NHSN Update and Implementation of the New Center for Medicare and Medicaid Services (CMS) Rule

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Overview

- Update on use of NHSN for mandatory HAI reporting
- New NHSN Agreement to Participate and Consent form
- Plans for enabling state health departments to gain access to NHSN data outside the scope of mandatory reporting
- New incentives for electronic health record (EHR) systems and plans for electronic HAI reporting to NHSN
- Challenges and opportunities for CDC and partners

NHSN from 2005 to 2010: HAI Reporting Evolves from Purely Voluntary and Confidential to Mainly Mandatory and Public

- NHSN was launched in 2005 as a voluntary and confidential system
- Approximately 300 hospitals participated initially
- In 2006, Vermont became the first state to mandate use of NHSN
- Rapid increase in users; over 3000 hospitals participate in 2010
- 22 states and the District of Columbia mandate use of NHSN
- Center for Medicare and Medicaid Services (CMS) will require hospital reporting via NHSN starting in 2011

Use of the NHSN for Mandatory HAI Reporting in 22 States and the District of Columbia

Central line-associated bloodstream infections (CLABSIs)	AL, CA, CO, CT, DC, DE, IL, MA, MD, NH, NJ, NV, NY, OK, OR, PA, SC, TN, TX, VA, VT, WA, WV
Surgical site infections (SSIs)	AL, CO, IL, MA, NH, NJ, NV, NY, OR, PA, SC, TN, TX, VT, WA
Multidrug-resistant organisms (MDRO) and *Clostridium difficile* associated disease (CDAD)	CA, DC, NJ, NV, NY, TN and other states considering its use
Ventilator-associated pneumonias (VAPs)	OK, PA, WA
Catheter-associated urinary tract infections (CAUTIs)	AL, NJ, PA
Central line insertion practices (CLIP)	CA, NH
Dialysis events	CO

NHSN and the Inpatient Prospective Payment System (IPPS) Rule: Mandatory HAI Reporting on the Federal Level Begins in 2011

- Proposed rule - April 20, 2010
- Final rule published - August 16, 2010: http://edocket.access.gpo.gov/2010/pdf/2010-19092.pdf
- First reporting quarter - January 1 through March 31, 2011
- First quarterly data due - August 15, 2011

Federal Register

Part II

Department of Health and Human Services

Implementation of healthcare associated infection (HAI) reporting via NHSN as part of the IPPS rule is a work in progress – Central line association bloodstream infection (CLABSI) reporting is to begin in 2011. Surgical site infection (SSI) reporting is begin in 2012.

National Quality Forum #0139 – Central line associated bloodstream infections among ICU and NICU patients

Numerator – Laboratory-confirmed primary bloodstream infections that are not secondary to another infection and that occur in Intensive Care Unit (ICU) or Neonatal Intensive Care Unit (NICU) patients in whom a central line or umbilical catheter was in place at the time of, or within 48 hours before, onset of the infection

Denominator – Device days, i.e., number of ICU or NICU patients with one or more central lines or umbilical catheters enumerated daily and summed over the measurement interval

Operational Guidance for the IPPS CLABSI Reporting Requirement

Central line associated bloodstream infections (CLABSIs), identified in accordance with the CDC's National Healthcare Safety Network (NHSN) Patient Safety Component criteria, that occur on or after January 1, 2011 in adult intensive care unit patients, pediatric intensive care unit patients, and neonatal intensive care unit (NICU) patients (restricted to Level II/III and Level III NICUs as defined in the NHSN Patient Safety Component Manual: http://www.cdc.gov/nhsn/TOC_PSCManual.html)

National Quality Forum #0299 – Surgical site infections

Numerator – Deep incisional or organ/space infections occurring within 30 days after an operative procedure* if no implant is in place or within 1 year if an implant is in place

Denominator – Number of operative procedures*

*Procedures in scope for the measure are coronary artery bypass graft and other cardiac surgery, hip or knee arthroplasty, colon surgery, hysterectomy (abdominal or vaginal), and vascular surgery

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NHSN and the IPPS Rule: Operational Plans

