National Healthcare Safety Network Member’s Meeting

APIC 2014

June 6, 2014
4:00-5:30 p.m.
Anaheim Convention Center Room 207 CD
Agenda

- Welcome
- Enrollment Update/SAMS
- Training & Analysis Updates
- Protocol & Application Updates
  - General
    - Unusual Susceptibility Profile Alerts
    - Chapter 17 Updates
    - 14-Day Rule
    - Date of Event
  - CAUTI, CLABSI, CLIP
  - SSI/Outpatient Procedures
  - VAE, pedVAP
  - LabID Event
  - HCP Flu Vacc, LTCF, DE, BV
- CMS Finalized and Proposed Rules
- Electronic reporting (CDA), AUR
- Q & A
ENROLLMENT UPDATE/
SAMS
## NHSN Enrollment (as of May 2014)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>5,733</td>
</tr>
<tr>
<td>Acute care</td>
<td>4,878</td>
</tr>
<tr>
<td>Long term acute care</td>
<td>563</td>
</tr>
<tr>
<td>Inpatient rehabilitation</td>
<td>292</td>
</tr>
<tr>
<td>Outpatient dialysis facilities</td>
<td>6,457</td>
</tr>
<tr>
<td>Ambulatory surgery centers</td>
<td>370</td>
</tr>
<tr>
<td>Long term care facilities</td>
<td>224</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,802</strong></td>
</tr>
</tbody>
</table>
SAMS Update

- **SAMS = Secure Access Management System (CDC’s new user authentication system)**
  - User name and password along with Grid Card (nothing to install on your computer)

- All new NHSN users are being invited to SAMS

- Existing NHSN users are being invited to SAMS on a rolling basis (mostly as their certificates expire)

- May 2014 update:
  - 3,104 users are completely SAMified
  - 2,068 users have started the SAMification process
  - These 5,172 users are about 23% of all active users
NHSN TRAINING & ANALYSIS UPDATES
ONLINE TRAINING OPPORTUNITIES

- **Interactive Trainings - coming Jan. 2015**
  - Self-paced slides with detailed graphics, screen shots of step-by-step examples of form completion for instructional purposes, practice questions, and case study examples.
  - Available for: Device and Procedure-associated Modules, MDRO/CDI LabID, Dialysis Event
  - more coming soon! (i.e. VAE)

- **Archived Webstreaming Trainings - available now**
  - Available for: CLABSI, CAUTI, VAE, LabID Events, SSI, Analysis

- **In-Person Training - coming Feb. 2015**
  - Late February 2015 - TBD
  - The training course will provide information on CMS reporting, definition and protocol clarification, interactive case studies, analysis, and changes in reporting for 2015.
ONLINE TRAINING

NHSN training topics...

- **Course Catalog**
  - Course descriptions for NHSN components, modules, and events

- **Enrollment & Setup**
  - Self-paced training for NHSN enrollment and existing facility set-up

- **Data Entry & Analysis**
  - Self-paced training for data entry, import, customization, and analysis

- **Request CDC Led Training**
  - Webinar/In-person Training Policy and Request

- **Dialysis Event**
  - Self-paced training for outpatient dialysis facility enrollment and set-up

- **Healthcare Personnel Safety Component**
  - Self-paced training for specific module and events

- **Biovigilance Component**
  - Self-paced training for specific module and events

- **Patient Safety Component**
  - Self-paced training for specific module and events

**Outpatient Dialysis Facilities**

- **Data Collection and Reporting Modules**
  - **Dialysis Event (DE) Surveillance**
    - **NEW!** Dialysis Event Surveillance Training
    - Required annually for all users participating in Dialysis Event Surveillance.
    - Free Continuing Education course # WB2351

**Symbol Key**

- These courses consist of self-paced, interactive multimedia instruction delivered online.
- Slide presentation view online or print.
- Pre-recorded podcast presentation available for viewing on-demand.
- Pre-recorded webinars available for viewing on-demand

- **Home Training Page**
- **Archived Webstreaming Events**
- **Interactive Trainings**

**www.cdc.gov/nhsn/training**
Continuing Education For NHSN Trainings

18.5 hours currently offered

>10 additional hours will be offered once interactive trainings go live
NAVIATING THE NHSN WEBSITE

National Healthcare Safety Network (NHSN)

CDC's National Healthcare Safety Network is the nation's most widely used healthcare-associated infection tracking system. NHSN provides facilities, states, regions, and the nation with data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate healthcare-associated infections.

