

Minnesota Common Ground: Transforming Public Health Information Systems

Benefits of a Collaborative Approach

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Background

State and local public health agencies must have timely, accurate and appropriate information to effectively serve their communities, to promote health, and to make lifesaving decisions that protect the public from health risks. Many public health agencies are examining their existing information systems and seeking to improve their ability to detect, assess, and respond to a range of risks to the public's health and safety, including infectious diseases, pandemic flu, bioterrorism, and chronic diseases. However, current public health information systems often fail to meet their agencies' operational needs and do not provide interconnectivity with other public health agencies and the health care system—functions that are critical to promoting and protecting the public's health.

Goal of Collaborative

Requirements Development

The Robert Wood Johnson Foundation (RWJF) recognizes the need for more sophisticated information systems to respond to the multiple challenges that public health agencies face in the 21st century. *They seek to change how public health information systems are conceived and developed—by transforming from a stand-alone environment to one that acts collaboratively to design systems that meet the needs of public health agencies and the public they serve.*

Methodology

In order to achieve the above goals, RWJF has partnered with the Public Health Informatics

Institute. The Public Health Informatics Institute has developed a cost-effective and rational approach to developing effective health information systems. Its requirements development methodology brings together public health agencies to:

- **Analyze** their business processes by thinking collaboratively about the tasks they perform to meet specific public health objectives
- **Redesign** business processes by rethinking the tasks to increase effectiveness and efficiency
- **Define** system requirements by articulating what the information system must do to support those tasks.

This approach, called *collaborative requirements development*, produces a set of information systems requirements that is common to all, but that can be tailored to meet individual agency needs. With defined business processes and requirements available, it will be unnecessary for every public health department to reinvent the wheel when defining its information systems needs.

Success Stories

In 2002-2003, a collaboration of public health laboratories, sponsored by the Association of Public Health Laboratories and facilitated by the Institute, developed requirements for laboratory information management systems that met the needs of all public health laboratories. As a result, public health



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laboratories were able to make informed decisions about their information systems, and to ensure the systems' interoperability with all state laboratories and federal agencies and conform to all national standards.

In 2005-2006, a workgroup of local health departments, sponsored by the National Association of County and City Health Officials (NACCHO) and facilitated by the Institute, enumerated and analyzed major business processes of local health departments, demonstrating the feasibility of sharing this methodology broadly with the public health community.

Benefits of a Collaborative Approach

Public health agencies are expected to use sophisticated information technologies effectively to detect, assess and respond to public health challenges. A collaborative approach to requirements development enables public health agencies to reach agreement on a common vocabulary and definitions to describe their business processes. It provides opportunities for agencies to review each others' approaches for carrying out core business activities and to redesign those processes to improve quality and performance, as well as interoperability. Broad adoption and endorsement of those processes will advance public health's ability to define information systems requirements that meet the needs of many states and communities. Widely endorsed requirements increase the likelihood that vendors will want to build products for the public health market. Finally, broad adoption of uniform information systems requirements will provide public health agencies the evidence necessary to gain financial support to acquire systems that align with their strategic goals and core services.