

HHS HAI Reporting Systems



Second Plenary

Co-Chairs:

David R. Hunt, MD, FACS

Hui-Hsing Wong, MD, JD

9:00 AM – 10:15 AM





Key Questions Addressed

- 3. With HHS analyzing and reporting HAI data acquired through a variety of programs and systems, each with its own methodology, and because these differences sometimes produce estimates of HAI scope, magnitude, or trends that are incongruent, what are the priorities of stakeholder groups as policies for HAI data reporting are being addressed?**
- 4. What policies and standards are needed to facilitate consistent public reporting of the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) data at the state and federal levels and how should those policies be identified or developed or maintained?**



Overview of Key HHS Data Sources: IMPAQ/RAND Evaluation Results



Daniel Weinberg, Ph.D.

IMPAQ International

Katherine Kahn, M.D.

RAND Corporation

For the IMPAQ/RAND Action Plan Evaluation Team





Background

- Work undertaken as part of the evaluation of the HHS Action Plan to Prevent HAIs
- Two tasks related to HAI data:
 - Inventory of HHS data systems that can be used to track HAIs
 - Presentation in a Baseline Assessment Report of HAI rates derived from HHS data systems
- Focus on the 6 HAIs named in the Action Plan





Relationship of Data Tasks to Action Plan

- Overlaps with Action Plan's surveillance activities
 - Same HAIs
 - Some of the same data sources
 - Baseline information and tracking of progress
- Complements Action Plan's surveillance activities
 - Additional data sources and metrics
 - Additional time periods
 - National, regional, and state levels
 - Juxtaposition of multiple data sources in a single compendium





Inventory of HHS Data Systems

- Identified the various HHS data systems available for HAI surveillance
- Characterized the data systems along several dimensions
- Analyzed the strengths and weaknesses of the data sources
- Researched and proposed HAI surveillance specifications for administrative data
- Recommended data for inclusion in the Baseline Assessment Report



