National Healthcare Safety Network Member's Meeting

APIC 2015

June 26, 2015

2:30-4:00 p.m.

Music City Center Room 207 ABCD

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

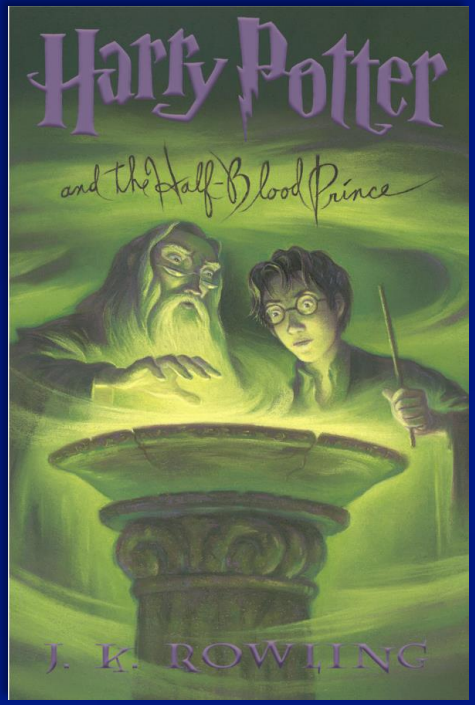
Agenda

- Welcome/State of NHSN
- Protocol & Application Updates
  - General
  - CLABSI, CLIP
  - CAUTI
  - SSI
  - VAE, pedVAP
  - LabID Event
  - Healthcare Flu vaccine, LTCF, DE, BV
- Electronic reporting (CDA)
- AUR
- CMS Finalized and Proposed Rules
- Analysis & Training Updates
- Q & A

STATE OF NHSN

10 Years Ago…

- "Harry Potter and the Half Blood Prince" hit bookshelves
- Chicago White Sox won the World Series for the first time in 88 yrs
- YouTube launched

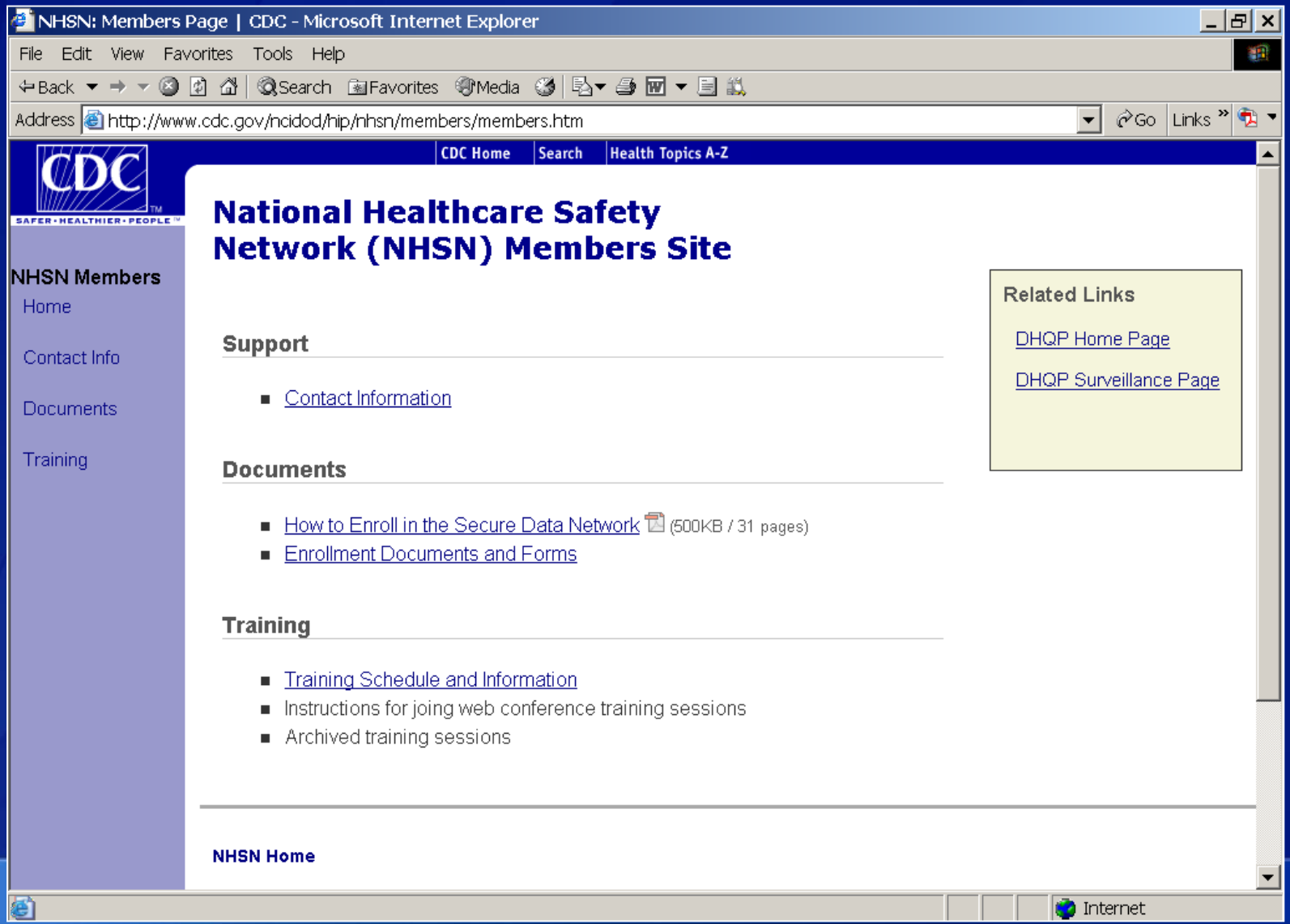


YouTube
Broadcast Yourself™

10 Years Ago…

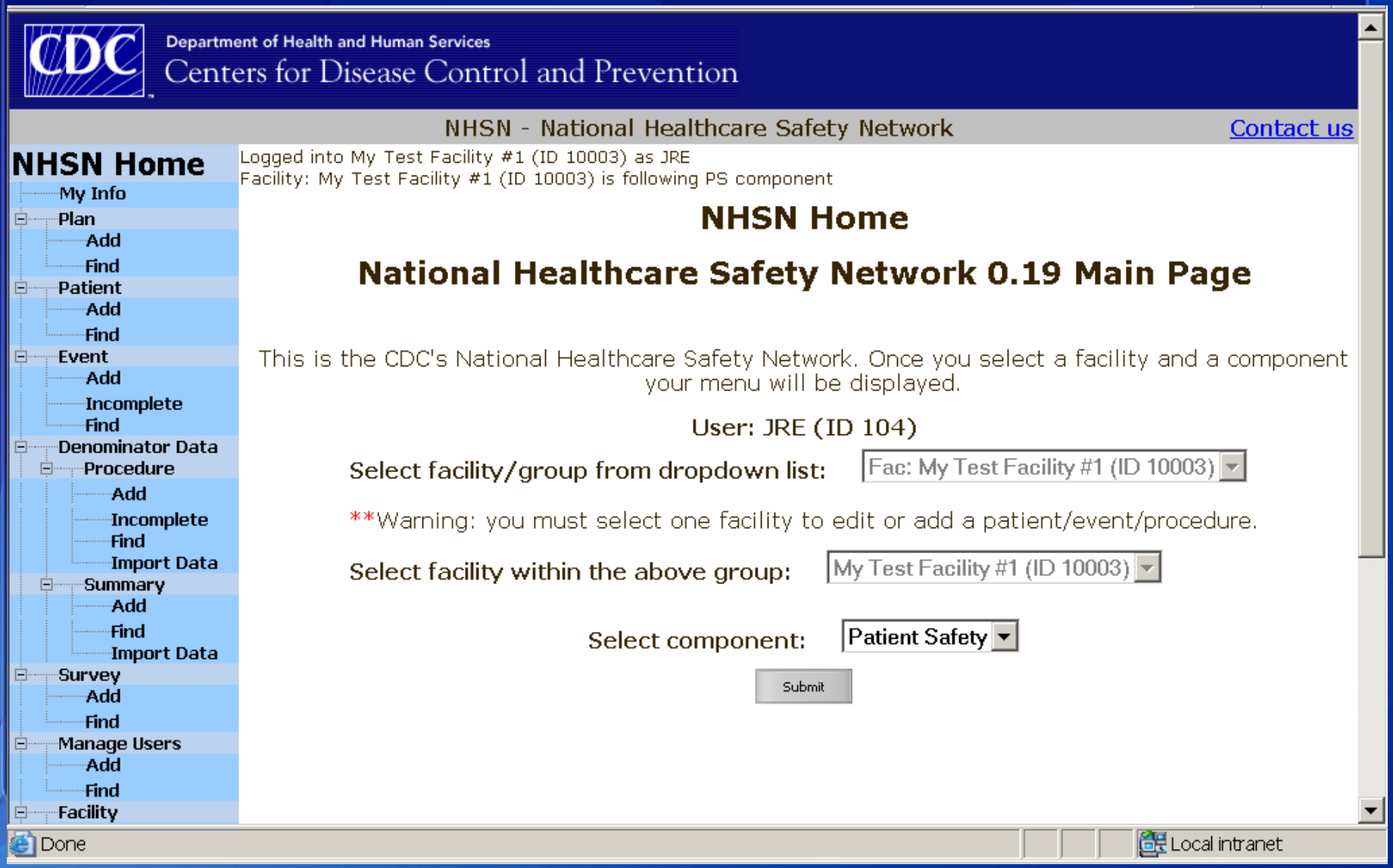
- **NHSN launched!!**

NHSN Website…THEN



NHSN Website…NOW

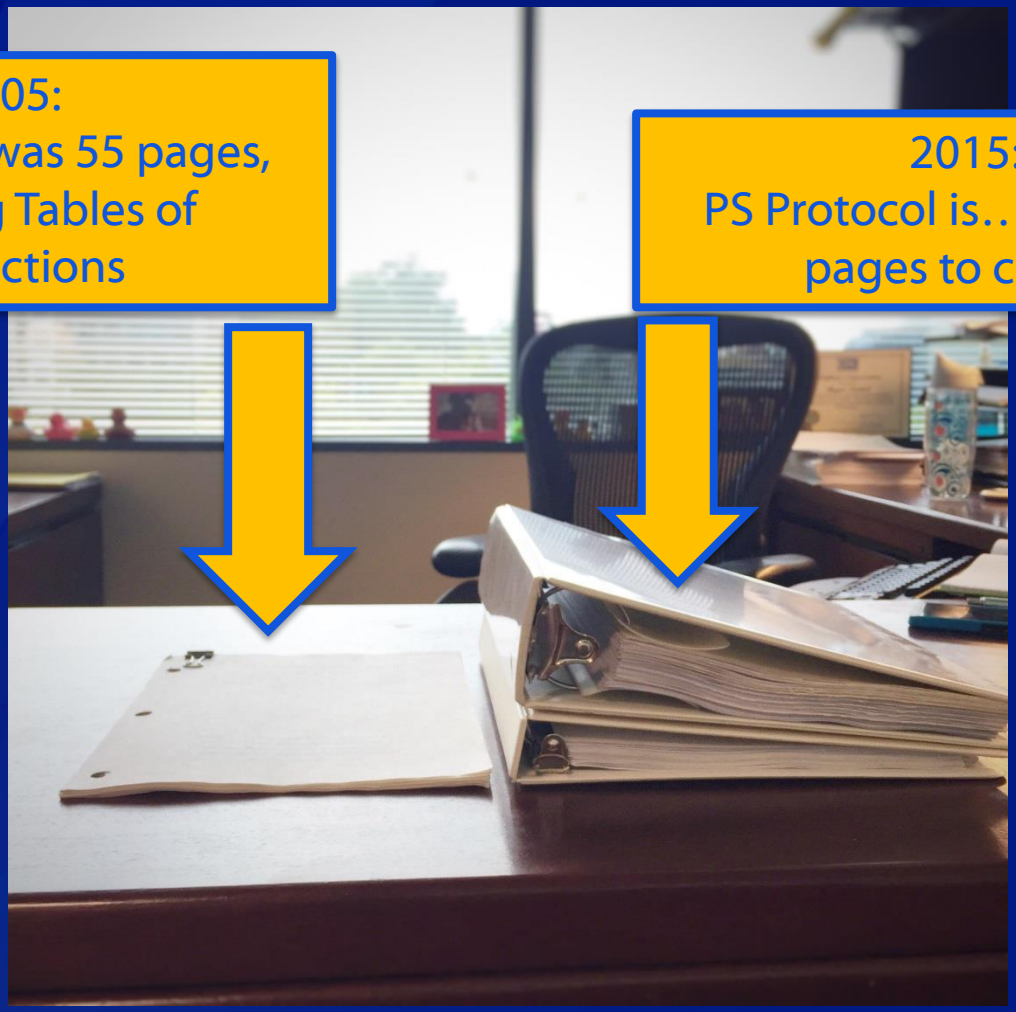
NHSN Application…THEN



NHSN Application…NOW

NHSN Protocol

2005:
PS Protocol was 55 pages, including Tables of Instructions



2015:
PS Protocol is…too many pages to count!

