APIC - Baltimore 2011
NHSN Members Meeting

June 26, 2011
4:30 - 5:30 PM
Convention Center
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
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)
**Facility ID:**

**Procedure #:**

**Secondary ID:**

**First:**

**Middle:**

**Patient Name, Last:**

**Gender:** F M

**Race (specify):**

**Event Type:** PROC

**NHSN Procedure Code:**

**Date of Procedure:**

**ICD-9-CM Procedure Code:**

**Risk Factors**

<table>
<thead>
<tr>
<th>*Outpatient: Yes No</th>
<th>Surgeon Code: ____________________________</th>
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<tbody>
<tr>
<td><strong>ASA Score:</strong> 1 2 3 4 5</td>
<td><strong>Duration:</strong> _____hours _____minutes</td>
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<tr>
<td><strong>Wound Class:</strong> C CC CO D</td>
<td><strong>Diabetes Mellitus:</strong> Yes No</td>
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<tr>
<td><strong>Height:</strong> ____ feet _____inches</td>
<td><strong>Weight:</strong> _____ lbs / kgs (circle one)</td>
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<td>or ____ meters (choose one)</td>
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**When NHSN Proc Code is one of those listed below, circle the code and complete additional risk factor(s)**

<table>
<thead>
<tr>
<th>AAA CHOL HER NEPH REC VHY S</th>
<th>*Endoscope: Yes No</th>
<th>*Implant: Yes No</th>
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<tbody>
<tr>
<td>APPY</td>
<td>*Emergency: Yes No</td>
<td>*Endoscope: Yes No</td>
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<td>BILI OVRY PRST SB THOR XLAP</td>
<td>*Endoscope: Yes No</td>
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<td>BRST CEA PVBY VSHN</td>
<td>*Implant: Yes No</td>
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<tr>
<td>CARD LTP</td>
<td>*Emergency: Yes No</td>
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<tr>
<td>CBGB</td>
<td>*Endoscope (for CBGB donor site only): Yes No</td>
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<tr>
<td>COLO LAM</td>
<td>*Endoscope: Yes No</td>
<td>*Implant: Yes No</td>
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<tr>
<td>CRAN</td>
<td>*Trauma: Yes No</td>
<td>*Implant: Yes No</td>
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<tr>
<td>CSEC</td>
<td>*Emergency: Yes No</td>
<td>*General Anesthesia: Yes No</td>
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<tr>
<td>*Duration of Labor: _____hours</td>
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<tr>
<td>GAST</td>
<td>*Emergency: Yes No</td>
<td>*Endoscope: Yes No</td>
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<td>HPRO KPRO</td>
<td>*General Anesthesia: Yes No</td>
<td>*Trauma: Yes No</td>
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<td>*Check one: ____Total ____Hemi Resurfacing (HPRO only)</td>
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<td>If Total: ____Total Primary ____Total Revision ____Partial Revision</td>
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<td>If Resurfacing (HPRO only): ____Total Primary ____Total Revision</td>
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<td>____Partial Primary ____Partial Revision</td>
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<tr>
<td>HYST</td>
<td>*Endoscope: Yes No</td>
<td>*General Anesthesia: Yes No</td>
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**Assurance of Confidentiality:** The voluntarily provided information obtained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, 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 in accordance with Sections 304, 306 and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).

Public reporting burden of this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC, Reports Clearance Officer, 1600 Clifton Rd., MS D-74, Atlanta, GA 30333, ATTN: PRA (0920-0666).
When NHSN Proc Code is one of those listed below, circle the code and complete additional risk factor(s)

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Additional Risk Factors

*Spinal Level: (check one)

- Atlas-axis
- Atlas-axis/Cervical
- Cervical
- Cervical/Dorsal/Dorsolumbar
- Dorsal/Dorsolumbar
- Lumbar/Lumbosacral

*Implant: Yes No

*Approach/Technique: (check one)

- Anterior
- Posterior
- Anterior and Posterior
- Lateral transverse

*Trauma: Yes No

Custom Fields

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Comments

Denominator for Procedure

* required for saving

OMB No. 0920-0666
Exp. Date: 05-31-2014
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

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

<table>
<thead>
<tr>
<th>Published</th>
<th>Topic</th>
<th>Responses</th>
<th>Status</th>
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<tr>
<td>June, 2010</td>
<td>CLABSI</td>
<td>811</td>
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<tr>
<td>September, 2010</td>
<td>CLABSI</td>
<td>807</td>
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<tr>
<td>October, 2010</td>
<td>VAP</td>
<td>525</td>
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<tr>
<td>February, 2011</td>
<td>CAUTI</td>
<td>623</td>
<td>Closed</td>
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<td>June, 2011</td>
<td>SSI</td>
<td>---</td>
<td>Open</td>
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<tr>
<td>TBD</td>
<td>Ped. CLABSI</td>
<td>---</td>
<td>In Process</td>
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<tr>
<td>TBD</td>
<td>Ped. CLABSI</td>
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<td>In Process</td>
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**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 infants

\(^1\)Sharma R \textit{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 stools (with no rectal fissure)

*One or more of the following radiographic findings:*
- Pneumatosis intestinalis
- Hepatic portal venous gas *(Hepatobiliary gas)*
- Pneumoperitoneum

Thanks to Fernanda Lessa, MD, Centers for Disease Control and Prevention
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
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<tr>
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<td>Annual</td>
<td>Periodically (as needed)</td>
<td>Bi-Annual</td>
<td>Annual</td>
</tr>
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<td>Publish Format</td>
<td>AJIC and Online</td>
<td>Peer-review Journal</td>
<td>ICHE and Online</td>
<td>Online</td>
</tr>
<tr>
<td>Data Inclusion</td>
<td>DA – CLABSI, CAUTI, VAP data</td>
<td>PA – SSI data (no rates)</td>
<td>DA – CLABSI, CAUTI, VAP and PA – SSI data</td>
<td>CLABSI and SSI data</td>
</tr>
</tbody>
</table>
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
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
The P-NICE Study
Prevention of Nosocomial Infections & Cost Effectiveness

"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 (NIH) (R01NR010107)

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

COMP funded by NIAID 1 R21 AI83888-01 (Lee)
PAICAP funded by AHRQ 1 R01 HS018414-01 (Lee)
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 Adjusting 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