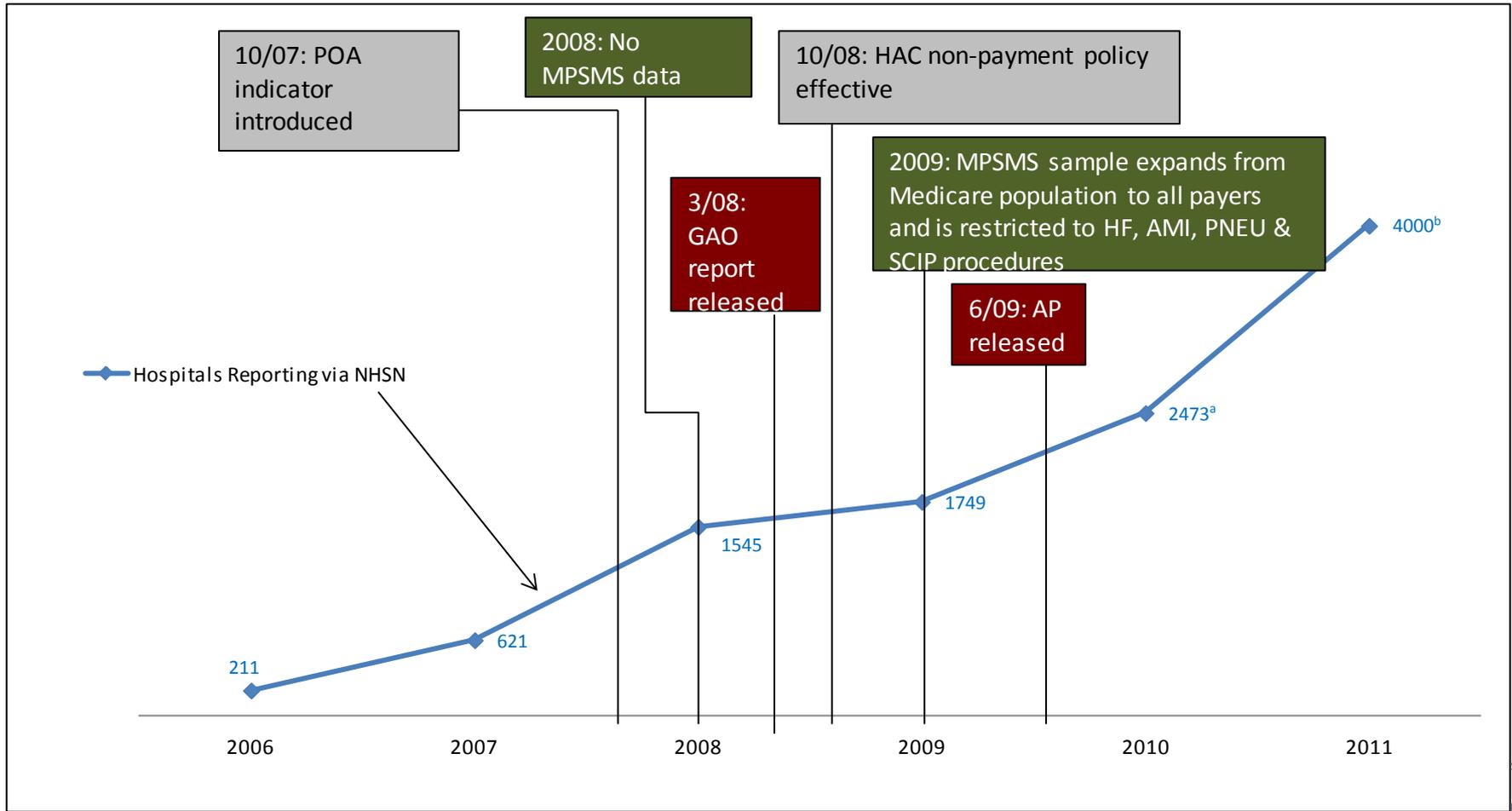


Data Systems Included in the Inventory and Data Report

Data System (HAIs)	Data Characteristics
NHSN (CAUTI, VAP, CLABSI, SSI. Not CDI or MRSA)	Most clinically valid federal data source. Number of hospitals involved: 211 (2006), 621 (2006-07), 1545 (2006-08), 1749 (2009), 2473 (2010), >4000 (at present).
EIP/ABCs (MRSA)	Hospitals and reference laboratories collect MRSA data in 9 surveillance areas (mostly metropolitan), capturing all positive MRSA cultures from within the surveillance areas. Data are publicly available for 2005 through 2009.
MPSMS (CAUTI, VAP, CDI, MRSA, CLABSI)	Rates based on the experiences of a representative sample of Medicare FFS (excluding Medicare Advantage) population (until 2009) or all payers' discharges of four types (beginning 2009). The quality of the data depends on the accuracy with which patient information is documented.
Hospital Compare (SCIP)	Publicly available database providing hospital-level information populated from the Hospital Inpatient Quality Reporting Program (formerly RHQDAPU). Data availability depends on SCIP measures (1 & 3: 2005-09; 2: 2006-09; 4 & 6: 2008-09).
Medicare FFS claims (all 6 HAIs)	Relies on Medicare FFS claims (excludes Medicare Advantage). Differences in how hospital staff assign diagnosis and procedure codes may result in inconsistent HAI reporting. Prior to FY2008, did not include info. on POA. Lack of clinical detail is a drawback.
HCUP (all 6 HAIs)	All payer. Relies on patient discharge data. Differences in how hospital staff assign diagnosis and procedure codes may result in inconsistent HAI reporting. Prior to FY2008, did not include info. on POA. Lack of clinical detail is a drawback.

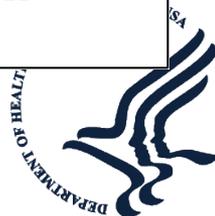


Important Policy Changes & Events



^a Number of hospitals reporting denominator data for DA module (2010 data summary report)

^b Approximate number of hospitals participating in IQR program.