NHSN – By the Numbers

Then	Now
By the end of 2005, NHSN had enrolled **134** hospitals and **0** groups (limited enrollment)	As of June 25, 2015, there are **15,784** active facilities, **1,267** groups, and **39,917** users…and growing
In 2005, support was provided by 1 user support specialist, 1 IP, 1 statistician, and 2 additional SMEs and a small team of developers	Today, direct support is provided by: **9** User support specialists **8** IPs **9** Analysts in addition to 3 Health educators + additional SMEs (e.g., 4 statisticians) and larger team of developers …and a partridge in a pear tree

We're outnumbered…

- 1,535 NHSN users to 1 NHSN Direct Support member

NHSN – By the Numbers

Then	Now
The first rate report using NHSN data (2006) represented **211** hospitals	The most recent DA Rate report (2013) represented **4,657** hospitals
In 2005, NHSN had **2** active components	Today, NHSN has **5** components, with the potential to expand to **7** components in the coming years
In 2005, no states required reporting of HAI data via NHSN	**33** states and D.C. require the use of NHSN to fulfill state HAI reporting mandates CMS Quality Reporting Programs require the use of NHSN for HAI and HCW Flu Vaccination reporting

NHSN – By the Numbers

- **According to the 2013 National HAI Progress Report:**
  - 46% decrease in CLABSI between 2008 and 2013
  - 19% decrease in SSIs related to the 10 select procedures tracked in the report between 2008 and 2013
  - 6% increase in CAUTI between 2009 and 2013; although initial data from 2014 seem to indicate that these infections have started to decrease
  - 8% decrease in hospital-onset MRSA bacteremia between 2011 and 2013
  - 10% decrease in hospital-onset *C. difficile* infections between 2011 and 2013

The State of NHSN…

- **We've come a long way from where we began…but we have a long way to go.**
  - "It's hard to stop a moving train…"

- **We are indebted to YOU for your ongoing efforts to monitor HAIs and to improve patients' safety**

GENERAL NHSN UPDATES/NEWS

NHSN Updates/News

- New NHSN website
- CMS/CDC Communique- Failure to report
- NHSN HAI Worksheet Generator

NEW NHSN WEBSITE

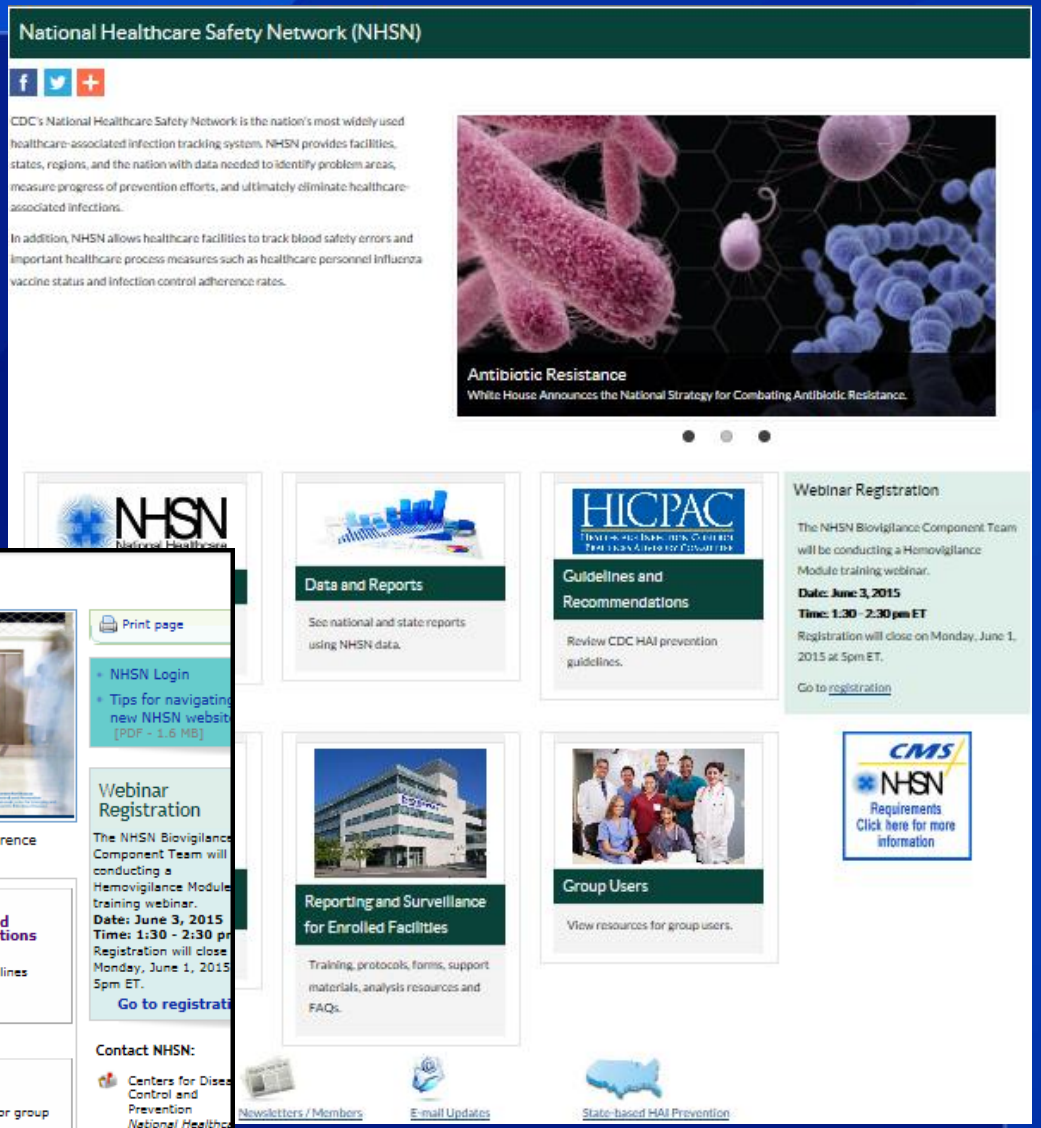
COMING SOON: NEW LOOK FOR THE NHSN WEBSITE

- New look to match CDC.gov website.
- Optimized for desktops and mobile devices
- No change to the site navigation
- Improved layout within pages – content is collapsed and user can expand content that is needed.

Expected Go – Live: July 2015

http://www.cdc.gov/nhsn

NEW LOOK


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.
Antibiotic Resistance
White House Announces the National Strategy for Combating Antibiotic Resistance.
NHSN
Data and Reports
See national and state reports using NHSN data.
HICPAC
Guidelines and Recommendations
Review CDC HAI prevention guidelines.
Webinar Registration
The NHSN Biovigilance Component Team will be conducting a Hemovigilance Module training webinar.
Date: June 3, 2015
Time: 1:30 - 2:30 pm ET
Registration will close on Monday, June 1, 2015 at 5pm ET.
Go to registration
Reporting and Surveillance for Enrolled Facilities
Training, protocols, forms, support materials, analysis resources and FAQs.
Group Users
View resources for group users.
CMS NHSN
Requirements
Click here for more information
Newsletters / Members
E-mail Updates
State-based HAI Prevention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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.
New Data: Hospital Infections
Some Progress, but More Work Needed
Learn More»
NATIONAL AND STATE HEALTHCARE ASSOCIATED INFECTIONS PROGRESS REPORT
Print page
NHSN Login
Tips for navigating new NHSN website
[PDF - 1.6 MB]
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About NHSN
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Data & Reports
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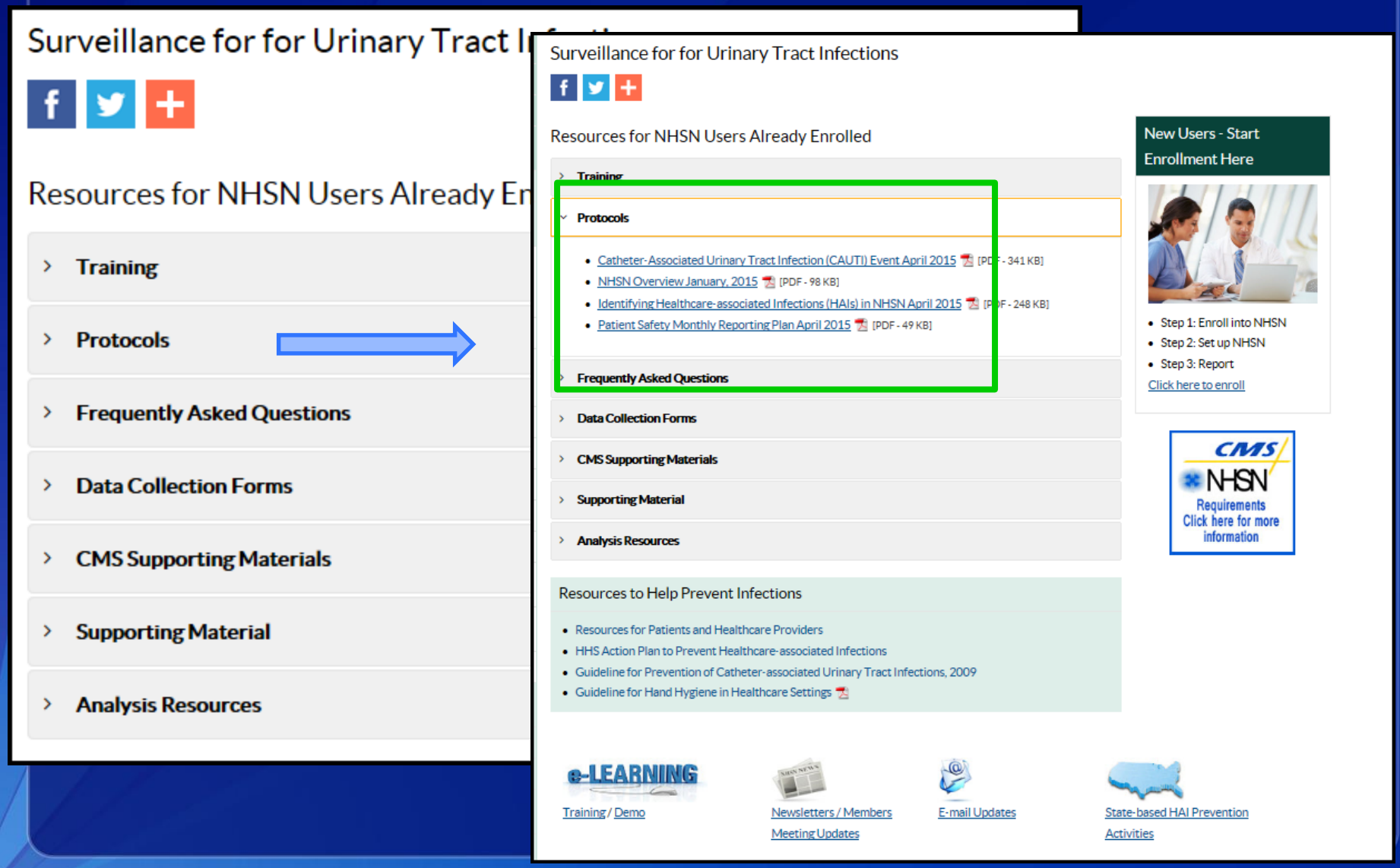
New to NHSN? Enroll Facility Here.
For first time facility enrollment.
Training, protocols, forms, support materials, analysis resources, and FAQs
Group Users
View resources for group users here.
Contact NHSN:
Centers for Disease Control and Prevention
National Healthcare Safety Network
MS-A24
1600 Clifton Rd
Atlanta, GA 3033
Contact NHSN@cdc.gov
Contact Us:
Centers for Disease Control and Prevention
1600 Clifton Rd
Atlanta, GA 3033
800-CDC-INFO
(800-232-4636)
e-LEARNING
Training / Demo
Newsletters / Members
Meeting Updates
E-mail Updates
State-based HAI Prevention Activities
HIPAA Privacy Rule