In addition, NHSN allows healthcare facilities to track blood safety errors and important healthcare process measures such as healthcare personnel influenza vaccine status and infection control adherence rates.

About NHSN
CDC's NHSN is the largest HAI reporting system in the U.S.

Data & Reports
See national and state reports using NHSN data.

Guidelines and Recommendations
Review CDC HAI prevention guidelines.

New to NHSN? Enroll Facility Here.
For first time facility enrollment.

Reporting & Surveillance Resources for Enrolled Facilities
Training, protocols, forms, support materials, analysis resources, and FAQs.

Group Users
View resources for group users here.

Contact NHSN:
Centers for Disease Control and Prevention
National Healthcare Safety Network
1600 Clifton Rd
Atlanta, GA 30333
Contact NHSN@cdc.gov

Contact Us:
Centers for Disease Control and Prevention
1600 Clifton Rd
Atlanta, GA 30333
FOR EACH EVENT TYPE, THE WEBPAGE HAS:

- Training
- Protocol
- FAQs
- Data Collection Forms
- CMS Supporting Materials
- Supporting Materials (i.e. Key Terms, Organism List, Location Labels)
- Analysis Resources

All specific to the surveillance type
Validation webpage on NHSN website
- Will include validation toolkits, NHSN protocols and trainings from prior years
- “Hot Topic” webcasts-1 hour or less
- New interactive trainings for 2015
- Additional CEs
ANALYSIS UPDATES
Changes to Analysis: CMS Reports

- CMS reports will no longer be found in the “Advanced” folder *(summer 2014)*
- Organized by facility type
COMING in January 2015!

- ALL output options within “All Device-Associated Events” will be retired and removed
- Please begin to use the event-specific options available for the DA Module Analysis

Use these instead!!!
Analysis Changes in 2015

- Update to CLABSI and CAUTI CMS IPPS SIRs to include medical, surgical, and medical/surgical wards for 2015 data and forward
- CLABSI and CAUTI SIRs for LTACH (2013 Baseline)
- CAUTI SIRs for IRFs (2013 Baseline)
- Annual update to CLABSI, CAUTI and Pediatric VAP Pooled Means
- Addition of “Indicator” variables to LabID line lists to determine which events are included in FacWideIN measures
ANTICIPATED 2015 UPDATES – OVER-ARCHING
Unusual Susceptibility Profiles Alert

- July 2014 NHSN application release
- Highlights reporting of epidemiological significant pathogens, prompts infection control interventions and assists with data cleaning
- User will be notified when unusual susceptibility profiles are entered into NHSN for in-plan events
  - Upon saving the event a pop-up window will identify the profile
  - User will have the ability to verify, amend or continue
  - Alert will be generated for all unverified profiles
- Tracking component in Analysis
  - Line listing and frequency tables
<table>
<thead>
<tr>
<th>Unusual Susceptibility Profiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbapenem - intermediate or resistant Enterobacteriaceae, <em>Acinetobacter baumannii, Pseudomonas aeruginosa</em></td>
</tr>
<tr>
<td>Highly Drug Resistant * Enterobacteriaceae, <em>Pseudomonas aeruginosa, Acinetobacter baumannii</em></td>
</tr>
<tr>
<td>Colistin/Polymyxin B resistant <em>Acinetobacter baumannii, Pseudomonas aeruginosa</em></td>
</tr>
<tr>
<td>Daptomycin non-susceptible and Linezolid resistant <em>Enterococcus</em> spp.</td>
</tr>
<tr>
<td>Vancomycin resistant <em>Staphylococcus aureus</em> (VRSA)</td>
</tr>
<tr>
<td>Daptomycin non-susceptible and Linezolid resistant and Vancomycin intermediate <em>Staphylococcus aureus</em></td>
</tr>
<tr>
<td>Vancomycin resistant <em>Staphylococcus</em>, coagulase negative (VRSE)</td>
</tr>
</tbody>
</table>

*all defined drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R)*
CDC/NHSN HAI Definitions (a.k.a Chapter 17)

- First major review since 1998 (?)

