

Public Health Practice Stories from the Field



National Public Health Improvement Initiative in New Jersey

Advancing Technology to Improve Efficiency
of Reporting Influenza Results

Improved

performance in
communicable disease
reporting, a key essential
public health service area

Reduced

lag time between testing a
specimen and reporting to
CDC from 2–3 weeks down to
2–3 days

Identified

achievable and scalable tasks
with important, measurable
results

Increased

health department workforce
capacity by eliminating
redundant tasks

The New Jersey Department of Health and Senior Services is the lead public health agency in a densely populated, diverse state. During a typical flu season, New Jersey's Public Health and Environment Laboratory tests about 1,000 specimens. Prior to updating the system, the laboratory reported positive test results electronically to the health department's Communicable Disease Service for epidemiology follow up, and reported all influenza test results manually via web entry to the Centers for Disease Control and Prevention (CDC). When a novel influenza strain is circulating, the number of specimens submitted for testing can more than triple. The manual data entry to CDC was time-consuming, labor intensive, and prone to human error.

With funding from CDC's National Public Health Improvement Initiative (NPHII) and key technical assistance from CDC, the health department convened staff from the public health laboratories, information technology, and epidemiology divisions to develop and implement automated, electronic reporting of influenza test results from the state lab to CDC. The existing electronic reporting to the Communicable Disease Service was modified to include all influenza tests, which were then routed to CDC through a new messaging server built per CDC specifications. This standardized messaging system can be expanded to include all reportable communicable diseases and allows health department staff more time to fulfill other essential responsibilities.

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What We Did

CDC's NPHII funding provided the impetus and technological assistance to re-engineer a key process and improve communicable disease reporting, one of the essential functions of public health practice. In year one, funds were used to

- Assemble a team of subject matter experts from CDC and three different health department divisions — public health laboratories, information technology, and epidemiology
- Modify the existing state public health laboratory information system to redirect electronic reports of influenza tests to CDC through a new communications server that was developed per CDC standards

What We Accomplished

We were able to implement our action plan and move forward immediately. The entire improvement process was completed in eight weeks. In year one, we were able to

- Establish direct electronic reporting for influenza laboratory results to CDC, eliminating time, effort, and risk of human error related to manual data entry
- Cut lag time from 2–3 weeks down to 2–3 days between testing of a specimen and reporting to CDC, depending on severity and type of outbreak
- Achieve more timely detection and reporting of influenza

What We Learned

Key factors to the success of year-one activities included

- Choosing achievable and scalable goals in the face of limited resources and other constraints
- Having staff with requisite expertise in effecting process improvement

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