Baseline Assessment

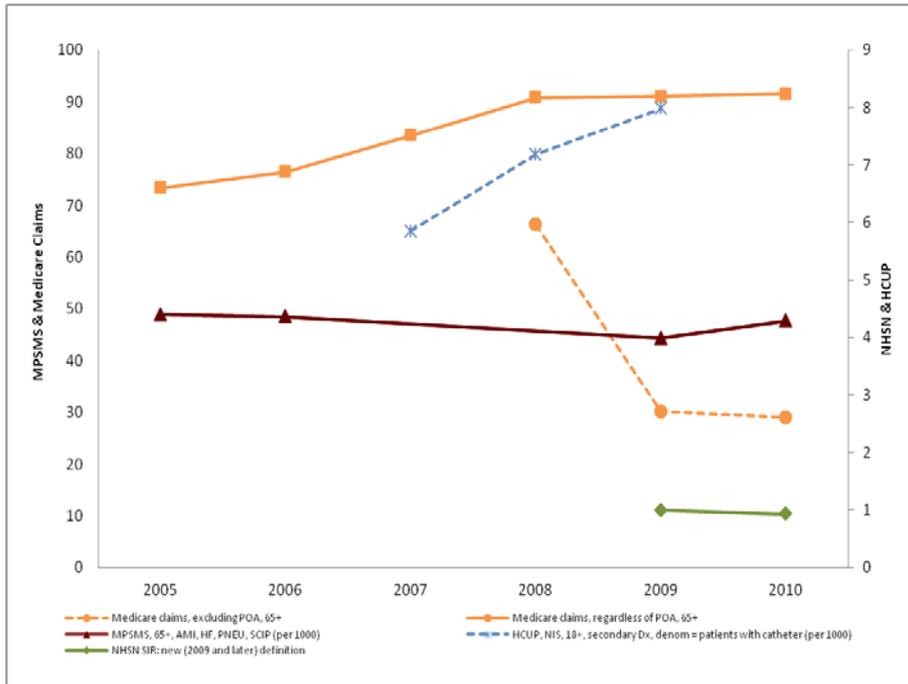
- Gathered HAI rates from several HHS data systems: NHSN, MPSMS, HCUP, Medicare claims, ABCs
- Organized and analyzed the data
- Examined rates across data systems and interpreted results in light of prior work and refined our interpretations through discussions with and presentations to data-holding HHS agencies
- Guiding principle: No single data system provides a comprehensive assessment of HAIs in the U.S.
- Presented findings in a report



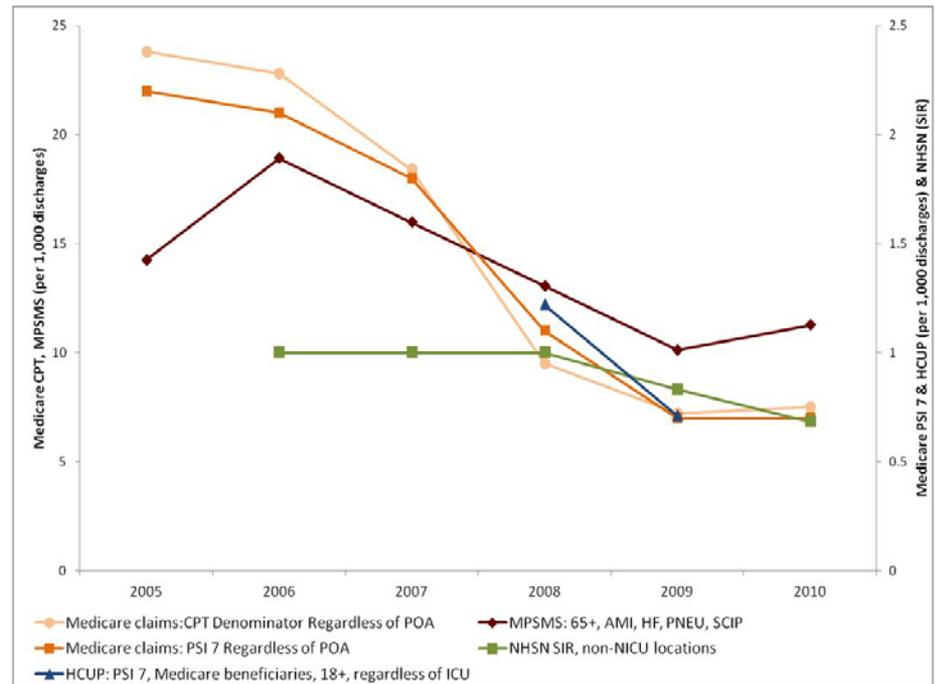


Summary Information for CAUTI and CLABSI

CAUTI



CLABSI



PfP HAC HAI Measurement Strategy



Noel Eldridge, MS

Center for Quality Improvement and Patient
Safety

Agency for Healthcare Research and Quality





Partnership for Patients

- Nationwide campaign in US to reduce harm to patients over three years: 2011-2013
 - Launched April 2011 -- 2010 is “baseline” year
- Goals are to reduce:
 - Preventable hospital-acquired conditions by 40%
 - 44% established as overall preventable fraction of HACs
 - Hospital readmissions by 20%
- 2010 baselines measured by Program
 - 145 measured HACs per 1000 discharges (4.75M total)
 - 14.4% (30-day) readmissions