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**

New Website Features



Failure to Report

CDC/CMS COMMUNIQUE

Background

- **Developed jointly – CMS and CDC**
- **Input from**
  - American Hospital Association
  - Federation of American Hospitals
  - APIC
- **Response to reports of**
  - Purposeful non-reporting of NHSN defined HAI
  - Deviations from standards of medical care to avoid HAI reporting
  - Pressure on infection preventionists to alter data submitted
- **Anticipated distribution:**
  - Within the next month
  - All NHSN users
  - Facility administrators

What should you do?

- Review
- Use the communique as a basis for internal discussions

Coming Soon

NHSN HAI WORKSHEET GENERATOR

COMING SOON

Worksheet Generator

- **ASSUMES USER HAS DETERMINED ALL CRITERIA ARE MET**
- **DOES NOT:**
  - Require documentation of required elements
  - PROVIDE A GUARANTEED DETERMINATION
- **Produces worksheet that identifies** based on dates provided:
  - **Date of Event**
  - **POA vs HAI**
  - **Infection Window Period**
  - **Repeat Infection Timeframe**
  - **Secondary BSI Attribution Period (not for BSI)**

CLABSI AND CLIP UPDATE

CLABSI 2015

- **No significant changes to LCBI criterion**
  - New general definitions apply
    - Determining POA vs HAI
    - Infection Window Period (IWP)
    - Repeat Infection Window (RIT)
  - Secondary BSI guidance narrowed to 2 choices
    1. Blood culture pathogen matches at least one organism found in a site-specific infection culture used to meet the primary site infection criterion
    2. The positive blood culture is an element used to meet the primary site infection criterion

What about MBI-LCBI reporting & data?

- **MBI-LCBI reporting is required**
  - Continue assessing BSI events for MBI as appropriate
    - Must meet LCBI criteria before applying MBI criteria

- **MBI-LCBI Data**
  - 2015 will be the new baseline for future device-associated SIRs
  - Future CLABSI SIRs will use the 2015 baseline & exclude MBI
    - MBI data will not be reported to CMS beginning in 2016
  - MBIs will be analyzed separately for an MBI-specific measure

Central Line Insertion Practices (CLIP)

- **Chlorhexidene gluconate labeling has changed to use with caution in patients less than 2 months of age**
- **Concerns continue related to safe use in premature infants > 2 months of age but younger by gestational age**
- **NHSN addressing via 2 step process r.e. skin prep**
  - 2015- if not CHG, was there a contraindication (CI)?
    - If < 120 days old on CLIP date and CI = Yes, any skip prep = adherence
  - 2016- if contraindication- must document 1 of 3 choices

CLIP 2016

- **Update to skin prep**
  - Addition of fields required if "Yes" to "Was there a contraindication to chlorhexidine"
  - Choices:
    - Patient is less than 2 months of age- chlorhexidine is to be used with caution in patients less than 2 months of age
    - Patient has a documented/known allergy/reaction to CHG based products that would preclude its use
    - Facility restriction or safety concerns for CHG use in premature infants precludes its use

CLIP 2016 Continued

- Business rules applied in analysis for CLIP Bundle Adherence-
- Documentation of any skin prep acceptable
  - For patients < 60 days old on CLIP date
  - For patients ≥ 60 days old on CLIP date if one of contraindications to CHG is marked yes
- All other CLIP events- CHG required for CLIP bundle adherence

CAUTI

2015 UTI Protocol Update

No longer included:

- Colony counts less than 100,000 CFU/ml
- Urinalysis results
- Non-bacteria as sole pathogens
- Uropathogen list for asymptomatic bacteremic UTI (ABUTI)- Now same list as for symptomatic UTI
- "Gap Days" to determine fulfillment of infection criteria- Instead, occurrence of all elements within the Infection Window Period will be required to fulfill infection criteria
- OUTI- is now replaced by USI

UTI Protocol Changes

- No significant changes anticipated for UTI protocol in 2016
- January vs. April 2015 SUTI 1A modification

Issue

- **January 2015 criteria based on date of event did not differentiate Foley presence in all cases**
- **Urgency, frequency and dysuria may indicate UTI following Foley removal; but not before**
- **Solution: Clarify that Foley is "another recognized cause" of these symptoms**

April 2015 modification
(Begin to use with April 2015 cases)

- **INPLACE/REMOVED merged into one criteria**
- **The Following symptoms cannot be used when the catheter is INPLACE:**
  - urgency
  - frequency
  - dysuria

April 2015 UTI modification

Table 1: Urinary Tract Infection Criteria

January 2015

Criterion	Urinary Tract Infection (UTI)
	Symptomatic UTI (SUTI) Must meet at least ***one*** of the following criteria:
SUTI 1a **Catheter-associated Urinary Tract Infection** **(CAUTI)**	Patient must meet 1, 2, and 3 below: 1. Patient has an indwelling urinary catheter **in place for the entire day on the date of event** and such catheter had been in place for >2 calendar days, on that date (day of device placement = Day 1) 2. Patient has at least ***one*** of the following signs or symptoms: • fever (>38.0°C) • suprapubic tenderness* • costovertebral angle pain or tenderness* 3. Patient has a urine culture with no more than two species of organisms, at least one of which is a bacteria of ≥10^5 CFU/ml. All elements of the UTI criterion must occur during the Infection Window Period (See Definition Chapter 2 Identifying HAIs in NHSN). ----------**OR**---------- Patient must meet 1, 2, and 3 below: 1. Patient had an indwelling urinary catheter in place for >2 calendar days which was **removed on the day of, or day before the date of event** 2. Patient has at least ***one*** of the following signs or symptoms: • fever (>38.0°C) • suprapubic tenderness* • costovertebral angle pain or tenderness* • urinary urgency* • urinary frequency* • dysuria* 3. Patient has a urine culture with no more than two species of organisms, at least one of which is a bacteria of ≥10^5 CFU/ml. All elements of the UTI criterion must occur during the Infection Window Period (See Definition Chapter 2 Identifying HAIs in NHSN). *With no other recognized cause **Note:** Fever and hypothermia are non-specific symptoms of infection and cannot be excluded from UTI determination because they are clinically deemed due to another recognized cause.

The day the Catheter was REMOVED it was also INPLACE

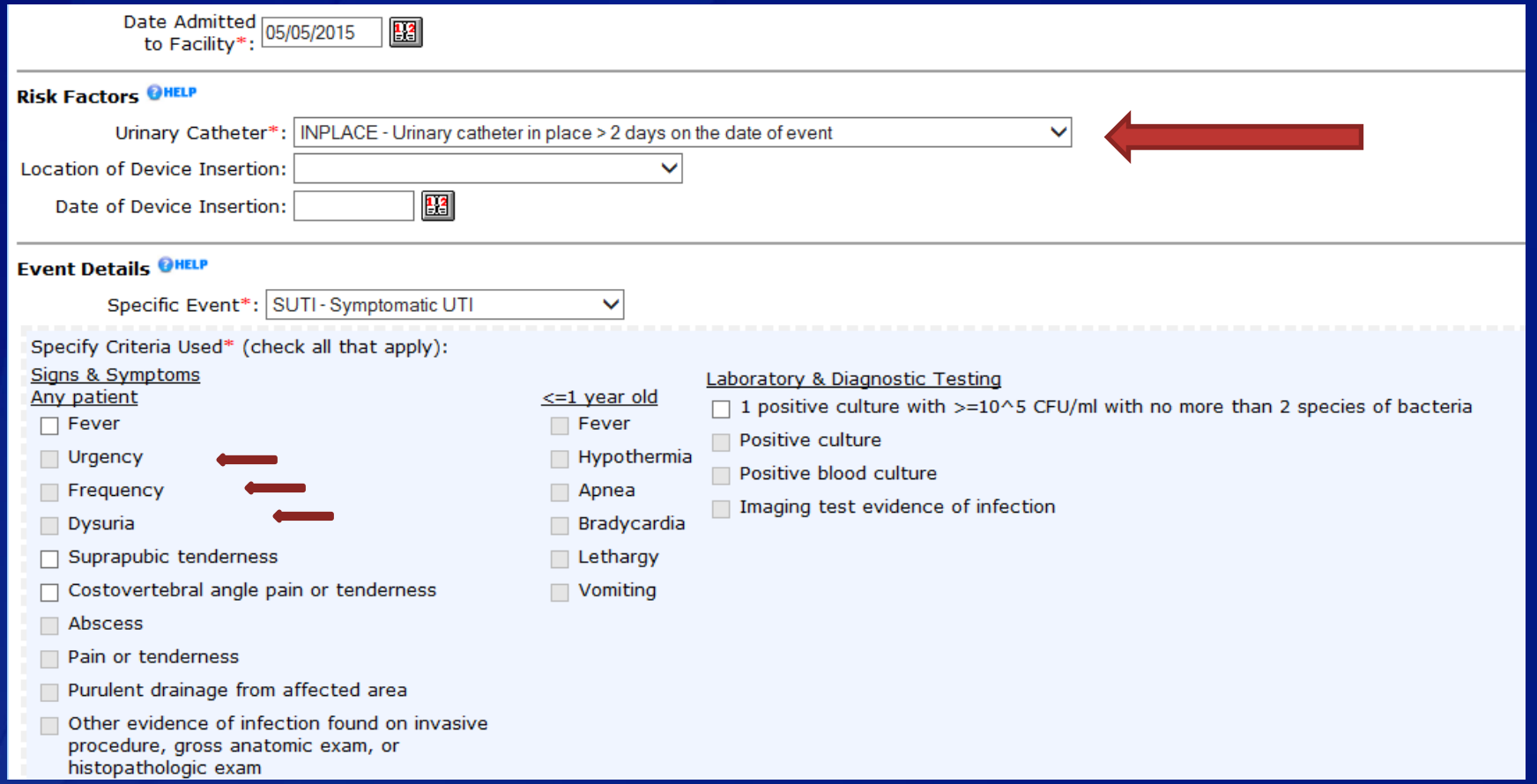
April 2015

Criterion	Urinary Tract Infection (UTI)
	Symptomatic UTI (SUTI) Must meet at least ***one*** of the following criteria:
SUTI 1a **Catheter-associated Urinary Tract Infection** **(CAUTI)**	Patient must meet 1, 2, and 3 below: 1. Patient had an indwelling urinary catheter that had been in place for > 2 days on the date of event (day of device placement = Day 1) AND was either: • Still present on the date of event†, OR • Removed the day before the date of event‡ 2. Patient has at least ***one*** of the following signs or symptoms: • fever (>38.0°C) • suprapubic tenderness* • costovertebral angle pain or tenderness* • urinary urgency* • urinary frequency* • dysuria* 3. Patient has a urine culture with no more than two species of organisms, at least one of which is a bacteria of ≥10^5 CFU/ml. All elements of the UTI criterion must occur during the Infection Window Period (See Definition Chapter 2 Identifying HAIs in NHSN). † When entering event into NHSN choose "INPLACE" for Risk Factor for Urinary Catheter ‡ When entering event into NHSN choose "REMOVE" for Risk Factor for Urinary Catheter *With no other recognized cause (see Notes below)

