

Pennsylvania Department of Health

Planning and Implementing PA-NEDSS: Business Transformation Imperatives

2004 Public Health Information Network Conference

Topics

- PA-NEDSS Overview
- Transformation Considerations and Challenges
 - Three-tiered Transformation Approach
 - Training and Outreach
 - Regulatory Approach
 - Business Process Redesign

Overview of Pennsylvania's National Electronic Disease Surveillance System (PA-NEDSS)

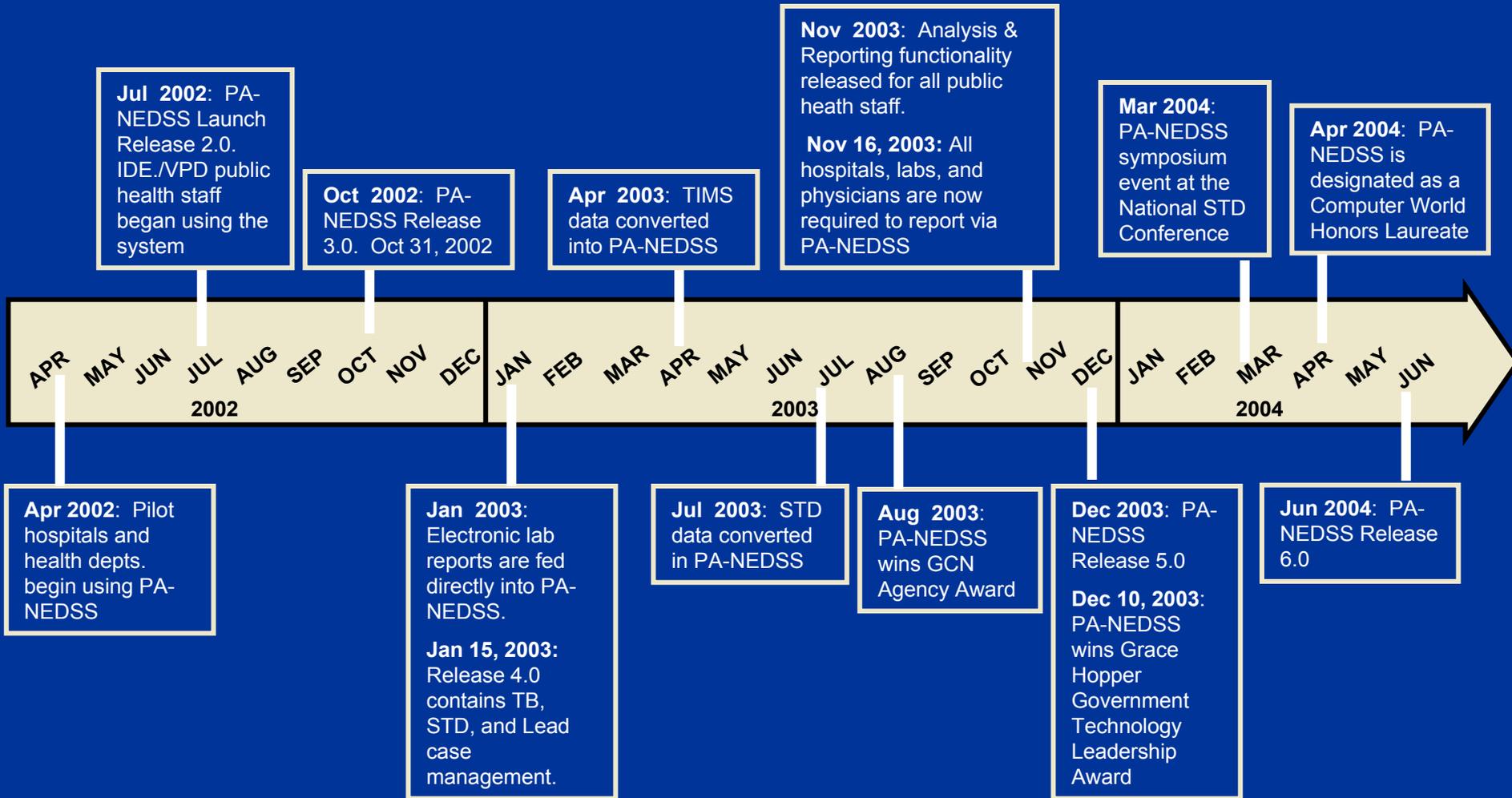


PA-NEDSS Overview

Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS) is an online public health disease reporting and case management system for the Pennsylvania Department of Health (DOH).