- Hospitals agree to participate by signing Annual Payment Update (APU) pledge form and NHSN consent agreement
- CDC and CMS develop and use a common communications plan
- New NHSN users take training prior to using the system
- Hospitals new to NHSN complete enrollment process
- Hospital CMS Certification Number (CCN) entered into NHSN, if not already entered
- CMS provides CDC with a list of CCNs for hospitals participating in APU Hospital Inpatient Quality Reporting Program
- CDC adds an NHSN analysis feature that enables quarterly calculation of hospital-specific CLABSI statistics
- CDC submits CLABSI statistics to CMS using a secure QualityNet exchange account
- CMS uses hospital-specific statistics to pay hospitals that successfully report and for public reporting at the Hospital Compare website: http://www.hospitalcompare.hhs.gov

NHSN and the IPPS Rule: Additional Operational Considerations

- HAI reporting requirements for APU will co-exist with state HAI reporting requirements
- Hospitals that use a commercial infection control software system can report HAI data electronically to NHSN
- CLABSI data submitted via NHSN to comply with APU reporting requirements in 2011 will not be included in the CMS Hospital Inpatient Quality Reporting Program data validation

NHSN Web Page Provides Training and Enrollment Resources for IPPS Participating Hospitals

Step 5. Print, Sign and Return Signed Consent Form to CDC

Step 4. Complete Enrollment Forms Online

Step 3. Obtain Your Digital Certificate & Complete Forms

Step 2. Review and Accecpt Rules of Behavior & Register Your Facility

Step 1. Complete the Required Training

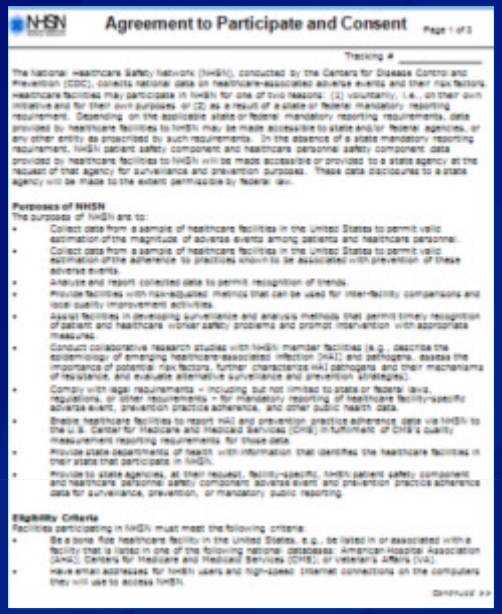
Complete the required trainings below.

- Overview of NHSN [PDF - 6.6MB]
- CLABSI Protocols [PDF - 16.1MB]
- Enrollment [PDF - 1.5MB]
- Facility Start-up [PDF - 17.6MB]

Approximate time - 4 hours

http://www.cdc.gov/nhsn/cms-ipps-rule_training.html

New NHSN Consent Agreement



NHSN

Agreement to Participate and Consent

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Tracking # _____

The National Healthcare Safety Network (NHSN), conducted by the Centers for Disease Control and Prevention (CDC), collects national data on healthcare-associated adverse events and their risk factors. Healthcare facilities may participate in NHSN for one of two reasons: (1) voluntarily, i.e., on their own initiative and for their own purposes or (2) as a result of a state or federal mandatory reporting requirement. Depending on the applicable state or federal mandatory reporting requirements, data provided by healthcare facilities to NHSN may be made accessible to state and/or federal agencies, or any other entity as prescribed by such requirements. In the absence of a state mandatory reporting requirement, NHSN patient safety component and healthcare personnel safety component data provided by healthcare facilities to NHSN will be made accessible or provided to a state agency at the request of that agency for surveillance and prevention purposes. These data disclosures to a state agency will be made to the extent permissible by federal law.