Two Key Elements of PFP Measurement Strategy

- National measurement strategy
 - Establish baselines and assess yearly progress using existing systems from AHRQ/CMS, CDC, and AHRQ
 - Employ sampling and extrapolation
 - >90% of measured HACs from Medicare Patient Safety Monitoring System (MPSMS - chart review method with 21 defined adverse events) that uses IQR charts (800 hospitals)
- Local measurement strategy
 - Rely on CMS-funded Hospital Engagement Networks (HENs) to select their own systems for quality improvement programs
 - Assess individual HEN performance
 - No new Federal data submission mandates





Nine “Targeted” Hospital Acquired Conditions (HACs)

- Adverse Drug Events (ADE)
- *Catheter-Associated Urinary Tract Infections (CAUTI)*
- *Central Line-Associated Bloodstream Infections (CLABSI)*
- Injuries from Falls and Immobility
- Obstetric Adverse Events
- Pressure Ulcers
- *Surgical Site Infections*
- Venous Thromboembolism (VTE)
- *Ventilator-Associated Pneumonia (VAP)*

These nine total to about 80 percent of measured 2010 HACs





HAC Baseline and Goal (per 1,000 Admissions)

PFP Hospital-Acquired Condition	Measured HACs per 1,000 Admissions
Adverse Drug Events	49
Pressure Ulcers	40
<u>Catheter-Associated Urinary Tract Infections</u>	12
Falls	8
<u>Surgical Site Infections</u>	3
Obstetric Adverse Events	3
<u>Ventilator-Associated Pneumonia</u>	1.2
<u>Central Line-Associated Bloodstream Infections</u>	0.5
Venous Thromboembolism	0.5
All Other HACs	27
Total	145

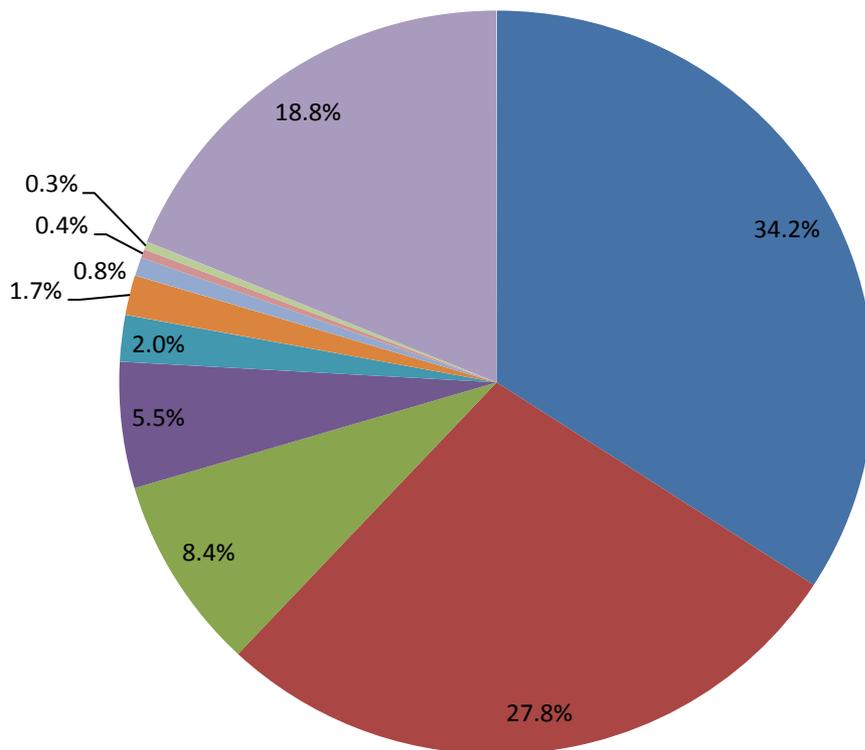
A 40% reduction in preventable HACs would make the total 119 in 2013





PFP-Measured HACs Pie Chart (2010)