If the catheter was removed on the date of event, it was still present for part of the day so choose still present

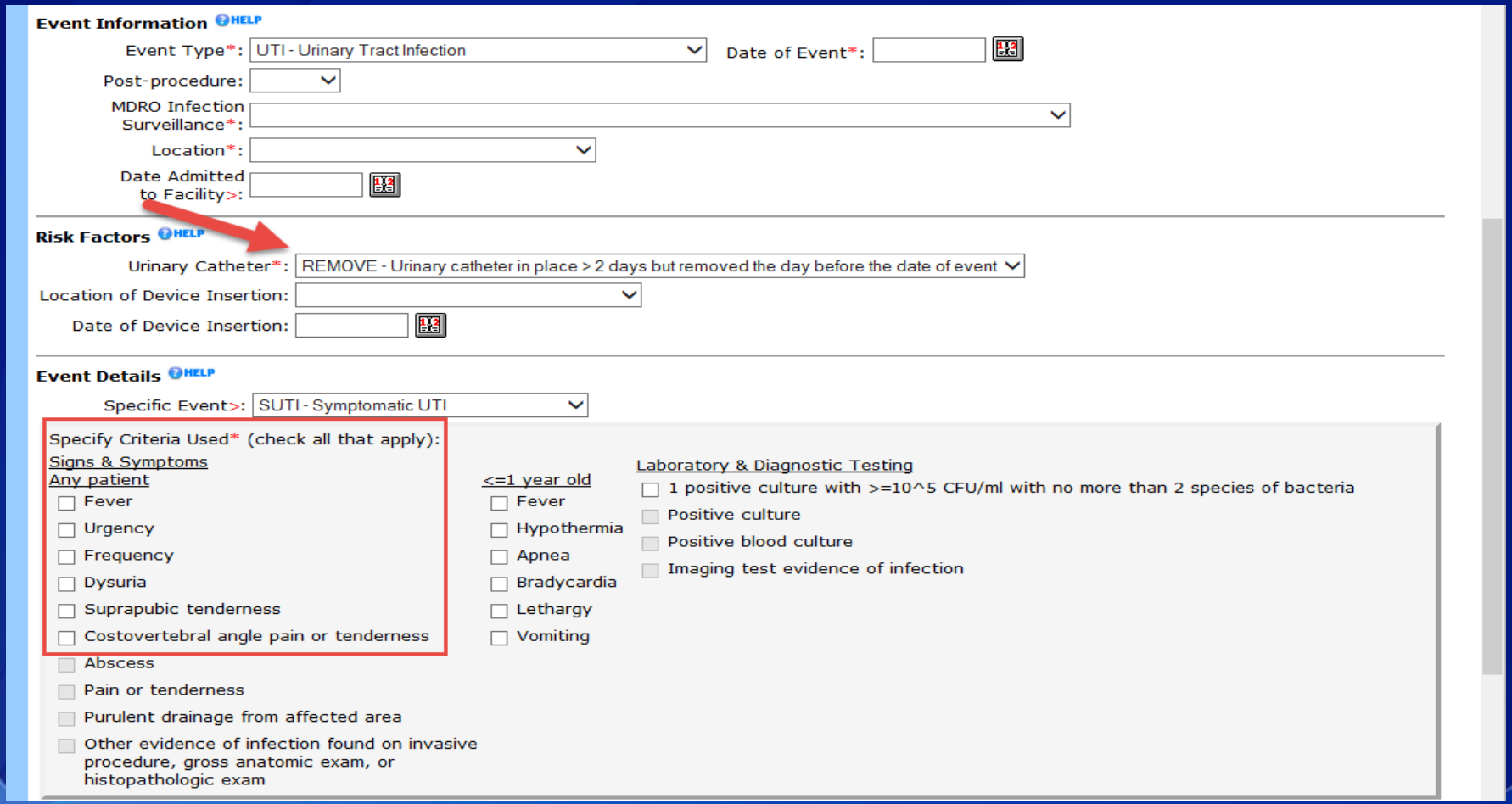
Do not use urgency, frequency or dysuria if symptoms occur while catheter is in place

Current NHSN Defect



April 2015 work around for data entry

- Under risk factor choose REMOVE-Urinary catheter in place > 2 days but removed the day before event



April 2015 work around tips

- Keep track of this case so you can edit this entry once NHSN completes the fix (rare occurrence)
- You may wish to document this in the comments field of the event to identify later in a line list
- This will not change the event type: CAUTI nor impact analysis

Urinary Tract Infection 2016 Application & Form update

- Application update scheduled for 2016
- This update will allow you to enter urgency, frequency and dysuria when choosing (under risk factors) “INPLACE-Urinary catheter in place > 2 days on the day of event”
- The UTI event forms will be updated online in 2016

SURGICAL SITE INFECTION SURVEILLANCE UPDATE & OUTPATIENT PROCEDURE COMPONENT UPDATE

Transition to ICD-10-PCS and CPT Codes

ICD-10-CM codes will replace ICD-9-PCS codes on October 1, 2015.

The mapping for the ICD-10-PCS and CPT codes is complete.

- Codes have been sent to the NHSN development team to be entered into the IDM - Information Data Model for use by vendors and IT departments

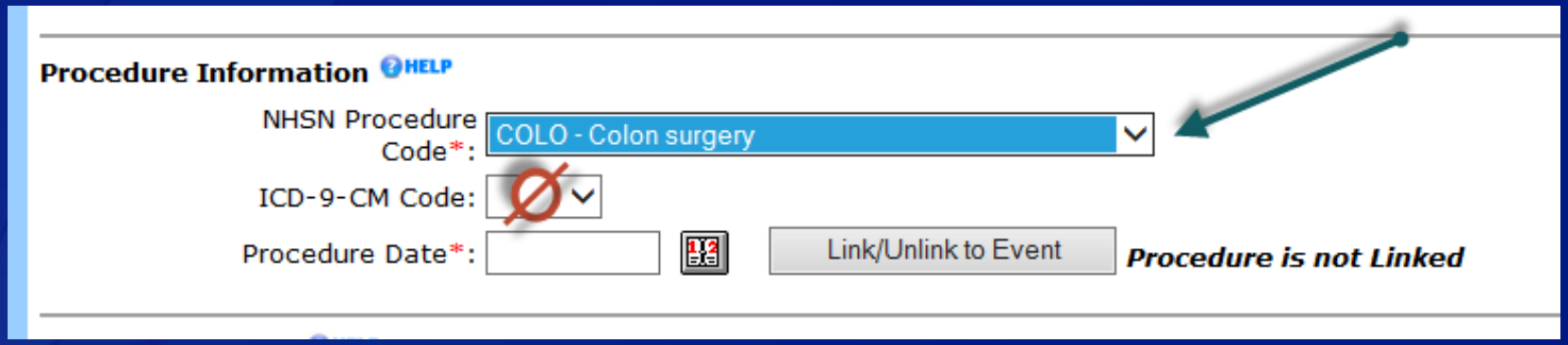
- By mid-July two Excel spread sheets with the NHSN operative procedure code mapping will be placed in the Supporting Materials section of the SSI portion of the NHSN Website.

- An NSHN email will be sent to all NHSN users and vendors as soon as these documents are available.

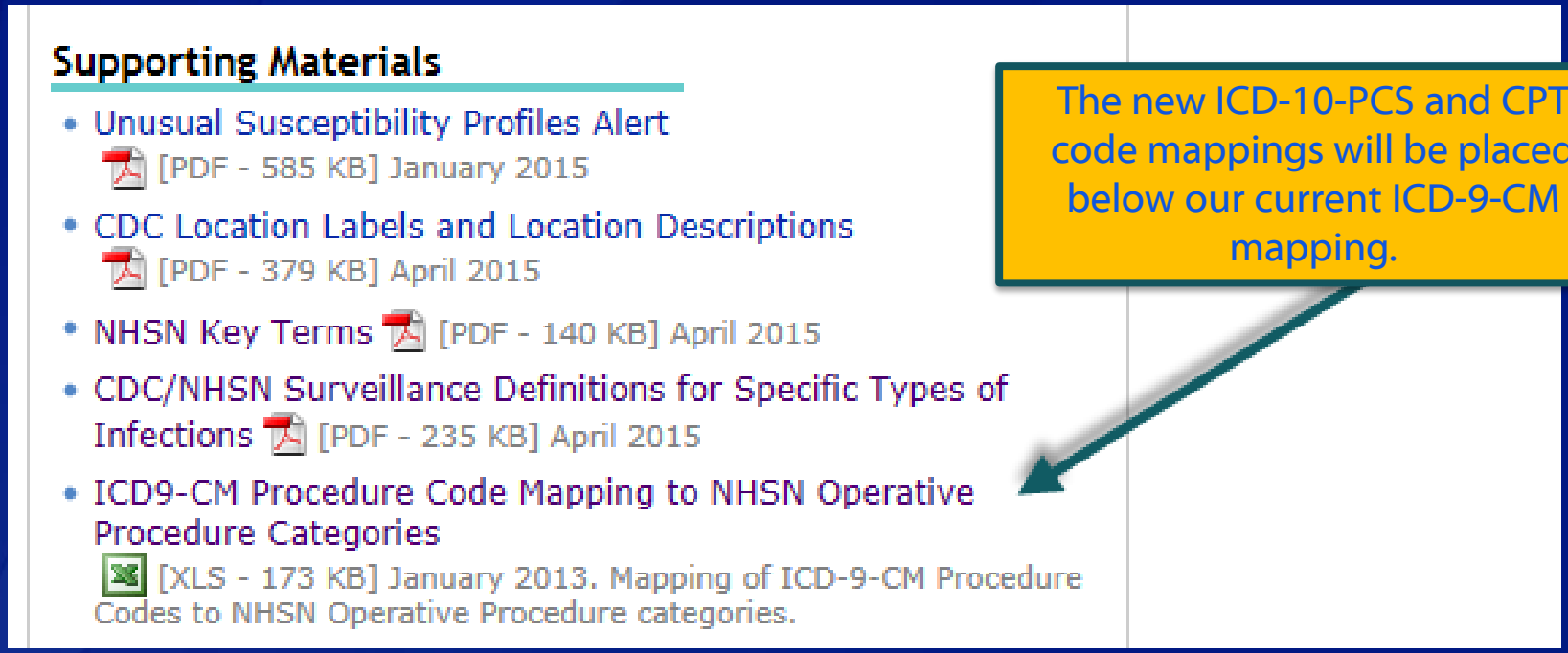
Transition to ICD-10-PCS and CPT Codes

ICD-10-PCS codes will replace ICD-9-PCS codes on October 1, 2015. However, NHSN will not have the ability to receive these codes until the January 2016 release.