Purposes of NHSN

The purposes of NHSN are to:

- Collect data from a sample of healthcare facilities in the United States to permit valid estimation of the magnitude of adverse events among patients and healthcare personnel.
- Collect data from a sample of healthcare facilities in the United States to permit valid estimation of the adherence to practices shown to be associated with prevention of these adverse events.
- Analyze and report collected data to permit recognition of trends.
- Provide facilities with risk-adjusted metrics that can be used for inter-facility comparisons and local quality improvement activities.
- Assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and healthcare worker safety problems and promot intervention with appropriate measures.
- Conduct collaborative research studies with NHSN member facilities (e.g., describe the epidemiology of emerging healthcare-associated infection (HAI) and pathogens, assess the importance of potential risk factors, further characterize HAI pathogens and their mechanisms of resistance, and evaluate alternative surveillance and prevention strategies).
- Comply with legal requirements – including but not limited to state or federal laws, regulations, or other requirements – for mandatory reporting of healthcare facility-specific adverse event, prevention practice adherence, and other public health data.
- Enable healthcare facilities to report HAI and prevention practice adherence data via NHSN to the U.S. Center for Medicare and Medicaid Services (CMS) in fulfillment of CMS's quality measurement reporting requirements for those data.
- Provide state departments of health with information that identifies the healthcare facilities in their state that participate in NHSN.
- Provide to state agencies, at their request, facility-specific NHSN patient safety component and healthcare personnel safety component adverse event and prevention practice adherence data for surveillance, prevention, or mandatory public reporting.

Eligibility Criteria

Facilities participating in NHSN must meet the following criteria:

- Be a bona fide healthcare facility in the United States, e.g., be listed in or associated with a facility that is listed in one of the following national databases: American Hospital Association (AHA), Centers for Medicare and Medicaid Services (CMS), or Veteran's Affairs (VA).
- Have email addresses for NHSN users and high-speed Internet connections on the computers they will use to access NHSN.

Continued >>

- Healthcare facilities complete a NHSN Agreement to Participate and Consent form by downloading the document from a link sent to them, reading it, obtaining the required signatures, and returning the signed agreement to CDC
- A new consent agreement is now available through the NHSN web-based application
- Provisions added to the new agreement enable CDC to extend data access to state health departments, even in the absence of a mandate, and to CMS for quality measurement reporting requirements

New NHSN Purposes - 1

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State-CDC Data Use Agreements – Access to NHSN Data Beyond State Mandates

- Data will be used only for surveillance and/or prevention and will not be used for public reporting of facility-level data or regulatory or punitive actions against facilities
- State acknowledges that unwelcome data requests may be submitted to the state and state law(s) will govern discoverability once the state has access to the data
- State provides documentation of legal safeguards against unwelcome data requests that would otherwise be compelled
- State agrees to complete confer rights template
- State acknowledges it will not have retroactive data access
- Facilities can opt out of reporting that is not mandatory
- Newly joining facilities will be informed of state's data access
- State acknowledges that CDC can and will revoke access if terms of the data use agreement are breached by the state