**Percent of Total Measured HACs –
PFP 2010 Baseline (4.745M)**



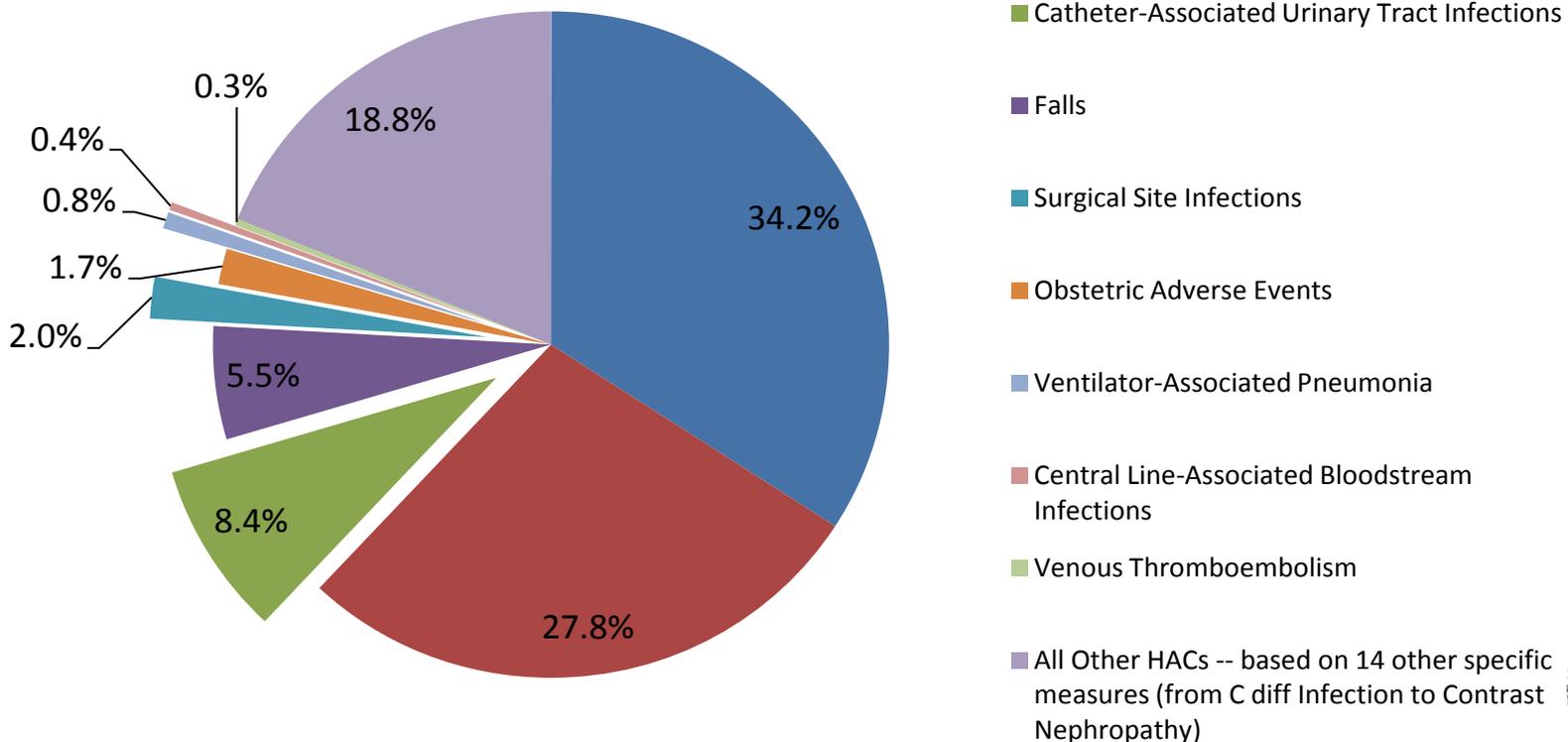
- Adverse Drug Events (57% Hypoglycemic Events & 42% Anticoagulant Drug Events)
- Pressure Ulcers
- Catheter-Associated Urinary Tract Infections
- Falls
- Surgical Site Infections
- Obstetric Adverse Events
- Ventilator-Associated Pneumonia
- Central Line-Associated Bloodstream Infections
- Venous Thromboembolism
- All Other HACs -- based on 14 other specific measures (from C diff Infection to Contrast Nephropathy)





