



APIC - Baltimore 2011 NHSN Members Meeting

June 26, 2011
4:30 - 5:30 PM

Convention Center

SAFER • HEALTHIER • PEOPLE™

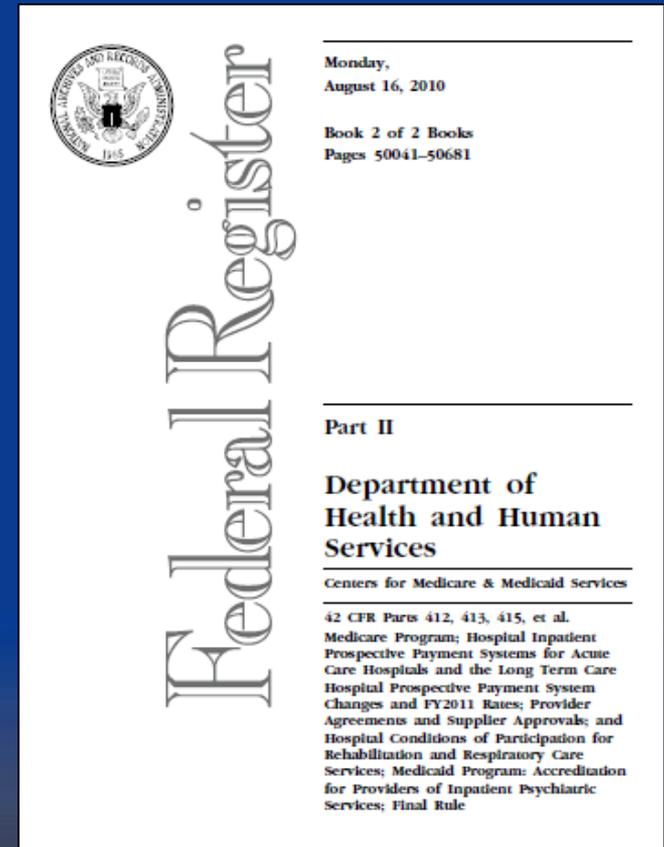


Agenda

- HAI Quality Measure Reporting to CMS
- HICPAC Surveillance Working Group
- Data Validation Activities
- AJIC Case Studies
- LCBI and NEC definition updates
- CDC presentations at this conference
- What's new in the app
- Annual Report; other reports
- Study updates: P-NICER and PAICAP

HAI Quality Measure Reporting to CMS

- 2011 – CLABSI in ICUs
- 2012 – SSI
- Proposed rules call for additional HAI event reporting in 2012 and 2013
- Now: Pay-for-reporting program
- Future: Pay-for-performance program



HAI Quality Measure Reporting to CMS



NHSN **Agreement to Participate and Consent** Page 1 of 3

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 proscribed 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 known 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 prompt 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 >>

- One of NHSN's newly stated purposes is to enable healthcare facilities to report data via NHSN to CMS to comply with quality measurement reporting requirements
- NHSN assurance of confidentiality states: "The voluntarily provided information obtained in this surveillance system . . . will be used only for the purposes stated, and will not otherwise be disclosed or released without the consent of the individual, or the institution . . ."

Operational Details

- Hospital agrees to participate in the Hospital Inpatient Quality Reporting Program (IQR) by signing an Annual Payment Update (APU) pledge form and an NHSN consent agreement
- CMS provides CDC with a list of CMS Certification Numbers (CCNs) for hospitals participating in the IQR Program
- Hospital assures that its CCN is correct in NHSN !!!
- Hospital enters quarterly HAI data into NHSN within 4½ months following the end of the reporting quarter
- CDC securely submits hospital-specific HAI summary statistics to CMS monthly and quarterly
- Hospitals can view their own HAI summary statistics on the secure APU Dashboard website
- CMS uses hospital-specific statistics for payment and for public reporting at the Hospital Compare website



SSI Quality Measure Reporting to CMS in 2012



- American College of Surgeons (ACS) and CDC submitted separate SSI measure proposals to the National Quality Forum (NQF)
- CMS asked instead that a single harmonized SSI measure be developed; it is currently under review at NQF
- This SSI measure proposes reporting of only 2 of the 10 NHSN operative procedure categories that CDC originally submitted to NQF: colon surgery (COLO) and abdominal hysterectomy (HYST)
- The proposed SSI measure is a prototype and will be followed by a more comprehensive measure or set of measures that add operative procedures and expand SSI risk adjustment