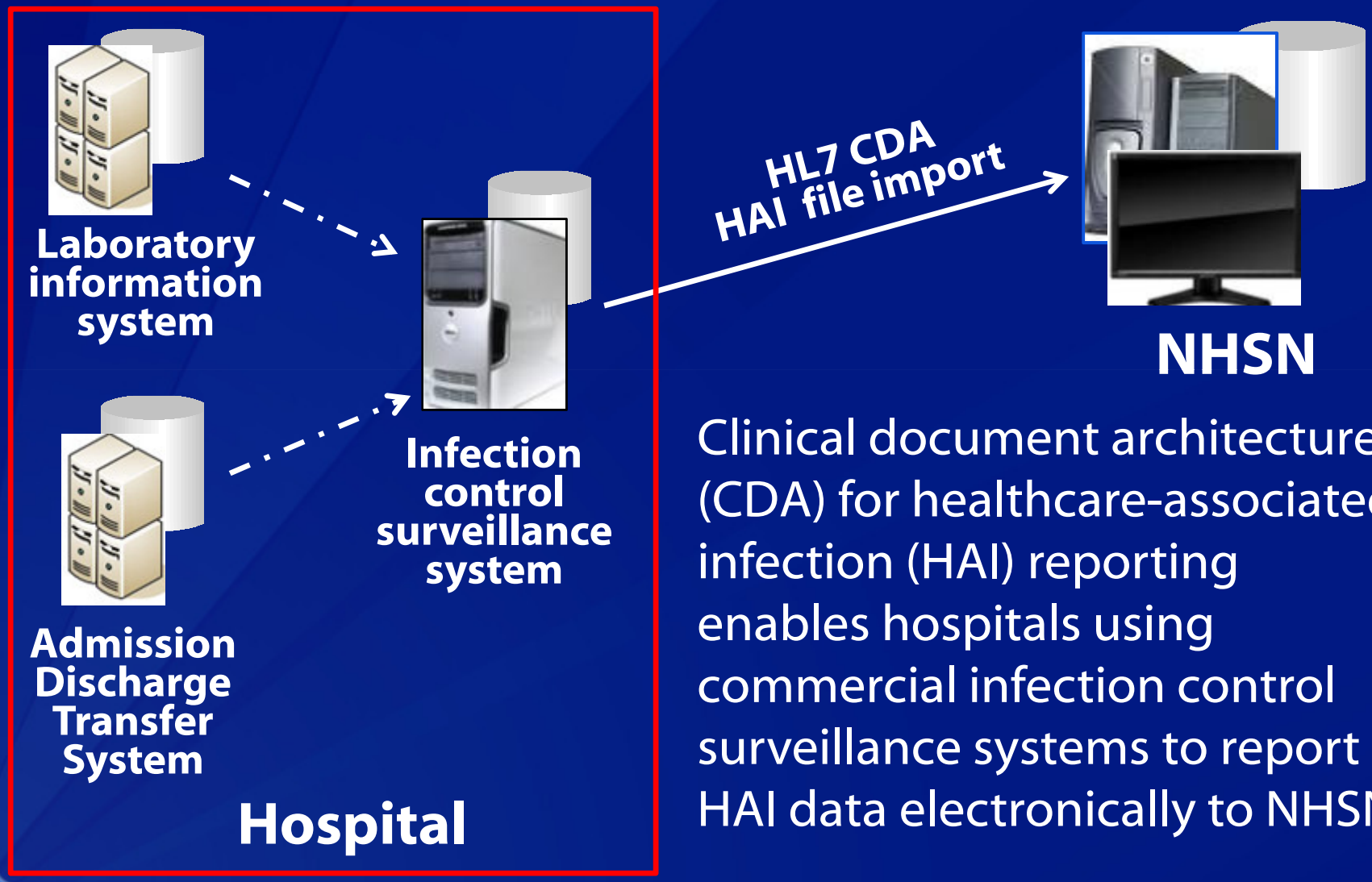
Federal Government's Incentive Program for Electronic Health Record Systems

- A $27 billion program, part of the Recovery Act, offering incentives to hospitals and physicians who demonstrate meaningful use of electronic health record systems
- Initial set of requirements for meaningful use was issued by HHS in July 2010
- Incentives are scheduled to continue through 2014
- Penalties for non-use begin in 2015