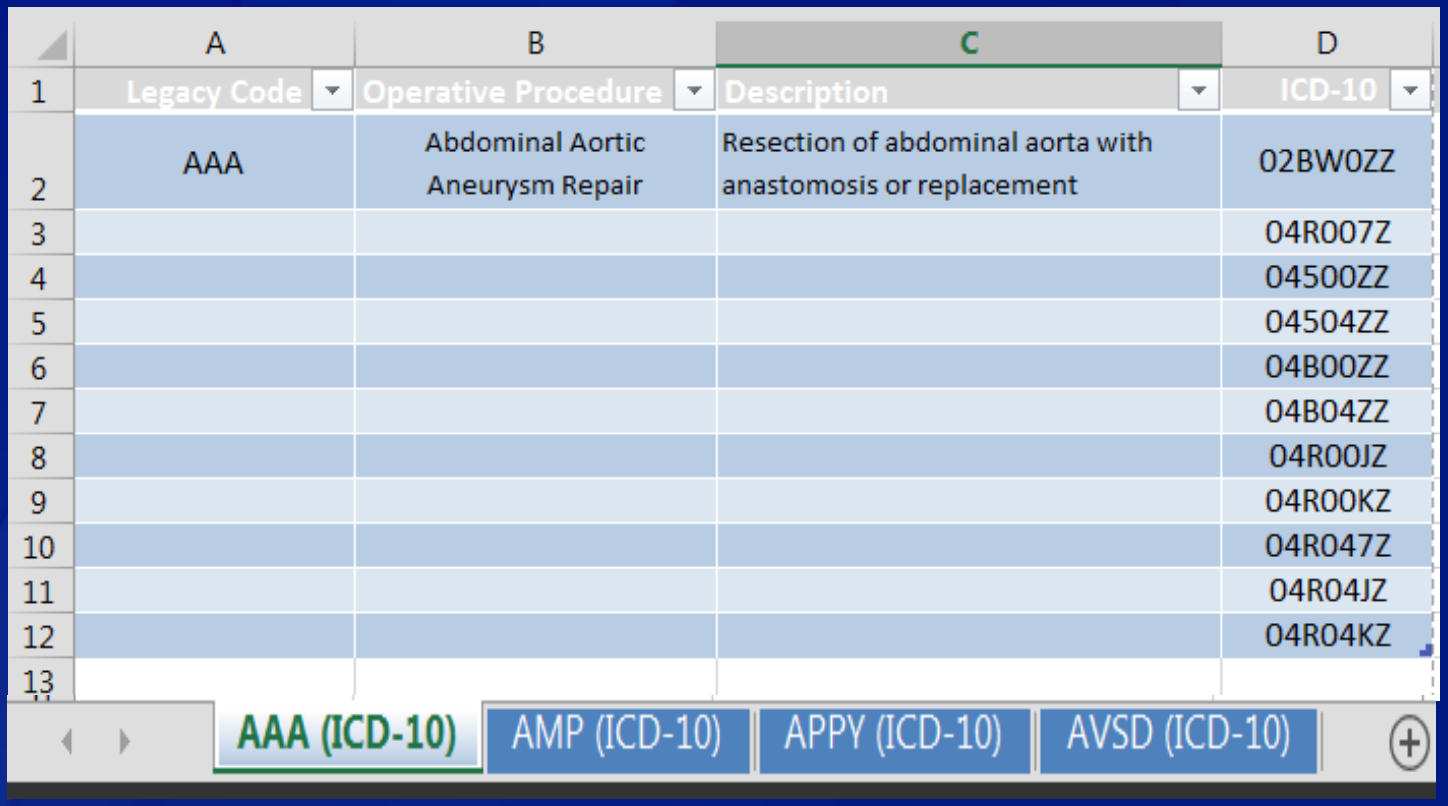
The NHSN guidance for entry of surgical denominator data for the last quarter of 2015 data is to enter the NHSN Procedure Code (e.g. COLO or HYST) but do not enter any ICD-10-PCS or CPT codes associated with the procedure.



NHSN operative procedure code mapping will be found in the Supporting Materials section of the SSI portion of the NHSN Website.



Example of 2016 ICD-10-PCS Procedure Code Mapping

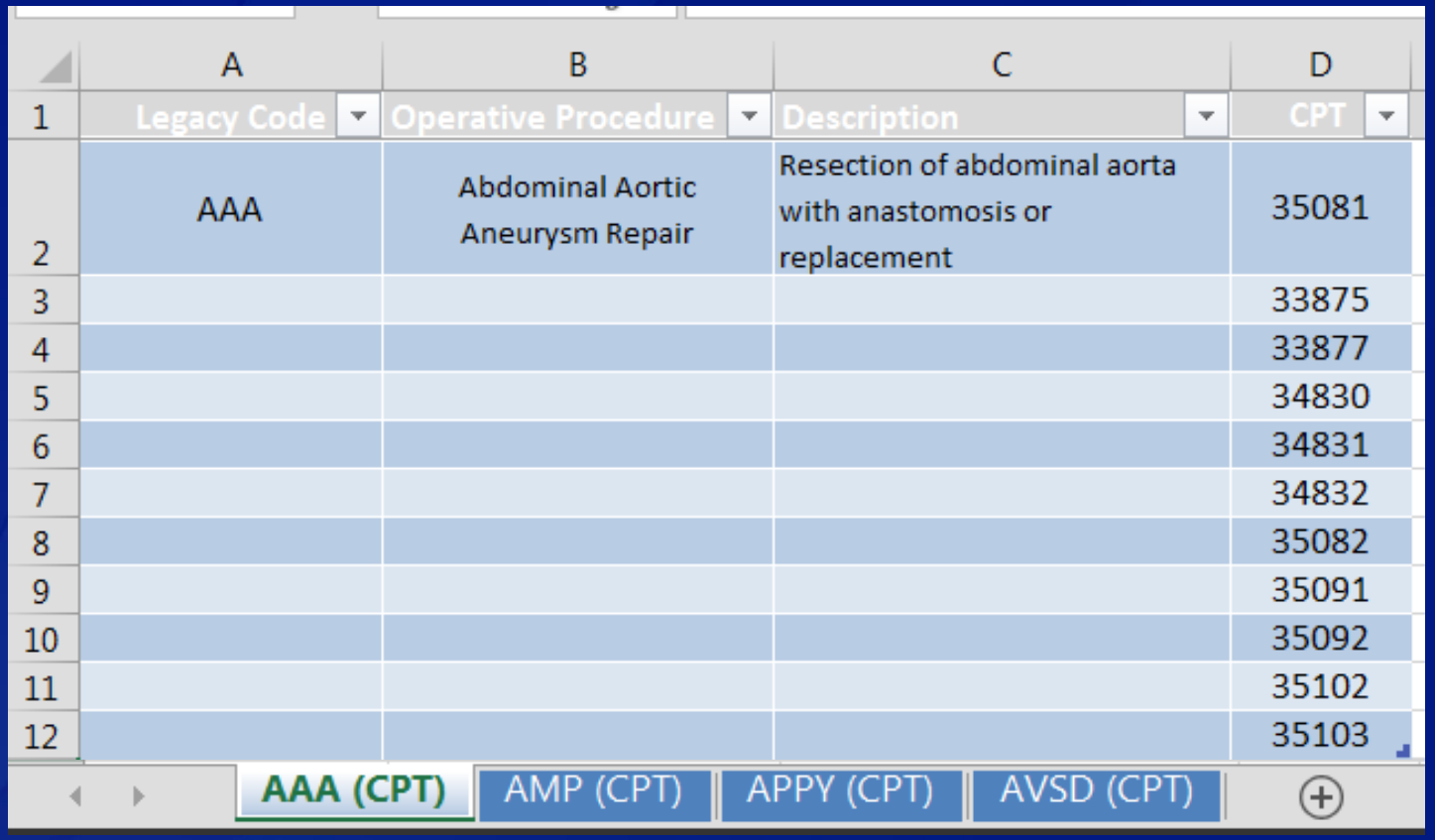


	A	B	C	D
1	Legacy Code	Operative Procedure	Description	ICD-10
2	AAA	Abdominal Aortic Aneurysm Repair	Resection of abdominal aorta with anastomosis or replacement	02BW0ZZ
3				04R007Z
4				04500ZZ
5				04504ZZ
6				04B00ZZ
7				04B04ZZ
8				04R00JZ
9				04R00KZ
10				04R047Z
11				04R04JZ
12				04R04KZ
13				

AAA (ICD-10) | AMP (ICD-10) | APPY (ICD-10) | AVSD (ICD-10)

There will links to both the ICD-10-PCS and the CPT mappings for NHSN operative procedures in the "Supporting Materials" area in the SSI Section of the NHSN website

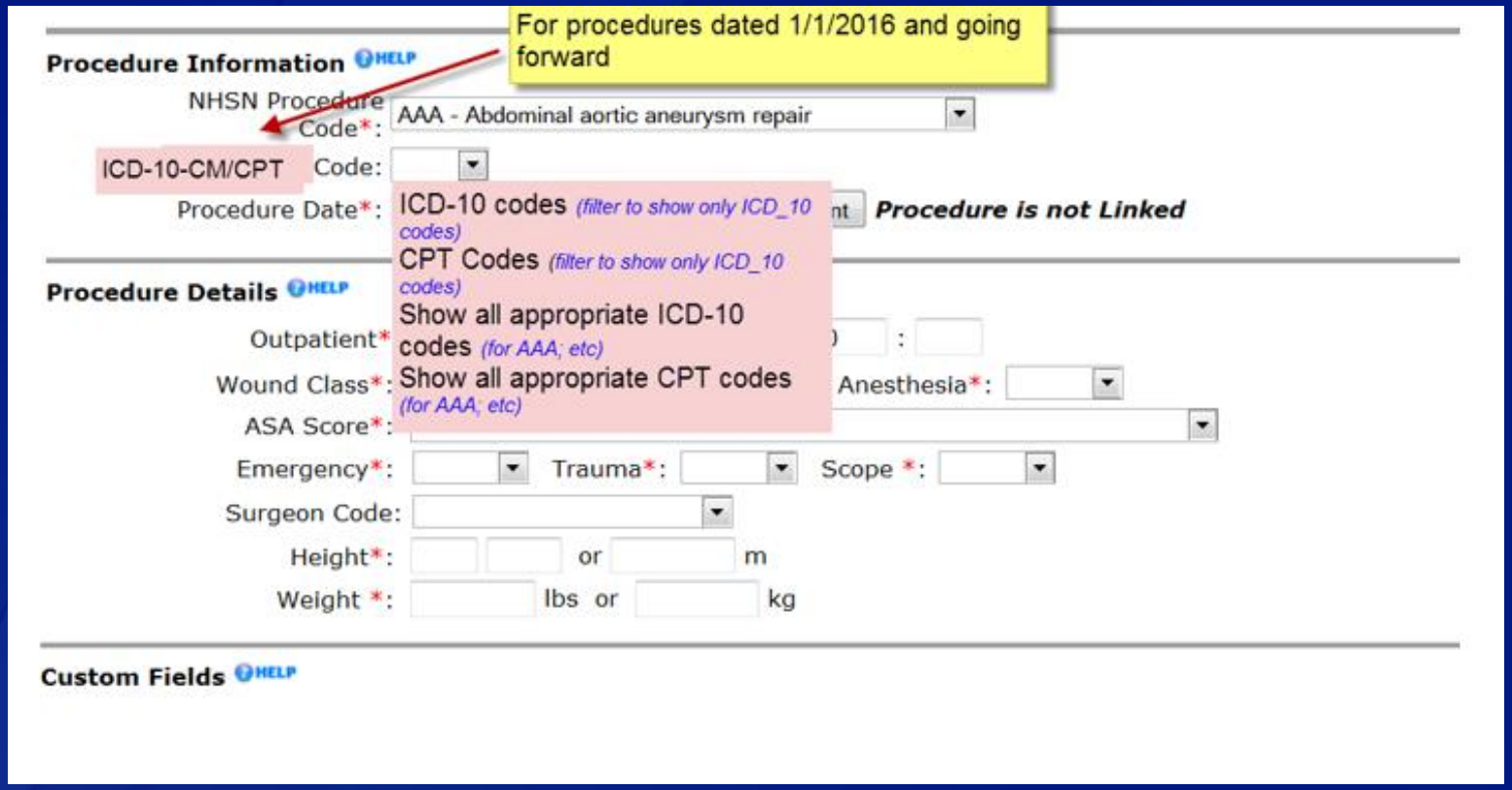
Example of the 2016 CPT Procedure Code Mapping



	A	B	C	D
1	Legacy Code	Operative Procedure	Description	CPT
2	AAA	Abdominal Aortic Aneurysm Repair	Resection of abdominal aorta with anastomosis or replacement	35081
3				33875
4				33877
5				34830
6				34831
7				34832
8				35082
9				35091
10				35092
11				35102
12				35103

AAA (CPT) | AMP (CPT) | APPY (CPT) | AVSD (CPT)

ICD-10-CM and CPT will remain as optional fields in the NHSN application



Transition to ICD-10-PCS and CPT Codes

- FUSN – Spinal fusion NHSN procedure group
  - 2016 will include FUSN and RFUSN
  - ICD-10-PCS and CPT codes do not differentiate between the two procedures
- OTH-Other NSHN procedure category is not mapped to ICD-10-PCS and CPT codes
  - Procedures in that group will not be considered NHSN operative procedures

SSI Updates for 2016

- For 2016 CMS has not added any new NHSN procedures to be followed.