- **Purposes:**
  - Reflect current diagnostic testing
  - Increase consistency
  - Position for eventual electronic capture
  - Optimize both clinical credibility and objectivity

- “Big 5” moved to individual protocols only-
  - BSI, Pneumonia, SSI, UTI, VAE,
  - Device-associated and non-DA

- **Removal of BRON**

- **Change of OUTI to USI (Urinary System Infection)**
Surveillance Rules
(Not for SSI, LabID or VAE events)

- **Minimum timeframe between events of the same specific type**
  - E.g. UTI = major event; specific event types = SUTI, ABUTI
  - From date of event to date of event

- **Date of Event**
  - Considering return to date of first element
  - More clinical credibility
  - Allowed by institution of maximal definitional time-frames

- **Temperature- use documented**
CAUTI, CLABSI, CLIP UPDATE
Laboratory Confirmed Bloodstream Infection

- Maximal time from primary infection til secondary BSI
- Simplification of Secondary BSI Guide (a.k.a. Appendix 1, BSI Protocol)
  - 4 scenarios 3 scenarios
  - Combines no site specific culture scenario and negative site specific scenario
  - Requires positive blood culture used as element of criteria
Urinary Tract Infection

- Thorough review of CAUTI definitions

**Purposes:**
- Address user concerns
- Optimize clinical credibility

**Potential definition (Not Final):**
- Continue to collect yeast UTIs
  - Separate in data analysis
  - NHSN to exclude from data shared with CMS
- Additional symptoms
- Modifications to use of urinalysis
- Simplification

- **CAUTI Workshop: Monday 1-3:30 p.m.**
Central Line Insertion Practices (CLIP)

- **Modification to NHSN CLIP Bundle Adherence**
  - Change to FDA labelling for CHG skin prep
  - Use with care
  - Premature infants of concern
  - Any documented skin prep in patients less than 120 days of age
  - Retroactive to 2014 - CDPH consulted
SURGICAL SITE INFECTION SURVEILLANCE UPDATE/OUTPATIENT PROCEDURE COMPONENT
On April 1, 2014, H.R. 4302 was signed Protecting Access to Medicare Act of 2014 into law. This bill contained a clause prohibiting the transition to ICD-10-CM/PCS codes to occur prior to October 1, 2015.

Therefore, NHSN will delay its transition to ICD-10-CM/PCS codes. HHS has yet to announce a new implementation date for the transition. NHSN is moving forward with the updated ICD-10-CM/PCS and CPT mappings to all NHSN operative procedure categories for SSI surveillance and will share with NHSN users well before the transition date.
What’s coming in 2015 for SSI reporting?

- **Infection Present at Time of Surgery (PATOS)** - captures a condition or diagnosis that the patient has at the time of the start of or during the index surgical procedure (in other words, it is present preoperatively). This must be noted preoperatively or found intraoperatively.
  - This will be a field on the SSI Event form.

- **For HPRO and KPRO Procedures:**
  - If a total or partial revision, was the revision associated with a prior infection at the index joint?
  - This will be a field on the denominator for procedure form.
SSI Updates for 2015

- For 2015 CMS has not added any new NHSN procedures to be followed.

- Outpatient Procedure Component – This protocol release for surveillance of surgical site infections and Ambulatory Surgical Center Quality Reporting Program Measures ASC-1 through ASC-5 in outpatient facilities (ASCs) remains TBD. NHSN will keep NHSN users posted on additional progress via the NHSN newsletter.”

- Diabetes Field for 2015 – For ease of collection NHSN will transition to the use of the ICD-9-CM Diabetes codes for this field. The ICD-9-CM diabetes codes of 250.XX will be Diabetes =Yes.
VAE & pedVAP PLANNED MODIFICATIONS
VAE Modifications (1)

- “Collapsing” the third tier of the VAE algorithm
- PVAP will replace current possible VAP and probable VAP
- Provides simplification and is consistent with plan for analysis (PoVAP and PrVAP combined as one event)
- Three pathways for meeting PVAP
  - Quantitative culture result without purulent respiratory secretions
  - Culture result that does not satisfy the specified quantitative requirement with purulent respiratory secretions
  - Other positive laboratory test (lung histopathology, diagnostics for Legionella, respiratory viruses, pleural fluid culture)
VAE Modifications (2)

- Exclusion of community associated fungal pathogens for use in meeting PVAP definition
  - Cryptococcus
  - Histoplasma
  - Coccidiodes
  - Paracoccidioides
  - Blastomyces
  - Pneumocystis

- Represent community acquisition
VAE Modifications (3)

- **Simplification for determining daily minimum PEEP/FiO2 when there is no value documented to have been maintained for at least 1 hour during a calendar day**
  - Choose the lowest value for the calendar day
    - Lowest value set late in the day (e.g. ventilation initiated late in the day)
    - Lowest value set early in the day (e.g. patient is removed from the ventilator)
    - Values are changed frequently throughout the day
VAE Modifications (4)