- Replaces card and form-based reporting methods
- Consolidates systems from multiple program areas into one system
 - Tuberculosis (TIMS)
 - Sexually Transmitted Diseases (STD*MIS)
 - Infectious Diseases (PETSS)
 - Lead (STELLAR)

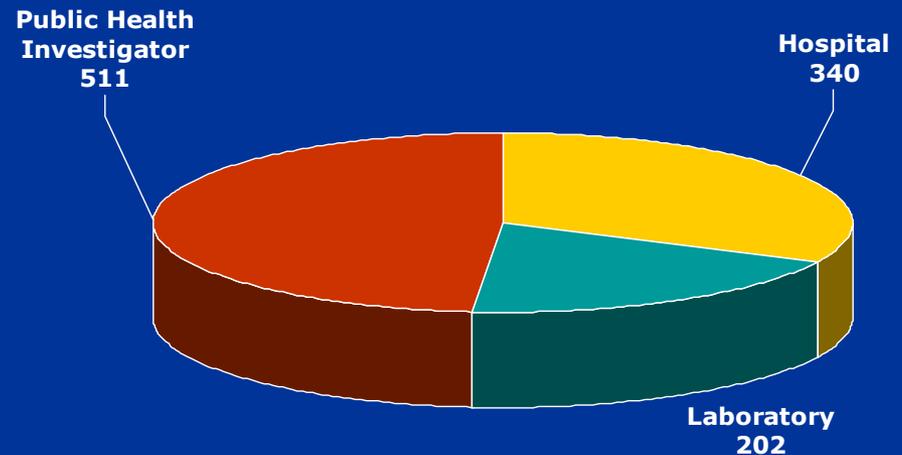
PA-NEDSS Timeline



PA-NEDSS Status

- PA-NEDSS currently has over 2,000 users
- Since its implementation in 2002, over 208,594 distinct disease reports have been submitted in PA-NEDSS

PA-NEDSS Users



Transformation Considerations and Challenges : Three-tiered Transformation Approach



Training and Outreach

Pennsylvania utilized a statewide training and outreach approach to overcome training challenges and keep costs at a minimum.

- Training plan included reaching over 2000 PA-NEDSS users across the state
- Users fell into four different groups each with special training needs
 - Investigators, Laboratories, Hospitals, and Physicians

The DOH employed multiple methods to meet training challenges

- Instructor-led, hands-on, computer based training
- Video conferencing
- Self-guided computer based training
- Information circulars (InfoBytes)

Regulatory Approach

As of November 16th, 2003, PA-NEDSS became the mandatory electronic disease reporting application for Pennsylvania.

- Ownership by all parties
- Phase-in approach over six months
- Go-live notice

Business Process Redesign

The DOH utilized a “team approach” to successfully accomplish the redesign. This approach involved establishing three functional and two cross-functional PA-NEDSS teams.

Team	Technical Team	Implementation Team
Development		
Tasks		
PA-NEDSS Requirements and Testing	<i>Configuration and Release Management</i>	<i>Helpdesk Management</i>
PA-NEDSS Development		
PA-NEDSS Operations Support	<i>System Operations</i>	<i>User Education and Training</i>
Analysis & Reporting		
Analysis & Reporting Requirements and Testing	<i>Implementation Support</i>	<i>Implementation Strategy and Planning</i>
Analysis & Reporting Development		
Analysis & Reporting Support	<i>Capacity Planning and Performance Support</i>	<i>Awards and Recognition</i>
Electronic Laboratory Reporting		
CDESS ELR Support	<i>Software Development Lifecycle Support</i>	
PA-ELR Requirements and Testing		
PA-ELR Development		