- Outpatient Procedure Component
  - This new component for surveillance of surgical site infections and Ambulatory Surgical Center Quality Reporting Program Measures ASC-1 through ASC-5 in outpatient facilities (ASCs) will tentatively be released in January 2017

  - NHSN is working with ASC-QC group to develop a measure to follow NHSN BRST – breast procedures

  - NHSN will keep NHSN users posted on additional progress via the NHSN newsletter

VAE & pedVAP UPDATE

2015 VAE Changes

- **The third tier of the VAE algorithm was collapsed to include one specific event: PVAP**
  - PVAP replaced possible VAP and probable VAP
  - Provides simplification and is consistent with plan for analysis (PoVAP and PrVAP combined as one event)
- **Community associated fungal pathogens are no longer available for meeting the PVAP definition:**
  - *Cryptococcus, Histoplasma, Coccidioides, Paracoccidioides, Blastomyces, Pneumocystis*
- **Episodes of Mechanical Ventilation (EMV) was introduced as a new optional denominator**

Other VAE Related Activities in 2015

- **Efforts to capitalize on EHR availability of data used to make VAE determinations**
  - **Synthetic Datasets (provided to vendor community)**
    - Vendors import sample set into their system and run their implementation of the VAE algorithm to self validate
    - Plan to post the synthetic datasets to a new NHSN vendor portal
  - **Web Service**
    - Ability for vendor systems to submit de-identified data automatically
    - Ability for individual users to submit de-identified data sets through a web page
    - Plan to move the service to a production environment
- **Next steps CDA for VAE 2017-18**

2016 VAE Updates

- **CMS reporting requirement for VAE in adult LTAC ICU and Ward locations begins**
  - Attempting to anticipate questions
    - Date of initiation of mechanical ventilation
  - Updates to the FAQ document
- **Additions to the Appendix: *List of Antimicrobials Agents Eligible for IVAC, PVAP***
    - Ceftazidime / avibactam
    - Ceftolozane / tazobactam
    - Dalbavancin
    - Isavuconazonium
    - Oritavancin
    - Peramivir
- **Baseline data preparation underway**

2015 PNEU Changes

- **Purulent sputum determined by direct exam / Gram's stain result** (same as VAE)
- **Pathogen exclusions for meeting PNEU/VAP definitions** (same as VAE)
  1. *Candida* species or yeast not otherwise specified, coagulase negative *Staphylococcus* species, and *Enterococcus* species are excluded unless isolated from lung tissue or pleural fluid
     - *Candida* sp. will continue to be included as a pathogen for meeting PNU3 (immunocompromised patients)
  2. Community associated fungal pathogens are no longer available for meeting the PVAP definition:
     - *Cryptococcus, Histoplasma, Coccidioides, Paracoccidioides, Blastomyces, Pneumocystis*
- **Pathogen & Secondary BSI assignment for PNU2 and PNU3 only**

Can I use the PNEU definitions to assign a secondary BSI related to CLABSI surveillance?

Yes, remembering that secondary bloodstream infections can only be reported for PNU2 and PNU3 specific events

- Must first fully meet NHSN PNEU infection definition
- Apply guidelines located in Appendix 1, Secondary BSI Guide, Chapter 4 (Bloodstream Infection Event)
  - Blood culture must either be an element used to meet the site-specific criterion

  OR

  - Blood & site-specific specimen cultures (used to meet the infection criterion) must match for at least one organism.

Using PNEU definitions to assign a secondary BSI related to CLABSI surveillance: Example

Blood culture as an element of the definition

Hospital Day	BSI	RIT	Infection Window Period
1			
2			
3			
4			
5			
6			
7		1	New onset cough
8		2	Imaging test: Infiltrate
9		3	Fever > 38.0 C
10		4	Fever > 38.0 C
11		5	Blood culture: *A. baumannii*
12		6	
13		7	
14		8	
15		9	
16		10	
17		11	
18		12	
19		13	
20		14	
21			

Blood & site-specific specimen cultures match for at least one organism

Hospital Day	BSI	RIT	Infection Window Period
1			
2			
3			
4			
5			
6			
7		1	New onset cough
8		2	Imaging test: Infiltrate
9		3	Fever > 38.0 C
10		4	Fever > 38.0 C
11		5	BAL: *A. baumannii*
12		6	
13		7	
14		8	
15		9	
16		10	Blood Culture : *A baumannii*
17		11	
18		12	
19		13	
20		14	
21			

PNU2 & Secondary BSI
Date of Event = Day 7
Pathogen: A.baumannii

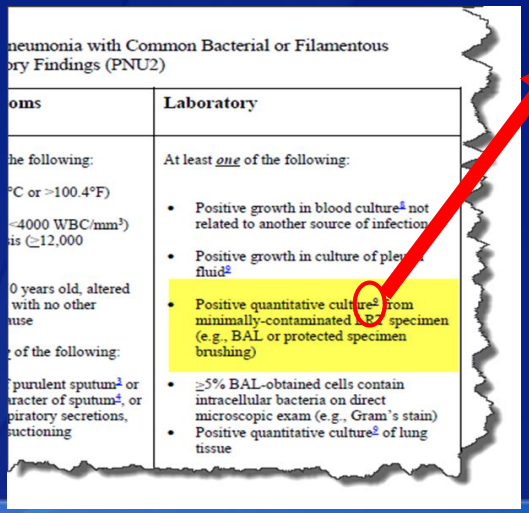
BSI Secondary to PNEU

Blood & site-specific specimen cultures *(used to meet the infection criterion)* must match for at least one organism.

- Eligible site specific culture collection date occurs within the 7-day infection window period. Eligible specimens include:
  - Minimally contaminated specimen (BAL, protected specimen brushing)
  - Pleural fluid
  - Lung tissue

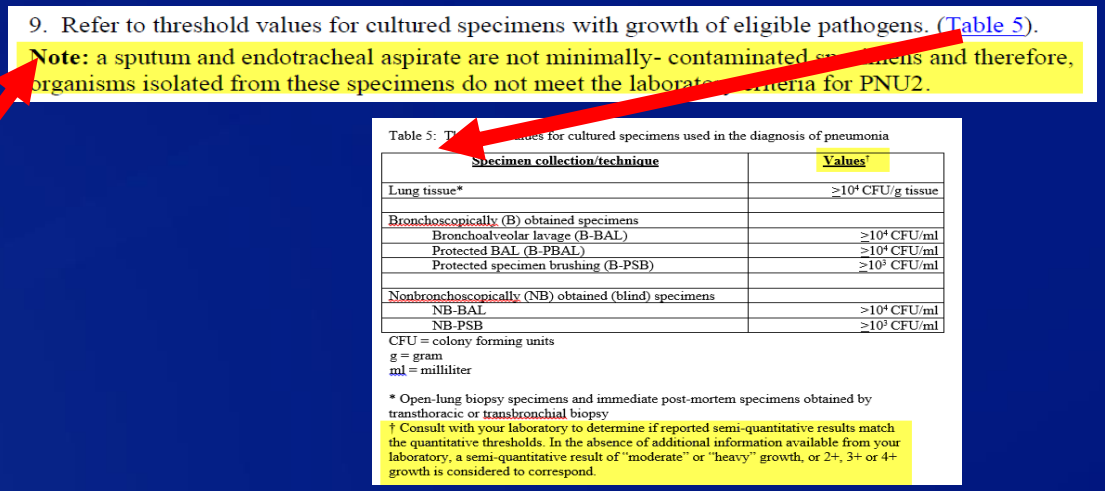
Sputum is NOT an eligible specimen for meeting PNU2 (Footnote #9)

- Blood culture collection date occurs in the secondary BSI attribution period



neumonia with Common Bacterial or Filamentous
ory Findings (PNU2)

oms	Laboratory
he following:	At least *one* of the following:
°C or >100.4°F)	• Positive growth in blood culture[8] not related to another source of infection
<4000 WBC/mm³) is (≥12,000	• Positive growth in culture of pleural fluid[8]
0 years old, altered with no other nuse	• Positive quantitative culture[8] from minimally-contaminated LRT specimen (e.g., BAL or protected specimen brushing)
of the following:	• ≥5% BAL-obtained cells contain intracellular bacteria on direct microscopic exam (e.g., Gram's stain)
purulent sputum[3] or aracter of sputum[4], or piratory secretions, uctioning	• Positive quantitative culture[8] of lung tissue



9. Refer to threshold values for cultured specimens with growth of eligible pathogens. (Table 5).

Note: a sputum and endotracheal aspirate are not minimally- contaminated s[illegible]ens and therefore, organisms isolated from these specimens do not meet the laborat[illegible]eria for PNU2.

Table 5: T[illegible]es for cultured specimens used in the diagnosis of pneumonia

Specimen collection/technique	Values†
Lung tissue*	≥10⁴ CFU/g tissue
Bronchoscopically (B) obtained specimens	
Bronchoalveolar lavage (B-BAL)	≥10⁴ CFU/ml
Protected BAL (B-PBAL)	≥10⁴ CFU/ml
Protected specimen brushing (B-PSB)	≥10³ CFU/ml
Nonbronchoscopically (NB) obtained (blind) specimens	
NB-BAL	>10⁴ CFU/ml
NB-PSB	≥10³ CFU/ml

CFU = colony forming units
g = gram
ml = milliliter

* Open-lung biopsy specimens and immediate post-mortem specimens obtained by transthoracic or transbronchial biopsy

† Consult with your laboratory to determine if reported semi-quantitative results match the quantitative thresholds. In the absence of additional information available from your laboratory, a semi-quantitative result of "moderate" or "heavy" growth, or 2+, 3+ or 4+ growth is considered to correspond.

PNEU/VAP

- Pediatric and Neonatal Working Group continues to work with partners in academics
- Proposed definition for PVAC and NVAC - publication pending
- Hopeful for a definition for neonates and children 2017-2018 at the earliest

LABID EVENT UPDATE

LabID Event Reporting

- **LabID Event reporting by CMS CCN**

  Inpatient Rehab facilities (IRFs) with unique CCN (different from the acute care facility) are excluded from acute care counts

- **CRE reporting expanded:**

  includes CRE-*E.coli*, CRE-*K. pneumoniae & oxytoca* , CRE-*Enterobacter spp.* (new)

LabID Event Reporting, Continued

- To be compliant with CMS IQR requirements, report non-duplicate specimens from:

1. **FacWideIN** (all LabID events occurring in all inpatient locations) PLUS
2. **Emergency departments** PLUS
3. **24-hour Observation locations**
   - Includes MRSA + blood & *C. difficile* + specimens
   - Includes specimens from admitted and non-admitted pts
   - No Change: Specimens collected from offsite affiliated outpatient locations are included only if collected on the same calendar day as inpatient admission

What's Coming in 2016- *Proposed*

Changes to LabID Event form:

- Question: Has patient been discharged from your facility in past 3 months ? 3 months will change to 4 weeks to offer better alignment with CO-HCFA categorization
- 2 Optional questions move to Required status
  - Last physical overnight location of patient immediately prior to arrival into facility (specific to outpatient and CO events)
  - Has the patient been discharged from another facility in past 4 weeks

For CRE reporting, additional questions added in relation to CRE laboratory test methods.