Health Level Seven

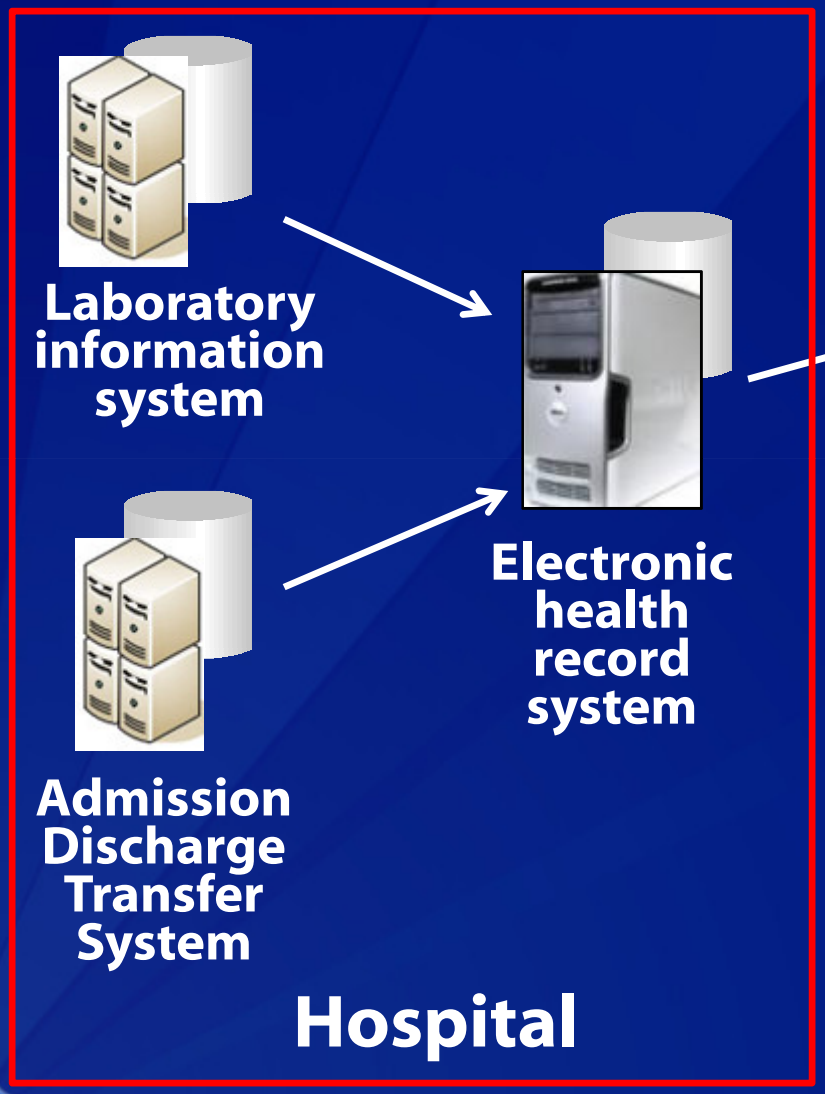
- Health Level Seven (HL7) is an international organization that develops and maintains technical standards used to exchange, store, and retrieve healthcare data in electronic form
- "Level Seven" refers to the seventh level of the International Standards Organization seven-layer communications model for Open Systems Interconnection - the application level
- HL7 provide standards for electronic messages and electronic documents (Clinical Document Architecture [CDA] files) that can be exchanged between applications, e.g. , between applications used in healthcare or between healthcare and public health applications

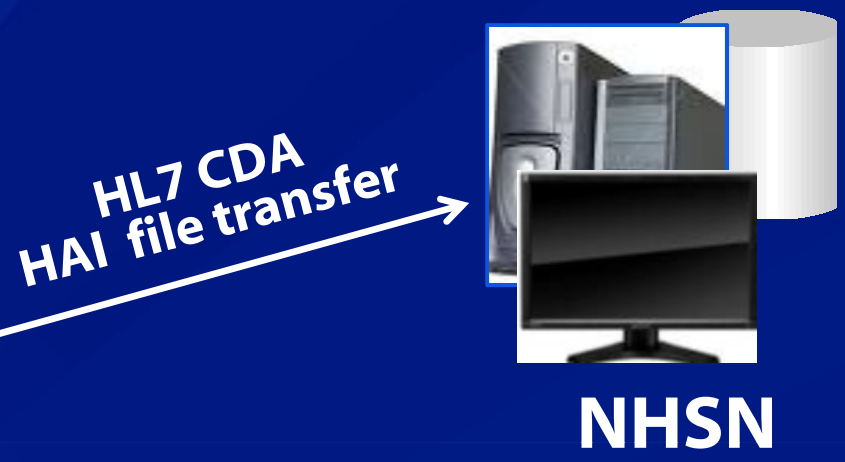
Clinical Document Architecture (CDA) HAI Reporting to NHSN - Current



Clinical document architecture (CDA) for healthcare-associated infection (HAI) reporting enables hospitals using commercial infection control surveillance systems to report HAI data electronically to NHSN.

