the most efficient and effective manner. Public health must innovate and modernize the ways of practice.

The Public Health National Center for Innovations (PHNCI), a division of the Public Health Accreditation Board (PHAB), has coordinated the development of this document as an early roadmap to describe what innovation in public health practice might look like. This work is being considered as an early developmental concept, which will be improved over time. Therefore, the definition, characteristics, and organizational culture listed herein should all be considered as "working" for now, with more definitive versions to be developed over time as PHNCI learns more from the public health field.

What Are the Characteristics of Innovation in Public Health?

PHNCI, with input from many others in public health and in the innovations arena, has described the following characteristics of innovation that are absolutely critical for an activity or product to be considered innovative:

Innovation Characteristics

- Is novel, new, or creative;
- Reflects the dynamic state of change inherent in public health transformation;
- Occurs by internal or cross-sector collaboration;
- Involves co-production of the process, policy, product, or program with partners, stakeholders, and/or customers;
- Has the potential to generate a new or improved means to create value;
- Lends itself to adaptation and adoption/ replication and diffusion;
- Generates real-time information for evaluation and course correction; and
- If related to technology, uses open source technology (i.e., the technology is in the public domain) so as to facilitate adaption and adoption/replication.

Innovations are one step in transforming governmental public health practice. The journey to transformation can be conceptualized as practices that move along three points on a spectrum: from emerging, to leading, and ultimately prevailing. Marking the beginning of transformation, "emerging" practices are public health innovations. They come from one or a small group of health departments and/or other agencies, and are brand new to the field. Leading practices are innovations that have been adapted and adopted or perhaps replicated by other health departments and/or other agencies. Although no longer considered innovative, they are not recognized as the usual way of doing business. Leading practices are widely viewed as best practices, and an increasing number of health departments are likely to emulate them. Finally, prevailing practices are those that are accepted and are in play throughout the public health practice community. They are no longer considered leading practices because they have been diffused throughout the public health practice community.✴ As an innovation first emerges, it may be transformative for the health department that develops the practice. If the health department is not the leader of the innovation, the health department should be performing a major role in the innovations work. As evidence of the effectiveness of an innovation grows and it becomes a leading practice, and ultimately is recognized as a prevailing practice, it can transform the field of public health.

✴ *Adapted from: Alliance for Innovation. Innovation Academy Playbook. Phoenix, AZ: 2016.*

How Can Culture Facilitate Innovation in Public Health?

A culture in public health that facilitates innovation has many of the same characteristics as a high-performing health department with a strong culture of quality improvement. That is, the culture is one that is comfortable with an openness to new ideas; with risk-taking; and with allocating time for innovative thinking. This culture is also typically led by committed and supportive leadership who sets the tone for a collaborative approach to problem solving.

Additional attributes of a culture that fosters

innovations may include the following (based on the innovation):

Organizational Attributes

- ✴ Employs human-centered design (i.e., starts the problem-solving process with the customer by gaining empathy and deeper understanding of how the person experiences the problem, which in turn can inspire new ways to address the problem);
- ✴ Promotes generative discussions and is biased towards collective action;
- ✴ Anticipates change in attitudes and behaviors; or
- ✴ Builds on community assets.

The public health field is naturally risk-averse, given that public health has a tight regulatory structure and failure has potential human costs. Therefore, to support risk-taking, it is essential to create "small steps" that allow for evaluation of data step by step. This is the point of prototyping, or developing a sample to be tested (in the case of a product), as opposed to pilot testing or evaluation. Prototyping is more agile by redirecting a few people for a short time. This keeps costs low while using what you have, to see if the innovation is worth trying. It is a generative approach, getting feedback as you go along rather than waiting until a test period for a pilot has been completed before accepting feedback.

How Does Innovation Align with Performance Management and QI?

What is the relationship between innovation, performance management and quality improvement? The Public Health National Center for Innovations (PHNCI) distinguishes between innovation and quality improvement (QI). A QI effort may be successful in generating an improvement, but the improvement is not necessarily an innovation that embodies the characteristics noted above. The application of QI has grown rapidly in public health over the last decade, and QI may provide skills in terms of team building, identifying measures, testing iteratively, and refining a new process that will be useful to

developing and testing innovations. PHNCI sees supporting innovation as another way for public health to expand improvement strategies. Likewise, an idea for an innovation may emerge from a performance management finding or observation. Health departments might discover there is a problem that needs an innovative solution based on performance management data or from QI projects that are not able to fully resolve the problem.

Both have processes associated with them. For QI, we talk about the "Lean" approach or PDCA (plan–do–check–act or plan–do–check–adjust). For innovation, there is a pathway that includes ideating (brainstorming), prototyping, measuring, adjusting, and celebrating successes. Those with QI skills may find them useful for innovation processes (for example, the measurement step in innovation may be similar to the "check" part of PDCA).

Where Will This Roadmap Lead?

In fulfilling its role as the national center or "hub" for identifying and disseminating innovations in public health, PHNCI sought to access the knowledge and expertise of individuals outside of public health and in national policy roles in public health to inform the development of a working definition of innovation in public health; characteristics of innovation; the organizational culture to support innovation; and

the relationship between quality improvement and innovation. We hope this will be useful for health departments pursuing innovation. Over the next two years, PHNCI will be working with public health departments to further examine these working definitions and characteristics with the ultimate outcome being a refined document for the field to use as they continue to improve the health of the populations they serve.

What Can Health Departments Do Now?

Health departments can begin immediately to participate with PHNCI as we develop this roadmap further. Some examples of ways to participate include:

Take Action

- Review PHNCI's e-learning module on Innovations;
- Monitor PHNCI's new and improved website (www.phnci.org) for the latest innovations and related work;
- Submit your own innovations to the PHNCI website;
- Participate in conferences, webinars, and other discussion opportunities that PHNCI offers.

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Advancing public health performance