CSTE

COUNCIL OF STATE AND TERRITORIAL EPIDEMIOLOGISTS

SPECIAL REPORT:
PUBLIC HEALTH SURVEILLANCE

2011 Public Health Surveillance Workshop

In February 2011, CSTE convened a group of surveillance experts to begin updating the strategic vision for public health surveillance that addresses needs at all levels of public health. The Workshop convened 40 leaders in surveillance and informatics, including CSTE Executive Board members, local and state/territorial public health epidemiologists, academicians, and representatives from the Centers for Disease Control and Prevention (CDC), the Association of State and Territorial Health Officials (ASTHO), the National Association of County and City Health Officials (NACCHO), and the Public Health Informatics Institute (PHII). The Workshop's agenda, and subsequent discussion, focused on the content of the 1996 article, "Blueprint for a National Public Health Surveillance System for the 21st Century" (i.e., "the Blueprint"). Several key developments have changed the landscape of surveillance in the 15 years since the Blueprint was published. Examples include public health's heightened role in national preparedness and security, changes in societal expectations for and uses of information, the increased capabilities of information technology (IT), and the opportunity and challenges posed by availability of information from electronic health records (EHRs).

Goals and Objectives of the Public Health Surveillance Workshop

- To bring together national leaders in public health surveillance to begin updating the strategic vision for public health surveillance that addresses needs at the local, state, territorial, and federal levels.
- To revisit the Blueprint, with the expected product from these discussions to be a white paper describing updated guiding principles for conducting public health surveillance in the current environment.
- To identify new priority areas of surveillance activity, especially within the areas of infectious disease; chronic disease; environmental health, occupational health, and injury; and large-urban local surveillance that may need addressing within an updated Blueprint.
- To suggest what surveillance activities and role CSTE should assume.

The following issues were addressed at the Workshop by the attendees:

SURVEILLANCE WORKSHOP ISSUE #1: Principles of Surveillance as Reflected in the Blueprint

CONCEPTS DISCUSSED

In the Blueprint, the National Public Health Surveillance System (NPHSS) was conceived as a single comprehensive national system that ideally would encompass all conditions under surveillance. The current perspective is that public health surveillance involves a wide range of different systems under a broad conceptual framework, such as an "enterprise" or "portfolio," rather than a unified system. Participants agreed that surveillance should track process and impact measures, as appropriate and relevant for the condition under surveillance and that public health practice, which includes surveillance, needs to be more clearly defined and delineated from research, whether conducted by public health staff or others. Surveillance data should flow in the most efficient manner, even while state/territorial and local laws and regulations dictate how and when information is sent to public health. Finally, local, state, territorial and federal jurisdictions' various legislative requirements and policies on privacy and confidentiality need to be recognized.

RECOMMENDATIONS

- Consideration should be given to reinvigorating the concept of the NPHSS and developing a comprehensive list of conditions/indicators recommended for surveillance.
- The availability of new and massive amounts of electronic data and the technical ability to transfer such data to public health should not drive surveillance decisions. Public health officials cannot control all information; their role should be to assess data quality, evaluate uses of various data sources for surveillance, and define how such data can be effectively used to drive public health decision making.

CSTE PRIORITY ACTION ITEMS

- Although in many ways the 1996 Blueprint continues to reflect sound surveillance strategy, it needs updating due to changes in IT and heightened requirements for preparedness. CSTE should co-convene and co-own a revised framework for public health surveillance, which will replace the existing Blueprint by fall 2011. The new document
  - o should be prepared for local, state/territorial, and federal public health surveillance staff, as well as government policy makers and the public;
  - o should address the implications of informatics on surveillance; and
  - o should incorporate the continuing education of legislators and the general public on how surveillance systems operate and how information generated from surveillance needs to be actionable for public health.
- CSTE should clarify the current utility of the NPHSS concept through further discussion and include the final consensus in the new document.
- CSTE intends to finish a document presenting an updated strategic view of surveillance by fall 2011

SURVEILLANCE WORKSHOP ISSUE #2: **Review of Current Governance Issues in Surveillance for Local, State/Territorial, and Federal Public Health Agencies**

CONCEPTS DISCUSSED

Shared governance of surveillance with meaningful input from local, state/territorial, and federal levels was addressed at the Workshop. Governance of surveillance differs from controlling use of data, although both are important to discussions of governance. Decisions on data collection for surveillance ideally should involve a process that includes state/territorial and local input about data elements to be collected. Finally, form should follow function—that is, the surveillance method should match the intended use of the information.

RECOMMENDATIONS

- Governance and policy decisions will improve when data suppliers and the public are well informed about surveillance methods. Public health epidemiologists should use analysis, visualization, and reporting tools, where appropriate, to educate the suppliers of data and interested parties about surveillance needs and processes.
- Multiple models exist for governance (e.g., federated, distributed, and centralized). Guidelines need to be developed to clarify the national governance model for surveillance decision making.
- Clear communication among the public health associations (e.g., CSTE, NACCHO, ASTHO) and their members is needed so that their members' interests are well represented in decision making.
- CSTE or CDC should consider creating a public health Senior Sabbatical to allow experienced surveillance officers to rotate and serve in positions that promote better surveillance governance and standards development.

CSTE PRIORITY ACTION ITEMS

- CSTE should co-convene and co-produce a governance document with external stakeholders aimed at clarifying and defining governance of public health surveillance.
- CSTE should consider developing flexible and rapid methods for developing/adopting/approving policy.
- CSTE should more aggressively recruit local epidemiologists into its policy-setting process.
- CSTE should explore ways to increase capacity building/assistance for states through the CSTE Fellowship Program, advocacy activities, and facilitation of technical assistance to state/territorial and local agencies.
- CSTE should convene future workshops with CSTE members, CDC, academicians, and others to address issues around data sharing, rerelease of data, new surveillance domains (e.g., substance abuse, mental health, injury), and new surveillance techniques.

SURVEILLANCE WORKSHOP ISSUE #3: **Information Technology (IT) and Electronic Health Records (EHR) Needs, Obstacles and Challenges for Surveillance**

CONCEPTS DISCUSSED

Changes in IT and in the types of information that are available in computerized form, especially EHRs, provide exciting opportunities to improve and expand the information available to advance the public health mission. However, public health officials do not have the infrastructure or capacity to analyze and utilize all data and do not control all data that relate to community health. Public health surveillance should be a purpose driven endeavor that is guided by the needs of information to guide action to improve the health of the population.

- Decisions about data collection and uses for public health surveillance should not be driven by technology but rather, those decisions should be based on mission/purpose/goals of public health to protect and improve the health of the population it serves.
- Assessments of existing surveillance systems should consider the following:
  - o speed of data acquisition;
  - o reliability of data;
  - o type of condition;
  - o national systems standards vs. flexibility to address unique needs of states and localities;
  - o validity of data;
  - o quantity of data; and
  - o stringent data requirements that interfere with reporting.

RECOMMENDATIONS

- The public health surveillance workforce needs to be trained in IT.
- Public health officials at the state/territorial and local levels must be prepared to yield to national standardization of surveillance methods and technology when state-to-state variation is unnecessary.
- Public health officials should describe the limitations of technology in its use for surveillance and not allow technology to drive the quality of surveillance data.
- Public health officials need to explore leveraging efficiencies across public health surveillance systems.

CSTE PRIORITY ACTION ITEMS

- CSTE should define the information technology workforce needs for public health surveillance.
- CSTE should promote training of mid- and high-level epidemiologists in IT, e.g., exchange programs to allow mid-career epidemiologists to gain experience in the IT aspects of surveillance through temporary assignments at different levels of government.

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