- Introduction of a new denominator
- Episodes of Mechanical Ventilation (EMV)
- EMV (optional)
  - Ventilator days (required)
  - APRV (required)
PNEU/VAP Modifications

- Purulent sputum will be determined by direct exam / Gram’s stain result (VAE purulent respiratory secretion definition)

- Pathogen exclusions for meeting PNEU definitions will mirror the VAE protocol pathogen exclusions
  - yeast, coagulase negative Staphylococci, Enterococcus are excluded unless isolated from lung tissue or pleural fluid
  - yeast included for meeting PNU3 (immunocompromised patients)
  - fungal pathogens excluded

- Considering allowing secondary BSIs to be attributed to PNU1
What’s Coming in 2015-

- **FacWideIN LabID Event reporting to exclude units with different CMS Certification Number (CCN)**
  - Inpatient Rehab facilities (IRFs) and all other CMS-defined “facility” types that are units within acute care should be excluded from acute care counts, if they have a unique CCN that is different from the acute care facility (even if only different by a single letter in the 3rd position).

- **New optional variables to LabID Event form:**
  - Has patient been discharged from another facility in past 4-weeks
  - Last physical overnight location of patient immediately prior to arrival into facility (specific to observation/emergency department specimens and community-onset events)
What’s Coming in 2015-

- FacWideIN LabID Event reporting will also require additional reporting “by location” from each onsite emergency department and observation location.
  - New in-plan rules to be followed for any MDRO or C. difficile
  - Must report ED and Observation LabID events from admitted and non-admitted patients and separate location specific encounter denominators
  - No Change: Specimens collected from any other offsite affiliated outpatient locations (i.e., not ED and Observation locations) are included only if collected on the same calendar day as inpatient admission

- CRE-Enterobacter added to CRE reporting (all three CRE types must be monitored for in-plan reporting, including CRE- Ecoli, CRE-Klebsiella, and CRE-Enterobacter)

- Additional updates to interface and analysis
HEALTHCARE PERSONNEL FLU VACC/ LONG-TERM CARE FACILITIES / DIALYSIS EVENTS / BIOVIGILANCE

- **New facilities required to report starting October 2014**
  - Long-term acute care facilities (LTACs)
  - Inpatient rehabilitation facilities (IRFs)
  - Ambulatory surgery centers
  - Hospital outpatient departments

- **All report separately except for outpatient departments**
  - Outpatient data combined with inpatient acute care summary **IF:**
    - CCN is 100% identical to CCN of acute care hospital **AND**
    - Attached to inpatient facility or on same medical campus

- **Next NHSN release will include separate summary form for data from IRF units within acute care hospitals**

- **CDC will release training in late Summer 2014**
NHSN LTCF (NH/SNF) Component Use

- Component released in September 2012
  - Currently 176 facilities enrolled, primarily nursing homes and skilled nursing facilities
  - Represents 1.1% of CMS certified nursing facilities

- Enrollment is voluntary, supported by state-led efforts to encourage NHSN use by LTCFs
  - 31 states with 1 or more LTCFs enrolled
  - 5 states with 10 or more LTCFs enrolled (NY with 60; VT with 29)

- Focused on surveillance for UTI, and Lab identified *C. difficile* and MDROs
Dialysis Facilities Transition to Dialysis Component in July 2014

- Dialysis facilities will transition from reporting dialysis events in the Patient Safety Component to the new Dialysis Component at the end of July 2014
  - No required action by users; the transition will be automatic!
  - On the NHSN Landing Page, users will log in under “Dialysis”

- New component is tailored to dialysis facility reporting only:
  - Dialysis Events (incentivized by CMS ESRD QIP Rule)
    - Quarterly reporting deadlines in 2014
  - CLIP Events (optional)
  - Hand Hygiene Adherence (optional)
  - **NEW! Patient Influenza Vaccinations (optional)
  - Dialysis-specific Define/Confer Rights for groups

- Dialysis-specific analysis reports will be easier to interpret with the addition of default variable labels
Massachusetts became the first state to mandate the use of the Hemovigilance Module.

Facility Administrators **must** add a user with administrator rights to the Hemovigilance Module.

Questions? Email us at **nhsn@cdc.gov** include “Biovigilance” in the subject line.
CMS FINALIZED AND PROPOSED RULES
Previously Finalized CMS IQR Requirements for Upcoming Reporting to NHSN

- **IPPS (Acute Care Hospitals)**
  - Medicare Beneficiary Number required on all Events reported to NHSN from Medicare patients beginning July 1, 2014.
  - CLABSI and CAUTI Events from Medical, Surgical, and Med/Surg Wards, in addition to ICUs beginning Jan 1, 2015.