Minor wording changes made to improve clarification and adherence to reporting rules.

HEALTHCARE PERSONNEL FLU VACCINATION/ LONG-TERM CARE FACILITIES / DIALYSIS EVENTS / BIOVIGILANCE

Healthcare Personnel Influenza Vaccination Reporting: Updates for 2015-2016

- **New facilities required to report starting October 1, 2015**
  - Dialysis facilities
  - Inpatient psychiatric facilities (IPFs)
- **Both facility types will report via the Healthcare Personnel Safety (HPS) Component of NHSN**
- **The next NHSN release will include a separate summary data form for data from IPF units within acute care hospitals**
- **CDC will release training materials in Summer 2015**
- **Final summary data for all facilities must be submitted through NHSN by May 15, 2016**
- **REMINDER: ambulatory surgery center data for 2014-2015 season must be entered into NHSN by August 15, 2015**
  - 1099/4403 required ASCs have yet to enroll!!!

NHSN LTCF Component Use

- **Component released in September 2012**
  - Currently 227 facilities enrolled, primarily nursing homes (NH) and skilled nursing facilities (SNF)
- **Enrollment is voluntary, supported by state-led efforts**
  - 36 states have one or more LTCFs enrolled
  - Nevada is first state with mandated NHSN reporting for state licensed long term care facilities
  - Focused on UTI surveillance and Laboratory-identified event reporting for *C. difficile* and MDROs
- **Enhancements made to denominator collection in 2015**
  - New antibiotic starts for UTI indication
  - Number of admissions on treatment for *C. difficile* infection
  - Expanded Annual Facility Survey to capture infection prevention and antibiotic stewardship practices

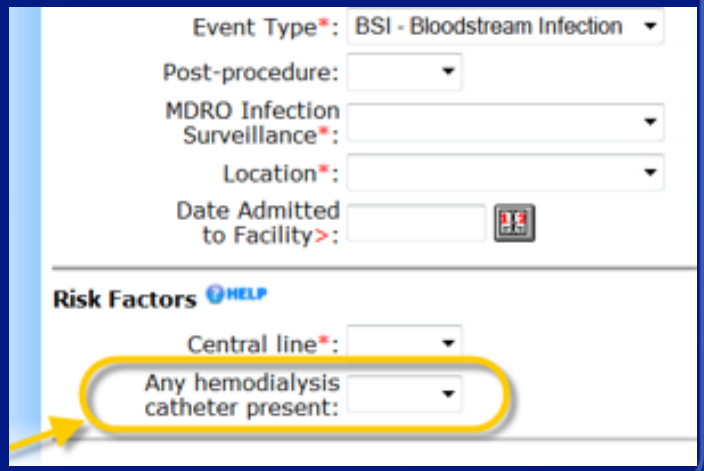
www.cdc.gov/nhsn/ltc

Dialysis Event Surveillance – June 2015

- **Currently, >6,000 dialysis facilities report to NHSN using the Dialysis Event Protocol:**
  - For hemodialysis outpatients, all positive blood cultures from specimens collected as an outpatient (e.g., dialysis facility, E.D.) and on the day of or day following hospitalization are reportable:
  - **Surveillance challenges that IPs can help overcome:**
    - Notifying dialysis facilities that a positive blood culture occurred in their patient.
    - Communicating pathogen and susceptibility data to the dialysis facility.
- **Resources for infection prevention in hemodialysis, including CDC-Recommended Core Interventions:**
  - http://www.cdc.gov/dialysis/prevention-tools/index.html

Assess Potential CLABSI Prevention Needs with the "Any Hemodialysis Catheter Present" Field in NHSN

- **Prompted by IPs who saw high numbers of CLABSIs among their hemodialysis patients, NHSN added an optional field on the NHSN BSI form:**
  - "Any hemodialysis catheter present: Yes/No"
- **This field is designed to help IPs assess potential CLABSI prevention needs; since both hospital staff and specialized dialysis staff care for hospitalized hemodialysis patients, a high proportion of CLABSIs among these patients may signal the need to increase or target CLABSI prevention efforts among dialysis staff.**
- **This field is most beneficial if used consistently.**
- ***CDC wants to know!*** **Have you used this field and found it beneficial? Please email the NHSN Helpdesk (nhsn@cdc.gov) and let us know.**



Biovigilance Component
Hemovigilance Module

- **What is it?**
  - The NHSN Hemovigilance Module is a national surveillance system for transfusion-related adverse reactions and incidents (e.g., process errors).
- **Why is it used?**
  - Estimate burden of transfusion reactions
  - Improve patient safety
  - Minimize morbidity and mortality of transfusion recipients
  - Identify emerging threats to blood safety
  - Provide a systematic method for monitoring transfusion-related outcomes and adverse events
  - Close surveillance gaps with existing reporting systems

What is captured by the Hemovigilance Module?

- **12 transfusion-related adverse reactions:**
  - Transfusion transmitted infection
  - Allergic
  - Febrile non-hemolytic
  - Acute and delayed hemolytic
  - Delayed serologic
  - Hypotension
  - Circulatory overload
  - Acute lung injury
  - Dyspnea
  - Graft-versus-host Disease
  - Post-transfusion purpura
- **Transfusion-related incidents**
  - Error or deviation resulting in an adverse patient outcome

Contact Us!

Email:

nhsn@cdc.gov

Include "Biovigilance Component" in the subject line

Website:

http://www.cdc.gov/nhsn/acute-care-hospital/bio-hemo/

ELECTRONIC REPORTING (CDA)

NHSN CDA

- NHSN accepts CDAs for electronic reporting
- Clinical Document Architecture (CDA) is a Health Level 7 (HL7) standard that provides a framework for the encoding, formatting, and semantics of electronic documents.
- xml format

```
<recordTarget>
    <patientRole>
        <id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="123456"/>
        <id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="2ND ID"/>
        <id root="2.16.840.1.113883.4.1" extension="546465465"/>
        <id root="2.16.840.1.113883.4.338" extension="465465465T"/>
        <patient>
            <name>
                <family>last</family>
                <given>first</given>
                <given>mid</given>
            </name>
            <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1" code="F"/>
            <birthTime value="19951209"/>
```

NHSN CDA – Working with Vendors and IT Staff

- **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

NHSN Data Currently Accepted via CDA

- **Device-Associated Module:**
  - CLABSI event
  - CAUTI event
  - CLIP event
  - DA Module denominator (patient days/device days)
  - Dialysis Event and denominator
- **Procedure-Associated Module:**
  - SSI event
  - Surgical procedure denominator
- **MDRO/CDI Module:**
  - LabID event
  - MDRO/CDI denominator (patient days/admissions)
- **Antimicrobial Use and Resistance Module (CDA only):**
  - Antimicrobial use
  - Antimicrobial resistance

DIRECT CDA Automation

- **DIRECT CDA Automation is an alternative method for electronic reporting to NHSN.**

- Primary requirement - facility already have the capability to send data via CDA
- How - Data is sent securely via a Health Information Service provider (HISP).
- Advantages:
  - User not required to login into each facility
  - User may send data for many facilities at one time
  - Notification sent via email
- ~ 70 facilities from two separate vendors have submitted data into NHSN using this NHSN feature.
- If your facility is sending data via CDA and you are interested in learning more about DIRECT CDA Automation
  - ask your CDA vendor
  - send an email to the NHSN CDA Helpdesk (nhsncda@cdc.gov)

NHSN CDA – Reporting Status

- As of June 8, 2015:
  - ~1622 acute short stay hospitals have imported at least 1 record via CDA
    - 4,828 Enrolled Acute Short Stay facilities → ~ 34% using CDA
  - ~2046 outpatient dialysis facilities have imported at least 1 record via CDA
    - 6,277 enrolled in NHSN → ~ 33% using CDA

Year	2015	2014	2013
Facilities importing CDA	3618	1197	90
Records imported via CDA since its introduction	2.46 million	1.35 million	760,000

ANTIMICROBIAL USE AND RESISTANCE

NHSN Antimicrobial Use (AU) Option

- **Purpose: Provide a mechanism for facilities to report and analyze antimicrobial usage as part of antimicrobial stewardship efforts at their facility**
- **Who can participate:**
  - Facilities that have:
    - Electronic Medication Administration Record (eMAR), or
    - Bar Coding Medication Administration (BCMA) systems

    AND
    - Ability to collect and package data using HL7 standardized format: Clinical Document Architecture
      - Participating 3rd party vendors: http://www.sidp.org/aurvendors
      - "Homegrown" vendors

NHSN Antimicrobial Use (AU) Option Data

- **Monthly aggregate, summary-level data**
  - All inpatient locations individually & combined (FacWideIN)
  - 3 outpatient locations (ED, pediatric ED, 24 hour observation)
- **Numerator: Antimicrobial days (Days of Therapy)**
  - 86 antimicrobials – includes antibacterial, antifungal, and anti-influenza agents
    - Sub-stratified by route of administration:
      - Intravenous (IV)
      - Intramuscular (IM)
      - Digestive (oral)
      - Respiratory (inhaled)
- **Denominators:**
  - Days Present - number of days spent in specific unit or facility
  - Admissions - number of patients admitted to the facility

NHSN AU Option – Current Participation

- **112 facilities have submitted at least 1 month of data**
  - Facility types include general acute care facilities, critical access hospitals, children's hospitals, and an oncology hospital
  - From 29 states: AZ, CA, CO, CT, FL, IA, ID, IL, IN, KS, KY, MA, MI, MN, MO, NC, ND, NE, NM, NY, OH, OK, OR, RI, SD, TN, TX, UT, WI
  - Using 5 vendors and 'homegrown' systems
- **Working with additional groups to continue to grow submission during 2015 and 2016**

*As of June 1, 2015

NHSN Antimicrobial Resistance (AR) Option

- **Purpose:**
  - Facilitate evaluation of antimicrobial resistance data using standardized approach
  - Provide facilities with improved awareness of a variety of AR issues to aid in clinical decision making and prioritize transmission preventions efforts
- **Who can participate?**
  - Facilities that have:
    - Electronic Laboratory Information System (LIS) and
    - Admission Discharge Transfer (ADT) System
    - *Or electronic access to required data elements*

    AND
    - Ability to collect and package data using HL7 standardized format: Clinical Document Architecture

NHSN Antimicrobial Resistance (AR) Option

- **Numerator: Patient-level susceptibility results for 19 specific organisms**
  - DOB, gender, date admitted to facility, location
  - Specimen collection date, specimen source
    - Blood, cerebral spinal fluid (CSF), urine, lower respiratory
  - Organism & antimicrobial susceptibility data for each antimicrobial required for the isolated organism/specimen type
    - Values for E-test, MIC, or Zone
    - Final lab interpretation
      - S, S-DD, I, R, NS, N
- **Denominator: patient days & admissions (facility-wide only)**

CMS FINALIZED AND PROPOSED RULES

Previously Finalized CMS IQR Requirements for Upcoming Reporting to NHSN

- **LTACH (Long-term Acute Care Hospitals)**
  - VAE Events beginning Jan 1, 2016
- **IPF (Inpatient Psychiatric Facilities)**
  - Healthcare Personnel Influenza Vaccination Summary beginning 2015/2016 flu season

Currently Proposed CMS IQR Requirements for Reporting to NHSN

- **IPPS (Acute Care Hospitals)**
  - HVBP:
    - FY2018 – CY14 to CY16
    - FY2019 – CLABSI/CAUTI from medical, surgical, & med/surg wards (CY15 to CY17)
    - FY2019 & FY 2020 – Begin using the 2015 NHSN baseline data for baseline and performance periods
  - HAC:
    - FY2017 – CLABSI/CAUTI/SSI/MRSA/CDI (CYs 14 & 15) = 85% CMS SD 2
    - FY2018 – CLABSI/CAUTI from medical, surgical, & med/surg wards (CYs 15 & 16)
    - FY2018 – Begin using the 2015 NHSN baseline baseline data

Currently Proposed CMS IQR Requirements for Reporting to NHSN

- **PPS-Exempt Cancer Hospitals**
  - MRSA bacteremia and CDI LabID Events FacWide beginning Jan 1, 2016
  - Healthcare Personnel Influenza Vaccination reporting beginning Oct 1, 2016
- **LTACH (Long-term Acute Care Hospitals)**
  - Submission deadlines moving: 4.5 months after the end of reporting quarter

NHSN ANALYSIS UPDATES

New Analysis Features Coming Soon!