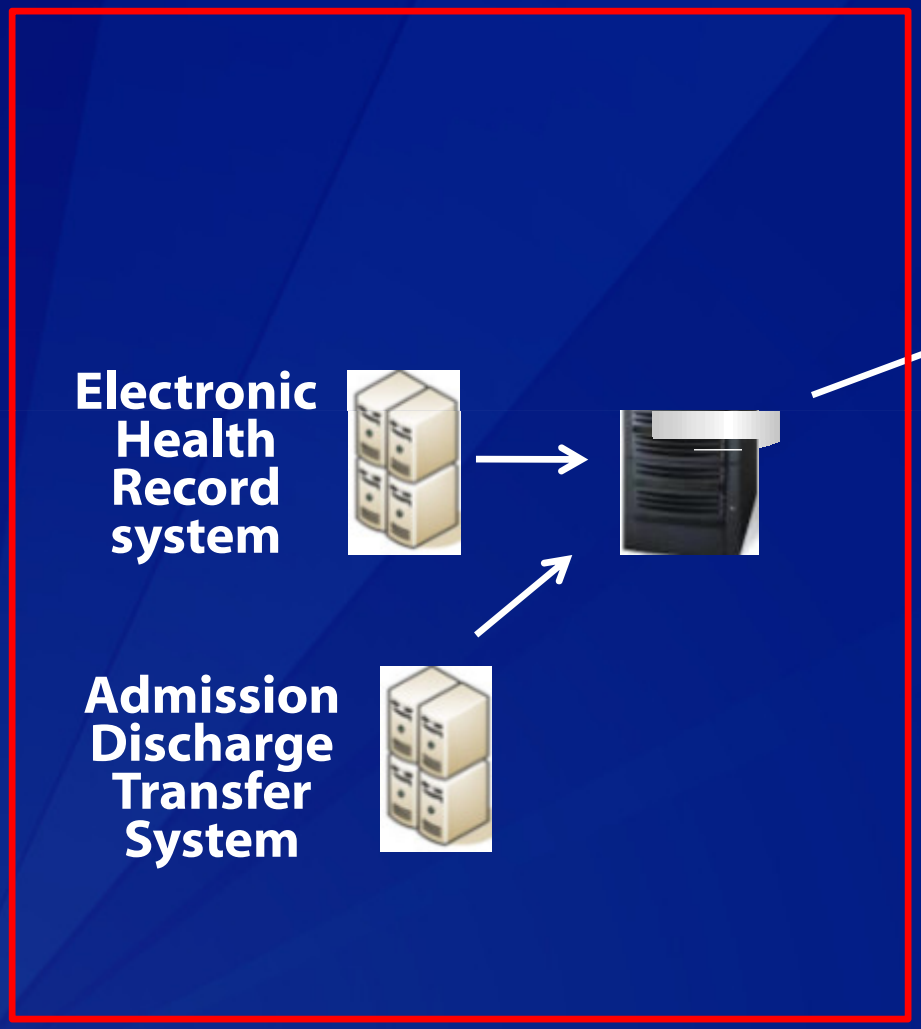
Clinical Document Architecture (CDA)
HAI Reporting to NHSN – EHRs are the Next Step





Clinical document architecture (CDA) for healthcare-associated infection (HAI) reporting will enable hospitals using electronic health record systems to report HAI data electronically to NHSN.

Electronic HAI Detection and Reporting – Use of Computer-based Algorithms

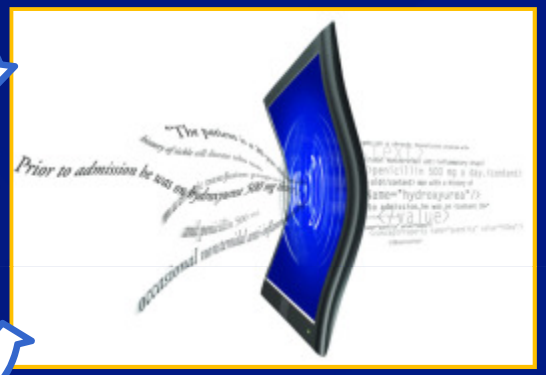


Algorithmic detection rules are applied against healthcare data in electronic form to detect an HAI, automatically triggering a HAI event report that is sent to NHSN.

NHSN Today:
Dependent on Manual Processes

Paper records

Manual Processes
- Case finding
- Data collection
- Data entry



NHSN web interface – reporting, analysis, and data sharing

NHSN Servers

Disparate electronic data sources

NHSN's Future:
Electronic Data for HAI Detection and Reporting

Electronic records

Automated Processes
- Case finding
- Data collection
- Data entry

NHSN data transfer

NHSN Servers

Interoperable Electronic data sources

NHSN web interface – analysis, visualization and data sharing

NHSN : Challenges and Opportunities

- Implementing the new CMS rule
- Launching new data access provisions
- Leveraging new incentives for meaningful use of EHRs
- Accelerating movement electronic HAI detection and reporting
- Validating data
- Informing practitioners, the public, and policymakers

Thank You!

Your Questions and Comments are Welcome

For More Information about NHSN: http://www.cdc.gov/nhsn/