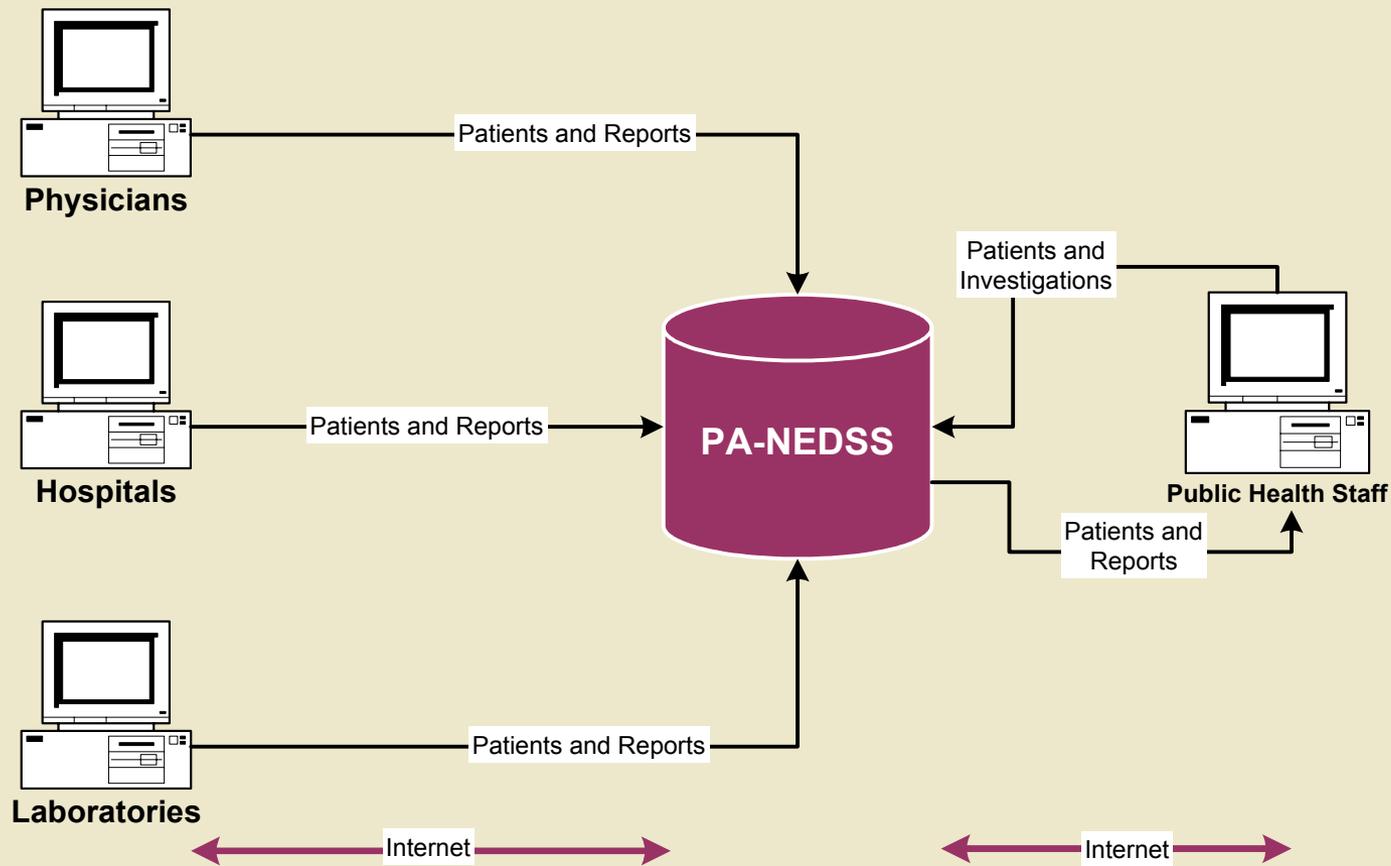
Business Process Redesign

The new electronic reporting process, designed to speed reporting by eliminating paper required significant technical upgrades and support.

- **Software:** Provided Windows 98 to district, county, and municipal health departments.
- **Hardware:** Developed a technical bulletin that informed business partners of minimum computer requirements necessary to use PA-NEDSS
- **Infrastructure:** Performed assessments to determine if network at health department sites were capable of supporting a web-based application such as PA-NEDSS.
- **Support:** Trained PA-NEDSS helpdesk staff dedicated to resolving PA-NEDSS related issues.

Business Process Redesign

Paper free disease reporting with PA-NEDSS



Business Process Redesign

PA-NEDSS performs the functions of several legacy computer systems (TIMS, STELLAR, STD*MIS, PETSS).

- Business processes were redesigned to allow functions previously accomplished in legacy systems to be accomplished in PA-NEDSS.
 - Information Standardization
 - Data Entry Flow
- Data was converted from the legacy systems into PA-NEDSS

Business Process Redesign

Information Standardization: Information collected for patients, reports, investigations, and providers was standardized as much as possible.

- Allows screens to be reused across program areas and keeps the system design simple
- Only 5 mandatory data elements required to create a patient: First Name, Last Name, Date of Birth, Gender, and Race

Data Entry Flow: The order in which data was collected and stored on paper records was modified.

- Data is entered in a way that maximizes user and system efficiency
- PA-NEDSS collects information in a set order, but users can also manually use menus

Data Conversion: Data was cleansed and migrated into PA-NEDSS.

- Data prior to 2002 is only available in legacy systems
- Over 200,000 records (investigations) were migrated

Presenter Biographies—Joel Hersh

**Joel H. Hersh, B.S., M.Ed., M.P.A.
Director, Bureau of Epidemiology
Pennsylvania Department of Health**

A career public health professional, Joel has directed the Commonwealth's multi-faceted epidemiology program, which includes efforts in Infectious and Chronic Diseases, Environmental Health and Maternal and Child Health since 1993. He is directly responsible for developing and maintaining a reportable disease system that allows public health staff throughout Pennsylvania to investigate cases of disease and intervene to reduce morbidity caused by those diseases. He is the epidemiology project officer for Pennsylvania's electronic disease reporting initiative (PA-NEDSS) and its pilot projects in syndromic surveillance. Previously, he directed the Division of Chronic Disease Intervention and the Preventive Health Block Grant within the department. He currently serves as a member of the Department of Agriculture's Farm Safety and Occupational Health Advisory Board. He has been an Adjunct Professor of Public Administration, Marywood University, Scranton, PA since 1976, and has served on the Board of the Pennsylvania Public Health Association (PPHA). He is a member of PPHA and the American Public Health Association (APHA).

Presenter Biographies—Debbie Sills

Debbie Sills

Principal

Public Sector

Deloitte Consulting LLP

Debbie has more than 15 years experience as an information systems and services professional. She is an expert in technology enabled, cross channel Client Relationship Management solutions. As a Principal with Deloitte Consulting, LLP, Debbie provides strategic planning, project management, and technical oversight to Deloitte professional staff and client projects. Debbie is the Project Partner for PA-NEDSS and CDC projects. She has extensive knowledge of CDC projects and NEDSS requirements. Her experience includes more than 20 years in the information systems and services industry including leading large, complex systems development and implementation projects for Public Sector clients.