- **Updated modifications available for the TAP Report**
  - Facilities and Groups can customize their "target" SIR
- **Inpatient Psychiatric Facility (IPF) analysis report for CMS-required HCP Flu Vaccination *(2015-2016 flu season)***
- **New analysis reports (line lists, rate tables, etc.) for all CRE organisms combined (*E.coli*, *Klebsiella*, and *Enterobacter*)**
- **Additional comparison and calculation available in the Statistics Calculator**
  - Single proportion compared to a chosen benchmark
  - Useful for HCP Flu Vaccination percentages

New Risk Adjustment of the Standardized Infection Ratio

- **We will be using 2015 data as the new baselines for all SIRs**
  - CLABSIs, CAUTIs, SSI, MRSA + CDI LabID
  - Acute care hospitals, LTACs, and IRFs
- **CDC will use a complete year of data for the final risk adjustment**
- **2015 data will be considered complete:**
  - LTACHS: March 1, 2016 (after the Feb 15, 2016 2015Q4 deadline)
  - All other facilities: June 1, 2016 (after the May 15, 2016 2015Q4 deadline)

Moving Forward…

- **Risk adjustment methods and risk models may vary from previous baselines**
  - For device-associated infections, this means that we *may* use different risk adjustment techniques
- **Current Projected Timeline:**
  - Summer 2015: Begin preliminary analyses of reported data
  - Late Summer 2016: Complete risk-adjustment
  - **December 2016/January 2017**: Incorporate new SIRs and risk-adjustment into NHSN application
  - This will require new output options in the NHSN application

Analyses Moving Forward…

- **Current Analyses Planned/Prioritized:**

Event	Acute Care Hospitals	LTACHs	IRFs
CLABSI	Yes	Yes	--
CAUTI	Yes	Yes	Yes
SSI (3 models)	Yes	--	--
MRSA LabID	Yes	Yes	Yes
CDI LabID	Yes	Yes	Yes
In addition: VAE, MBI-LCBIs, Antimicrobial Resistance – HAIs, Antimicrobial Use			

NHSN TRAINING UPDATES

New CMS Quality Reporting Checklist

- **Will be posted this summer on CMS Resources webpage**

Monthly Checklist for Reporting to CMS Hospital IQR

☐ CCN: _____

Month/Year: _____

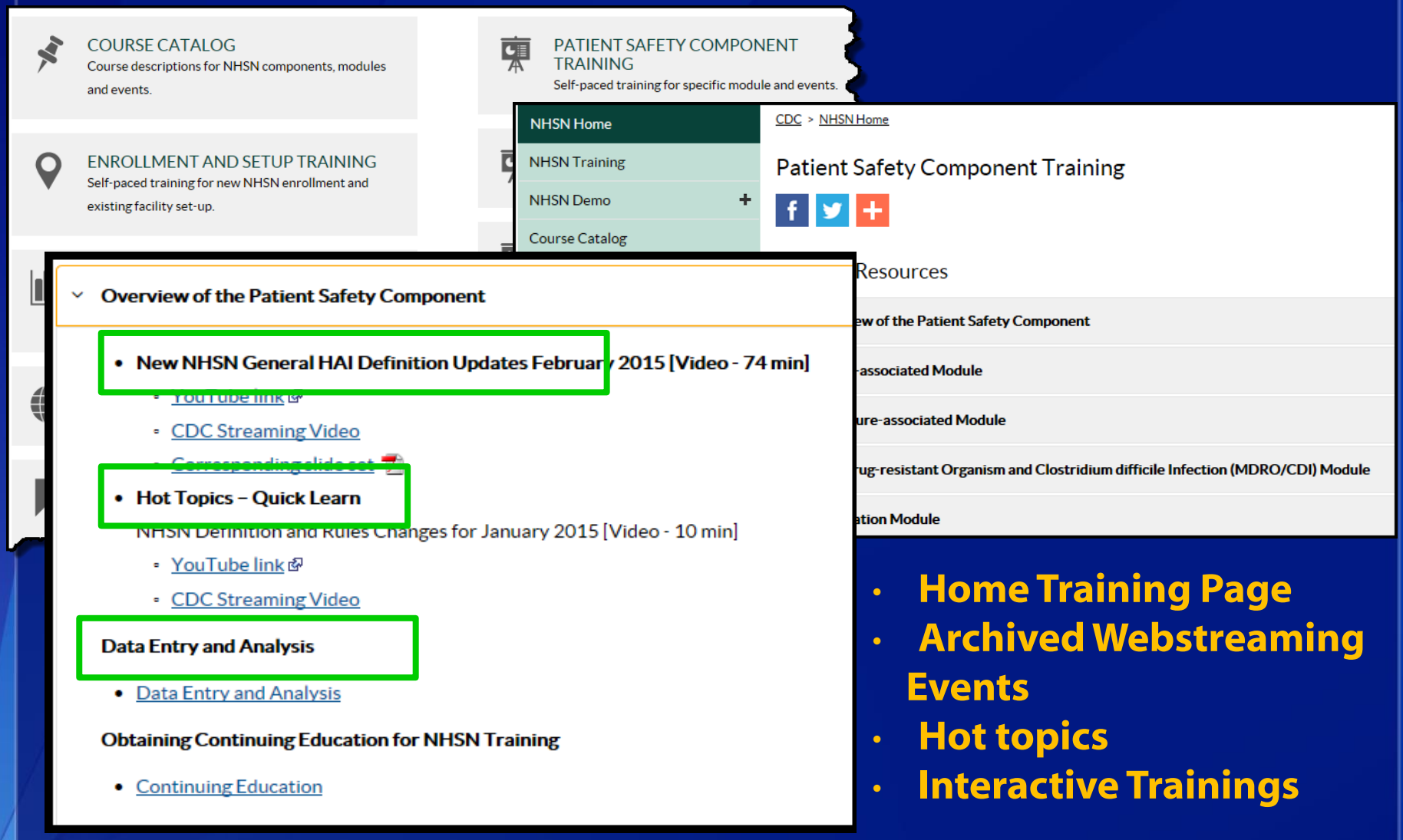
	CAUTI	CLABSI	LabID Event	SSI	HCP Influenza Vaccination (seasonal)
Monthly Plan	☐ ICUs ☐ Wards*	☐ ICUs ☐ Wards*	☐ CDI ☐ MRSA ☐ FACWIDEIN	☐ COLO ☐ HYST	☐
Seasonal Influenza Vaccination Summary Data					☐
Monthly Denominator Data	☐ ICUs ☐ Wards*	☐ ICUs ☐ Wards*	☐ FACWIDEIN	☐ COLO ☐ HYST	

http://www.cdc.gov/nhsn/cms/index.html

ONLINE TRAINING OPPORTUNITIES

- **Hot Topics – Quick Learns**
  - "Quick Cast" – most are 5 – 10 minutes
- **Interactive Trainings - CBTs**
  - 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, PNEU)
- **Archived Webstreaming Trainings - available now**
  - Available for: CLABSI, CAUTI, VAE, LabID Events, SSI, Analysis
- **In-Person Training - coming March 2016**
  - The training course will provide information on CMS reporting, definition and protocol clarification, interactive case studies, analysis, and any updates in reporting for 2016.
  - Webstreaming will be available for those not attending in-person

ONLINE TRAINING



- Home Training Page
- Archived Webstreaming Events
- Hot topics
- Interactive Trainings

www.cdc.gov/nhsn/training

NHSN Continuing Education

Continuing Education

National Healthcare Safety Network provides online access to complete the continuing education (CE) certificate process. This process includes registration for a course on the CDC Training and Continuing Education Online system, completing the course posttest and assessment, and printing of the CE certificate. To receive CE, participants must complete this process online.

Expiration

You must submit your answers online before the stated expiration date to be eligible to receive continuing education credit. Please check each course for expiration dates.

Obtaining Continuing Education for NHSN Training Events

1. Once you completed viewing the courses, go to CDC Training and Continuing Education Online.
   a. If you have not registered as a participant, click on **New Participant** to create a user ID and password; otherwise click on **Participant Login** and login.
   b. If you have registered in this system before, please use the same login name and password. This will ensure an accurate transcript.
2. Once you have logged in, you will be on the Participant Services page. Click on **Search and Register**. Then click on the second option **keyword search** and enter the course number. You can only register and enter one course at a time.
3. Click on the course title (at the bottom of the page). The course information page will come up. Scroll down to **Register Here**. Click on the type of CE that you would like to receive and then **Submit**. Three demographic questions will come up. Complete the questions and then **Submit**.
4. From **Participant Services**, click on **Evaluations and Tests**.
5. Complete the course evaluation and **Submit**. Once you hit submit, it will give you the option of completing the posttest. The posttest for each training course is very brief.
6. Upon achieving a passing posttest score (of 80% or higher), you will be able to immediately print your continuing education certificate from your personal transcript. If you do not post a passing score, you may retake the test.
   - A record of your completion will be located in the transcript and certificate section of your record.
7. If you have any questions or problems contact CDC Training and Continuing Education Online at: 1-800-41TRAIN or 404-639-1292 or ce@cdc.gov.

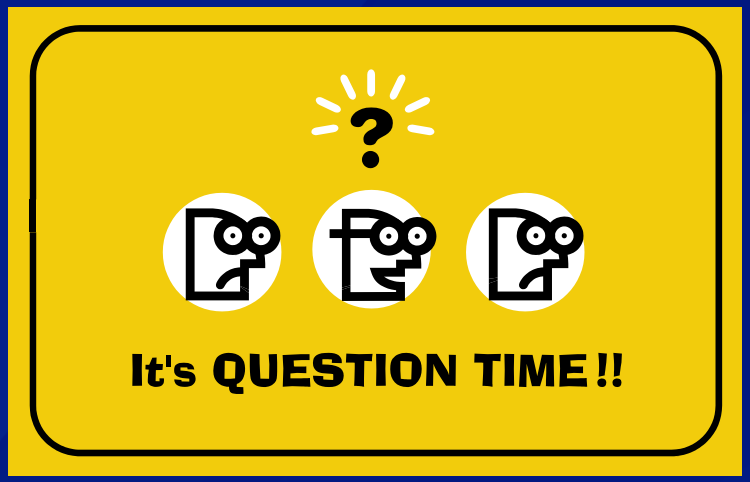
Continuing Education Resources

- **NHSN Webstreaming / Webinar Events**
- **Self-Paced Interactive Training**
- **Continuing Education**
- **Disclaimer and Disclosure**

>30 hours of CEs are online free of charge

CME
CNE
CPH
CEU

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