SSI Quality Measure Reporting to CMS in 2012

- Must follow NHSN SSI protocol
 - For 2012, will be some changes to which risk factors are required for procedure categories
 - May be changes to some definitions (e.g., SSI criteria, operative procedure, etc)

Denominator for Procedure

* required for saving

Facility ID:	Procedure #:
*Patient ID:	Social Security #:
Secondary ID:	
Patient Name, Last:	First: Middle:
*Gender: F M	*Date of Birth:
Ethnicity (specify):	Race (specify):
Event Type: PROC	*NHSN Procedure Code:
*Date of Procedure:	ICD-9-CM Procedure Code:

Risk Factors

*Outpatient: Yes No Surgeon Code: _____

ASA Score: 1 2 3 4 5 *Duration: ____ hours ____ minutes

*Wound Class: C CC CO D *Diabetes Mellitus: Yes No

*Height: ____ feet ____ inches *Weight: ____ lbs / kgs (circle one)

or ____ meters (choose one)

When NHSN Proc Code is one of those listed below, circle the code and complete additional risk factor(s)	Additional Risk Factors
AAA CHOL HER NEPH REC VHYS	*Endoscope: Yes No *Implant: Yes No
APPY	*Emergency: Yes No *Endoscope: Yes No
BILI OVRY PRST SB THOR XLAP	*Endoscope: Yes No
BRST CEA PVBY VSHN	*Implant: Yes No
CARD LTP	*Emergency: Yes No
CBGB	*Endoscope (for CBGB donor site only): Yes No
COLO LAM	*Endoscope: Yes No *Implant: Yes No *General Anesthesia: Yes No
CRAN	*Trauma: Yes No *Implant: Yes No
CSEC	*Emergency: Yes No *General Anesthesia: Yes No *Duration of Labor: ____ hours
GAST	*Emergency: Yes No *Endoscope: Yes No *Implant: Yes No
HPRO KPRO	*General Anesthesia: Yes No *Trauma: Yes No *Check one: ____ Total ____ Hemi ____ Resurfacing (HPRO only) If Total: ____ Total Primary ____ Total Revision ____ Partial Revision If Hemi: ____ Partial Primary ____ Total Revision ____ Partial Revision If Resurfacing (HPRO only) : ____ Total Primary ____ Total Revision ____ Partial Primary ____ Partial Revision
HYST	*Endoscope: Yes No *General Anesthesia: Yes No

Continued > > >

Denominator for Procedure

* required for saving

<p>When NHSN Proc Code is one of those listed below, circle the code and complete additional risk factor(s)</p>	<p>Additional Risk Factors</p>
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<p>FUSN RFUSN</p>	<p>*Spinal Level: (check one)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Atlas-axis <input type="checkbox"/> Atlas-axis/Cervical <input type="checkbox"/> Cervical <input type="checkbox"/> Cervical/Dorsal/Dorsolumbar <input type="checkbox"/> Dorsal/Dorsolumbar <input type="checkbox"/> Lumbar/Lumbosacral <p>*Implant: Yes No</p>	<p>*Approach/Technique: (check one)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Anterior <input type="checkbox"/> Posterior <input type="checkbox"/> Anterior and Posterior <input type="checkbox"/> Lateral transverse <p>*Trauma: Yes No</p>
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Custom Fields

Label	Label
_____ / / _____	_____ / / _____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Comments



COLO and HYST

- Patient demographics
- Risk factors:
 - Both: ASA, duration, wound class, diabetes, height, weight
 - COLO: Endoscope, implant, general anesthesia
 - HYST: Endoscope, general anesthesia

HAI Quality Measure Reporting to CMS via NHSN: Current and Proposed Requirements

HAI Event	Facility Type	Start Date
CLABSI	Acute Care Hospitals – ICUs	January 2011
SSI	Acute Care Hospitals	January 2012
CLIP	Acute Care Hospitals	January 2012
CAUTI	Acute Care Hospitals	January 2012
CAUTI	Inpatient Rehabilitation Facilities	October 2012
CAUTI	Long Term Acute Care Hospitals	October 2012
CLABSI	Long Term Acute Care Hospitals	October 2012
MRSA Bacteremia	Acute Care Hospitals	January 2013
<i>C. difficile</i> Lab ID Event	Acute Care Hospitals	January 2013
HCW Influenza Vaccination	Acute Care Hospitals	January 2013

