Editorial

Strengthening Local Health Department Informatics Capacity Through Advocacy, Education, and Workforce Development

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Our ability to capture data and create linkages among disparate sources of information has increased exponentially in the digital age. When harnessed and leveraged to its full potential, the wealth of information we have about our communities has the potential to greatly improve population health outcomes. To do so, local health department (LHD) leaders must effectively use information and information technology (IT) to make strategic decisions that will promote the public's health and well-being.

In recent years, several pieces of federal legislation have greatly affected how LHDs access, use, and share information. The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 provided the Department of Health and Human Services with the authority to establish programs to improve health care quality, safety, and efficiency by promoting health infrastructure technology, including electronic health records and electronic health information exchange.¹ In 2010, the Patient Protection and Affordable Care Act further incentivized health care providers to digitize health information.

These changes require LHD leaders to develop and communicate a strategic vision for how informatics, the field specializing in the use of health data to inform decisions that improve community health, can work effectively across their agencies to support their goals. Some health departments have established crosscutting informatics teams that work across their organizations to effectively and efficiently make high-quality information available to program managers and leadership. Small, rural, and under-resourced departments may grow their capacity by partnering with other organizations to share services.

Regardless of whether they serve 5000 people or 5 million people, LHDs can successfully engage in informatics activities, such as assessing, designing, and testing ways for different data systems to communicate and exchange information, only if they have the infrastructure, funding, and workforce to support these efforts.

● Current Challenges to LHD Informatics Efforts

In 2015, the National Association of County and City Health Officials (NACCHO) conducted the third in a series of surveys about informatics needs and capacity in LHDs. The survey was supported by the Centers for Disease Control and Prevention and the Jiann-Ping Hsu College of Public Health at Georgia Southern University. Findings from the survey illuminate a variety of issues currently impeding greater advancement of informatics work at LHDs. One of the most surprising findings from the survey was that roughly one-fifth of LHDs reported not having conducted any activity related to informatics in the past 2 years. There were a number of challenges identified.

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Infrastructure

In the survey, many LHDs reported a lack of decision-making control concerning critical components of informatics, which hampers their ability to fulfill their informatics needs. While 40% of LHDs rated their IT infrastructure as good or excellent, a small but significant proportion of LHDs still do not have access to high-speed Internet. In addition, less than a quarter of respondents reported having developed strategic plans related to informatics and only 17% reported having implemented a new information system.

Workforce and capacity

LHD informatics capacity varies extensively by the size, location, and type of governance under which they operate. As would be expected, large and metropolitan health departments are better able to develop and sustain informatics capacity. Small, rural, and centrally governed LHDs reported facing greater barriers. Unmet training needs are higher in state-governed and smaller LHDs. While 40% of large LHDs indicated their staff had sufficient informatics training, only 5% of medium-sized LHDs and 2.6% of small LHDs reported that their staff had sufficient training.

Electronic health records and health information exchange

Electronic health records represent a goldmine of useful data for LHDs. However, of the roughly 90% of LHDs that reported providing clinical services, nearly a third are still using paper records. In addition, almost 60% of LHDs store nonclinical data in paper records.

Interoperability, or the ability of systems to work together across different platforms, is a core principle of informatics. Nonetheless, very few LHDs reported that all agency information systems were interoperable, resulting in inefficiencies and missed opportunities to detect, track, and manage outbreaks; analyze trends; identify at-risk populations; and protect communities during public health emergencies.

● Helping LHDs Build Informatics Capacity

Advocacy

As the national voice of the nation's 2800 LHDs, NACCHO seeks to help LHDs overcome the barriers they face in harnessing the full potential of informatics. NACCHO is on the forefront of advocating for federal legislation and regulation that support LHDs' capacity for informatics. NACCHO advocates for health

information exchange standards that improve the quality and performance of public health activities across all levels of government; supports the involvement of LHDs in local, regional, state, and federal efforts toward health information exchange that ensures information is securely exchanged, protects privacy, and permits authorized use and access for public health purposes; and promotes the development of interoperable information systems that support the business processes of LHDs. Perhaps most important of all, NACCHO advocates for the funding necessary for LHDs to develop and sustain informatics activities.

Workforce development

Recognizing that LHDs are in dire need of staff who are proficient in informatics, NACCHO, the Centers for Disease Control and Prevention, and partner organizations developed Strengthening Health Systems through Interprofessional Education (Project SHINE), an informatics workforce development initiative. The program emphasizes interprofessional education, health systems integration, and community engagement. Over the course of 1 year, fellows in this program strengthen the public health informatics capacity of the host LHD by working on disease surveillance systems, data visualization (eg, infographics, story maps), meaningful use, and public health activities with health information exchanges. The program is proving to be an effective way of increasing informatics capacity in the next generation of public health leaders.

Education and peer sharing

One of NACCHO's most important roles is convening and connecting local health officials and their staff. NACCHO hosts the biennial Public Health Informatics Conference, which serves as a venue for groundbreaking discussions about public health informatics, evolving public health systems, and public health's role in our nation's expanding health IT infrastructure. Through access to experts in the field and peer networking, attendees learn about emerging trends in the discipline and gain concrete tactics for overcoming barriers to informatics implementation. The most recent conference, held August 21-24 in Atlanta, brought together hundreds of attendees, including LHD leaders and staff, state and federal partners, researchers, health care organizations, and IT vendors.

● Conclusion

Effectively using informatics to support public health practice is an important component of LHD

operations today. The articles within this supplement contain an important snapshot of LHDs' capacity and potential for informatics and the challenges and barriers standing between them and optimal use of health information and IT.

Meaningful use will end and will likely be replaced with merit-based incentives programs; public health must be included in those incentive measures. While many challenges remain, building and sustaining LHD informatics capacity now are critical. Our ability to

optimize the health and well-being of our communities depends on it.

REFERENCE

1. Office of the National Coordinator for Health Information Technology. Health IT legislation and regulations. <https://www.healthit.gov/policy-researchers-implementers/health-it-legislation>. Published 2016. Accessed July 14, 2016.