- **LTACH (Long-term Acute Care Hospitals)**
  - MRSA bacteremia and CDI LabID Events FacWideIN beginning Jan 1, 2015.
Currently Proposed CMS IQR Requirements for Reporting to NHSN

- **IPPS (Acute Care Hospitals)**
  - **Data Access:** CMS proposing that CDC/NHSN must share with them “all patient-level data” from “all required fields” and some voluntarily submitted fields for all HAIs reported by facilities into NHSN.
  - **HVBP:** FY2016 – CLABSI/CAUTI/2 SSIs (CY12 to CY14) FY2017 – add MRSA blood and CDI (CY13 to CY15) NHSN
    HAIs are Domain 2 of CMS Safety Domain (SD)
  - **HAC:** FY2015 – CLABSI/CAUTI (CYs 12 & 13) =65% CMS SD  FY2016 – add 2 SSIs (CYs 13 & 14) =75% of CMS SD

- **PPS-Exempt Cancer Hospitals**
  - Public reporting of NHSN HAI data by 2017
Currently Proposed CMS IQR Requirements for Reporting to NHSN

- **IRF (Inpatient Rehabilitation Facilities)**
  - MRSA bacteremia and CDI LabID Events FacWideIN beginning Jan 1, 2015.

- **IPF (Inpatient Psychiatric Facilities)**

- **LTACH (Long-term Acute Care Hospitals)**
  - Ventilator-Associated Events (VAE) beginning Jan 1, 2016
As of May 2014:

- 1,197 acute care hospitals have imported at least 1 record via CDA
  - ~5,100 enrolled in NHSN → 24% using CDA
- 1,813 outpatient dialysis facilities have imported at least 1 record via CDA
  - ~6,500 enrolled in NHSN → 28% using CDA
- 1.35 million records have been imported via CDA since its introduction

Last year at this time:

- About 900 facilities importing CDA
- About 760,000 records imported via CDA
Many infection prevention software systems can create CDAs that can be imported into NHSN, some hospital IT departments have created CDAs without vendors.

NHSN does not rank, evaluate, or endorse any software vendor!

- There are facilities that use the CDA import in every state – colleagues in your local APIC chapter are great resources for comments/reviews of their vendor system.

APIC maintains a list of software systems that can send CDAs to NHSN on their Surveillance Technology site:

http://www.apic.org/Professional-Practice/Practice-Resources/Surveillance-Technology

- Click on “Vendor Resources” to view the list.
NHSN Antimicrobial Use (AU) Option

- AU Option is completely electronic (no manual data capture or entry into NHSN)

- Data Source
  - Electronic Medication Administration Records (eMAR)
  - Bar Coded Medication Administration Records (BCMA)

- Implementation
  - Partnership with vendors to electronically capture numerator and denominator for importation into NHSN
  - Data reported via Clinical Document Architecture (CDA)
As of April 1, 2014:

- 60 facilities reporting data ≥1 month
  - 45 with “good” (i.e. validated) data
  - 597 individual units reporting

Facilities from 6 states

Range in bed size:
- < 200 beds: 41%
- 200 – 500 beds: 38%
- > 500 beds: 22%

Range in teaching status:
- Non-teaching: 47%
- Major teaching: 34%
- Other teaching: 19%
NHSN Antimicrobial Resistance (AR) Option

- NHSN AR Option will be introduced in July 2014 software update (protocol already posted – Chapter 11 of the Patient Safety Component manual)

- AR Option is also completely electronic (no manual data capture or entry into NHSN)

- Data Source
  - Laboratory Information System (LIS)
  - Admission/Discharge/Transfer (ADT) System
NHSN Antimicrobial Resistance (AR) Option

- Facility-wide inpatient reporting along with some outpatient locations

  - **Numerator:**
    - Specific organisms and antibiotic susceptibility results
    - Isolated from CSF, blood, urine, or lower respiratory tract
    - E-test, disk diffusion, and MIC results provided along with final interpretation (S/I/R)
    - One CDA imported per isolate per patient (with some additional rules about how to select isolates to report)

- **Denominator:**
  - Patient days
  - Admissions
Thank you

NHSN Help Desk: NHSN@cdc.gov

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1 800 CDC INFO (232 4636)/TTY: 1 888 232 6348
E-mail: cdcinfo@cdc.gov    Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.