**HICPAC Surveillance Working Group
and
Data Validation Activities**



In an Era of Public Reporting through NHSN, Challenges for 2011 and beyond

- ❑ **Minimize variability applied to the surveillance process**
 - **Ensure reliability of case finding** (essential for providing valid comparisons between facilities)

- ❑ **Simplify data collection and reporting**
 - Consider impact to 14,000 users, >4,000 facilities
 - Variability in infrastructure and experience

- ❑ **Validation**

Minimize Variability in Case Finding: Near Term Definition Considerations

- ❑ **Clinical credibility and maximizing reliability of CLABSI reports**
 - Consider modifications in HAI definitions to facilitate improved classification of secondary BSI
 - Consider evidence to treat polymicrobial blood cultures or single positive (one of two sets) culture results differently (i.e., suspect contamination)
- ❑ **Changes in definition of location of attribution**
- ❑ **Improving VAP definition to maximize reliability and interfacility comparisons**
- ❑ **Implementing simplified denominator collection**

New Process Help Address Challenges: HICPAC Surveillance Working Group

- ❑ Inform HICPAC and CDC on potential benefits and consequences of proposed operational changes in NHSN based on scientific evidence, experience**
- ❑ 10 members: hospital epidemiologists, infection preventionists, State HAI program representatives, 2 HICPAC members**
- ❑ Initiated April 2011**
- ❑ Monthly review of data, issues, discussion**
- ❑ Report to**
 - HICPAC meetings, increase transparency in operational changes**
 - NHSN Steering Workgroup**

Validation: State Health Department Partnerships

- ❑ **CDC funded 51 states and territories to develop HAI programs; 32 to support surveillance activity**
- ❑ **12 states have completed or in progress validation efforts**
 - 5 states have completed CLABSI validation studies (CT, MD, NY, SC, TN)
 - 2 states have completed SSI validation studies (NY, SC)
- ❑ **8 more in planning stage**
 - Most will validate CLABSI and/or SSI data
 - PA is also validating CAUTI data

Validation: Federal Partnerships

- **CMS Hospital Inpatient Quality Reporting Program**
 - CDC is advising CMS on validation component to CLABSI for 2012
 - Run in parallel to existing validation of SCIP, Heart Failure, Pneumonia, acute myocardial infarction measures (800 hospitals)
 - Goal to identify non-reported CLABSI (target those likely to be missed)
- **The Joint Commission**
 - Exploring opportunity to utilize NHSN data as part of evaluation, mostly off site; considering on-site activities



NHSN Case Studies



■ AJIC and NHSN collaboration

AJIC special article

Health care-associated infections studies project: Case 2

Marc-Oliver Wright, MT(ASCP), MS, CIC,^a Joan N. Hebdon, RN, MS, CIC,^b Kathy Allen-Bridson, RN, BSN, CIC,^c Gloria C. Morrell, RN, MS, MSN, CIC,^d and Teresa Horan, MPH, Evanston, Illinois; Baltimore, Maryland; and Atlanta, Georgia

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second publication of a joint effort with the American Journal of Infection Control and the Centers for Disease Control and Prevention's

We hope that you will take advantage of this offering and look forward to your active participation. Scenario and questions available at: <http://www.surveymonkey.com>.

Published	Topic	Responses	Status
June, 2010	CLABSI	811	Closed
September, 2010	CLABSI	807	Closed
October, 2010	VAP	525	Closed
February, 2011	CAUTI	623	Closed
June, 2011	SSI	---	Open
TBD	Ped. CLABSI	---	In Process
TBD	Ped. CLABSI	---	In Process



**Proposed
CEU
project**

**Oral Abstract
2011 APIC**



LCBI Definition Update



- Email February 18, 2011
- Effective January 1, 2011
- LCBI Criterion 2 (Common Commensals)
 - Deleted requirement of matching susceptibilities (Notes 4b,c,d and Table 3)
 - NHSN Manual Chapters 4 & 17 updates with V 6.4 release



LCBI Definition Update

- Rationale
 - Cultures are multiclonal
 - Variance in susceptibilities not uncommon
 - Variance in facility testing policies for second and subsequent positive cultures of same organism





NICU Update

- Proposed new definition for necrotizing enterocolitis (NEC)
- Streamline collection of denominator data for central line-associated BSI in NICUs
 - Proposal to combine central line-associated BSI (CLABSI) and umbilical catheter-associated BSI (UCAB)

NHSN Necrotizing Enterocolitis (NEC) Definition (1988)

≥ 2 of the following signs or symptoms:

- vomiting, abdominal distention, or prefeeding residuals AND**

**Persistent microscopic or gross blood in stools
AND**

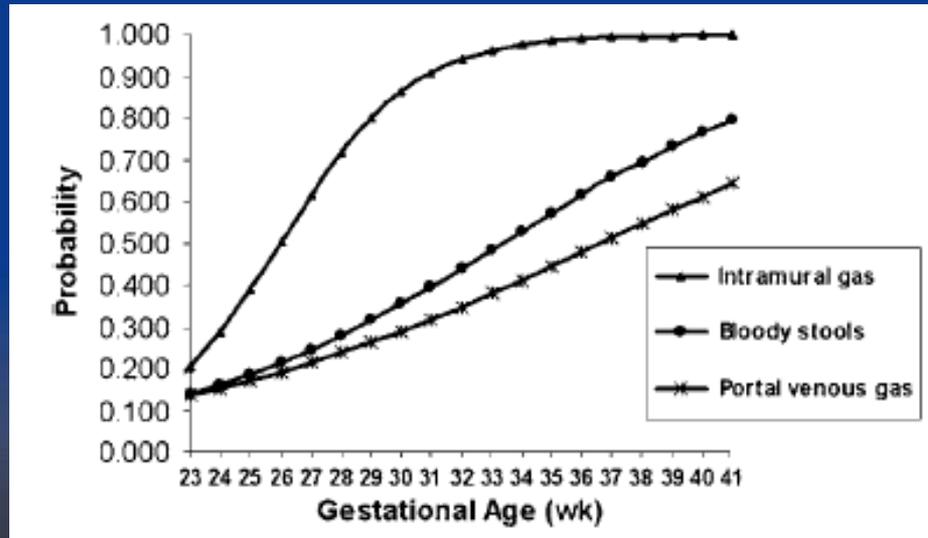
≥ 1 of the following radiographic abnormalities:

- a. pneumoperitoneum**
- b. pneumatosis intestinalis**
- c. unchanging “rigid” loops of small bowel**

Problems Identified with NSHN NEC Definition



- Fecal occult test not routinely done
- Bloody stools are uncommon finding in preterm infants¹



¹Sharma R et al; PIDJ 2002; 21:1099-1105



Proposed NEW NHSN NEC Definition

One or more of the following clinical signs:

- Bilious gastric aspirate
- Bilious emesis
- Abdominal tenderness
- Prominent abdominal distension
- Occult or gross blood in stool (with no rectal fissure)

One or more of the following radiographic findings:

- Pneumatosis intestinalis
- Hepatic portal venous gas (Hepatobiliary gas)
- Pneumoperitoneum



Presentations of Interest at APIC Professional Development Series

- **NHSN Surgical Site Infections- including case studies**

Andrus, Morrell and Horan

- Monday 6/27/11, 3-5:30 PM #1500

- **NHSN Central Line-Associated Bloodstream Infections – including case studies**

Allen-Bridson, Smith and Steed

- Tuesday 6/28/11, 7:30 -10:00 AM #2100



Presentations of interest at APIC



HOT TOPICS

- **Role and successes of Emerging Infections Program Activities**

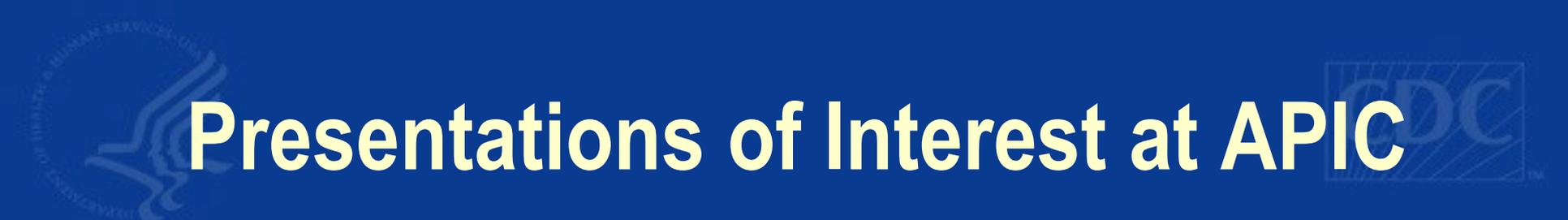
Scott Fridkin MD

- Tuesday, 9-10 AM # 2205

- **Ventilator-Associated Pneumonia: Current Efforts to Clarify and Streamline Surveillance Definitions**

