



Using PHIN for Healthcare Surveillance: The National Healthcare Safety Network

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Objectives

- Briefly define CDC Application Modules (CAMs)
- Describe the NHSN as both a reporting and knowledge system
- Discuss how NHSN relates to PHIN surveillance components

Public Health Information Network

Early Event Detection
BioSense

Surveillance
NEDSS
NHSN

Secure
Communications
Epi-X

Analysis &
Interpretation
BioIntelligence
Analytic Technology

Information
Dissemination & KM
CDC Website
Health alerting

PH Response
Lab, Outbreak
Management, Vaccine
administration, etc.



PUBLIC HEALTH INFORMATION NETWORK

Federal Health
Architecture &
Consolidated
Health Informatics



CDC Application Modules

- Data transmitted directly from an entity to databases at CDC
 - NHSN: Healthcare facilities and laboratories
 - BioSense: Drug stores, emergency rooms, laboratories, etc
- Databases located behind CDC's firewall



CDC Application Modules

- Access to CAMs may require use of digital certification via CDC's Secure Data Network
- Utilize CAM Services
 - Login/security
 - Manage users/patients/groups
 - Import/export data



What is NHSN?

- Reporting system
 - Patient and healthcare personnel safety adverse events (data in)
- Knowledge system
 - Information out





Reporting System



- NNIS: National Nosocomial Infections Surveillance System
- DSN: Dialysis Surveillance Network
- NaSH: National Surveillance System for Healthcare Workers



NNIS	DSN	NaSH
Nosocomial infections in critical care and surgical in-patients	Bloodstream and vascular access infections in dialysis out-patients	Exposure to bloodborne pathogens; TB skin testing and exposure; vaccine history and receipt and adverse events



Reporting System



- NNIS and DSN = Patient Safety Component
 - Device-associated Adverse Event Module
 - Central line-associated bloodstream infection
 - Catheter-associated urinary tract infection
 - Ventilator-associated pneumonia
 - Dialysis incident
 - Procedure-associated Adverse Event Module
 - Surgical site infection
 - Post-procedure pneumonia
 - Medication-associated Adverse Event Module
 - Antimicrobial use and resistance option



Reporting System



- NaSH = Healthcare Personnel Safety Component
 - Blood/Body Fluid Exposure Module
 - Post-exposure Prophylaxis
 - Vaccine History
 - Disease Exposure Module*
 - TB
 - Communicable Disease Exposure (not TB)

***Not in v.1**



NHSN Reporting Premises



- Share data in a timely manner while maintaining data security, integrity, and confidentiality
 - Between user and public health agencies
 - Between users (e.g., multi-hospital system)
- Minimize user burden
 - Streamline data reporting protocols
 - Provide analysis tools
 - Increase capacity for including data from existing electronic sources
- Allow all healthcare delivery entities to participate



Knowledge System



- Rates
 - National comparisons
 - Local comparisons
- Automatic alerts
- Analysis tools
 - Root cause
 - Rates / Reports
 - Calculator
- Links to guidelines
- Links to best practices / lessons learned



Relationship with Other PHIN Components



- NHSN provides a link between public health and healthcare delivery settings
 - Standards-based
 - Secure
- Interoperable with NEDSS/NBS
 - Antimicrobial-resistant organisms
 - Bloodborne pathogen exposures



Summary



- NHSN is:
 - a CDC Application Module
 - connects public health and healthcare delivery settings
 - reporting and knowledge system

- Compatible with NEDSS/NBS

- First release due Fall 2004

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