Shelley Magill MD, PhD

- Wednesday, 2-3 PM #NA



Presentations of Interest at APIC

- **CMS Tool for ASC and Model for Infection Control in Ambulatory Care**

Melissa Schaefer MD

- Monday June 27, 3-4 PM #1404

- **Infection Prevention and Control for LTACHs**

Nimale Stone MD

- Tuesday June 28, 9-10 AM #2204

- **CDC Outbreak Session**

Tara MacCannell PhD, MSc

- Tuesday June 28, 10:30-11:30 AM #2300



Upcoming NHSN Training Opportunities at the CDC



❑ December 5, 2011

- 1-day Surgical Site Infection Surveillance
 - Including definitions, entering data, form completion; case studies, hands-on analysis and uses of the data for prevention
 - Limited attendance: 150-250

❑ February 7-10, 2012; October 2-5, 2012

- 3 ½ day NHSN Training Conference
 - Comprehensive look at HAIs especially Big 4
 - Includes hands-on analysis and uses of the data for prevention
 - Limited attendance: 150-250

❑ Registration information will be available on the NHSN Training Website

- Watch for emails



NHSN Major Changes Planned for Release 6.4.2 Late-July 2011

■ Patient Safety:

- Update metrics for MDRO/CDI LabID Event reporting
[Please see June 2011 updated MDRO/CDI Module protocol]
- Analysis Output Option for CMS IPPS CLABSI SIR
- Change name “Common Skin Contaminants” to “Common Commensals”
- Add more stratification features to Bar Charts

NHSN Major Changes Planned for Release 6.5 Mid-October 2011

■ All Components:

- Creation of new component specific to LTC facilities with relevant reporting (LTC Component = UTI HAIs and LabID Events at implementation)
- Create alerts for missing numerators and denominators and ability to report zero events for a month
- Control the execution of dataset generation
- Increase number of available Custom Fields with easier set-up
- Create component specific variable lists
- Allow Groups to send messages to participating facilities from within NHSN
- New status categories for Withdrawn and Inactivated facilities

NHSN Major Changes Planned for Release 6.5 Mid-October 2011

■ Patient Safety:

- Add derived variables to stratify procedure SIRs
- Enable “location” field in Summary record header
- For SSI Event PVBY add event codes for DIS and SIS
- Add FacWideIN and FacWideOUT as a selection option for analysis
- Add locationtype variable to analysis output filtering
- Add Dialysis facility survey data to Confer Rights template

■ Healthcare Personnel Safety:

- Analysis additions for Influenza Summary Method

NHSN Major Changes Planned for Release 6.6 February 2012

■ All Components:

- Add Critical Access Hospital (CAH) facility type as a choice
- Create a screen to search and view valuesets
- Force Facility Administrator to add Primary Contacts as users
- LTAC hospital clean-up and new LTAC facility annual survey
- Create a sortable Output list for Custom Output set in analysis
- Sort list of Custom Output Options by Output name

■ CDA:

- Antimicrobial Resistance (micro lab data) piece of the AUR Module implemented



NHSN Major Changes Planned for Release 6.6 February 2012

■ Patient Safety:

- Simplify required fields for Surgical Procedures (SSI denominators)
- Add “During Readmission to Another Facility” to choices for SSI detected
- Allow up to 3 pathogens for SUTI and ABUTI with a positive blood culture
- Add question to CLIP form for unsuccessful insertion and revise occupation of inserter choices
- Eliminate umbilical catheter days for NICU and count as central line days
- Change to NEC definition
- Allow in-plan UTI reporting from NICUs
- Expand in-plan LabID Event Blood Only reporting to the Outpatient-ED

NHSN Major Changes Planned for Release 6.7-Fall 2012 or 6.8-Feb 2013

■ Patient Safety:

- Update ICD-9 to ICD-10 codes and mapping to NHSN procedure codes
- Map CPT codes to NHSN procedure codes

Planned NHSN Reports at a Glance

Report Details	Annual Report	SSI Report	Antimicrobial Resistance Report	HHS / National SIR Report
Report Interval	Annual	Periodically (as needed)	Bi-Annual	Annual
Next Report	June 2011	Fall 2011	Winter 2011	March 2012
Period Covered	2009	2006-2009	2009-2010	2010
Publish Format	AJIC and Online	Peer-review Journal	ICHE and Online	Online
Data Inclusion	DA – CLABSI, CAUTI, VAP data	PA – SSI data (no rates)	DA – CLABSI, CAUTI, VAP and PA – SSI data	CLABSI and SSI data

Prevention of Nosocomial Infections & Cost-Effectiveness Analysis Refined (P-NICER Study)

Funded by the National Institute of Nursing Research Grant #R01NR010107

Conducted in collaboration by investigators and consultants from Columbia University, RAND, CDC, IHI, Joint Commission, Southwestern Medical Center, Harvard, New York University, University of Iowa, and the University of Illinois in Chicago

Pat Stone, Principal Investigator

Phone : 212 305-1738

Fax : 212 305-6937

E-mail: ps2024@columbia.edu

Monika Pogorzelska, Project Coordinator

Phone: 212 305-3431

Fax : 212 305-6937

E-mail : mp2422@columbia.edu

**Prevention of
Nosocomial
Infections &
Cost
Effectiveness
Refined**

The P-NICER Study





Study Aims

- Aim 1: Use a qualitative approach to describe the phenomena of infection prevention, surveillance and control in hospitals
- Aim 2: Assess the impact of intensity of infection control processes on device-associated and organism specific HAI rates in ICUs across the nation
- Aim 3: Determine the impact of state regulated mandatory reporting on infection control processes and HAI rates

Phase I: (ending in spring of 2011)

- Qualitative in depth interviews in 12 hospitals that participated in the P-NICE study
- Interviews with multiple personnel including IPs, hospital epidemiologists, administrators, nurses and ancillary service personnel

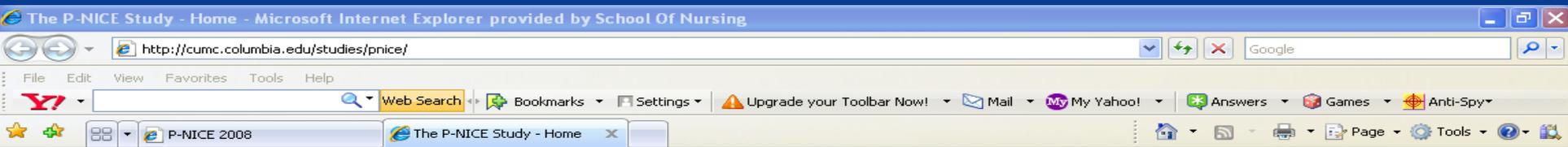
Phase II: National Survey and P-NICER NHSN Group

- Fall 2011
 - Web-based survey of eligible hospital
 - Join the P-NICER NHSN Group
 - \$100 AMEX gift card for each hospital
- NO IRB approval needed to participate

P-NICER Study Website

**Prevention of
Nosocomial
Infections &
Cost
Effectiveness
Refined**

The P-NICER Study



Prevention of Nosocomial Infections & Cost Effectiveness

The P-NICE Study Prevention of Nosocomial Infections & Cost Effectiveness

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The P-NICE Study

"To address the clinical effectiveness and cost-effectiveness of infection control staffing levels and intensity of infection control interventions and to examine the long term outcomes attributable to healthcare associated infections (HAI)"

Funded by the National Institute of Nursing Research (NINR) (R01NR010107)



COLUMBIA UNIVERSITY
School of Nursing



<http://cumc.columbia.edu/studies/pnice/>



COMP & PAICAP

- Grace M. Lee, MD MPH
Harvard Pilgrim Health Care Institute &
Harvard Medical School

Email: grace.lee@childrens.harvard.edu

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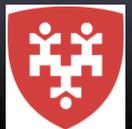


COMP



Consequences Of Medicare Payment Adjustment

- Goal: To evaluate the impact of the CMS non-payment policy on hospital infection prevention efforts through
 - Qualitative interviews with infection preventionists
 - *4 abstracts presented at APIC and Academy Health*
 - *2 manuscripts in press*
 - *2 manuscripts in preparation*
 - National survey of the perceived impact of the CMS policy on hospitals
 - *2 abstracts presented at Academy Health and SHEA*
 - ***APIC Session #3403 Legislation and Public Policies Impacting Infection Prevention Wednesday, Jun 29th, 2-3pm***





PAICAP

Preventing Avoidable Infectious Complications by Addjusting Payment

- Collaboration between Harvard, CDC, CMS, IHI, SHEA and APIC
- Recruiting NHSN hospitals to **evaluate the impact of the CMS policy on HAI rates**
- Please contact us if you're interested:

Website: www.paicap.org

Email: paicap@hphc.org

grace.lee@childrens.harvard.edu

Phone: 1-877-97-PAICAP (1-877-977-2422)





THANK YOU