Four “Targeted” HAI HACs Total 11.6 percent of Measured HACs

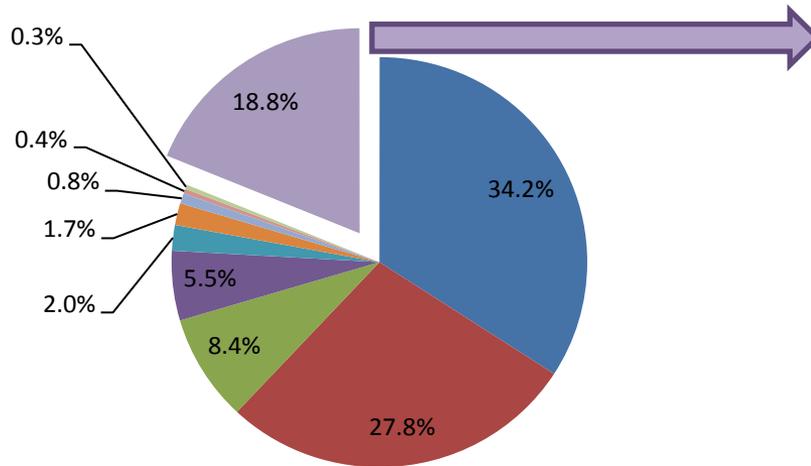
Percent of Total Measured HACs – PFP 2010 Baseline (4.745M)





Four HAIs Measured Among “All-Other” HACs

**Percent of Total Measured HACs
- PFP 2010 Baseline**



- These four HAIs (MRSA, VRE, *C diff*, and Post-op Pneumonia) are 4.5% of the measured HACs.
- The four targeted HAIs (11.6%) combined with these four HAIs total to 16.1% of measured HACs.
- About one-half of the measured HAIs are CAUTIs.

MPSMS	Femoral Artery Puncture for Catheter Angiographic Procedures	76,000
MPSMS	AE associated with Hip Joint Replacements	30,000
MPSMS	AE associated with Knee Joint Replacements	29,000
MPSMS	Contrast Nephropathy Associated with Catheter Angiography	230,000
<u>MPSMS</u>	<u>Hospital-Acquired MRSA</u>	<u>15,000</u>
<u>MPSMS</u>	<u>Hospital-Acquired Vancomycin Resistant Enterococcus (VRE)</u>	<u>13,000</u>
<u>MPSMS</u>	<u>Hospital-Acquired Antibiotic-Associated <i>C diff</i></u>	<u>87,000</u>
MPSMS	Mechanical Complications Associated with Central Venous Catheters	110,000
MPSMS	Postoperative Cardiac Events for Cardiac and Non-cardiac Surgeries	43,000
<u>MPSMS</u>	<u>Postoperative Pneumonia</u>	<u>97,000</u>
PSI	Iatrogenic Pneumothorax (PSI 6)	13,000
PSI	Post-op Hemorrhage or Hematoma (PSI 9)	21,000
PSI	Post-op Respiratory Failure (PSI 11)	50,000
PSI	Accidental Puncture or Laceration (PSI 15)	77,000
<u>MPSMS & PSI</u>	<u>Total All Other HACs (sum of 14 above)</u>	<u>894,000</u>





Eight HAIs Included in PFP Measures

PFP HAI	Pre-launch Estimate	2010 Measured Baseline	2013 Goal (-17.6%*)	Comment on Measure
<u>CLABSI</u>	40,000	18,000	14,800	1.1% of pts w/new CL(s)**
<u>CAUTI</u>	530,000	400,000	330,000	Physician diagnosed & Rx
<u>SSI (NHSN***)</u>	110,000	96,000	79,100	SCIP (12) + 5 operations
<u>VAP</u>	40,000	38,000	31,300	Physician diagnosed & Rx
<i>C. difficile</i>	NA	87,000	71,700	Positive assay >2 days
Post-op Pneumonia	NA	97,000	79,900	Physician diagnosed & Rx
MRSA	NA	15,000	12,400	Sterile sites only****
VRE	NA	13,000	10,700	Sterile sites only ****

* At launch, goals varied from minus 7% (SSI) to minus 25% (CLABSI)

** Percent from raw data from 4-condition MPSMS sample

*** Special CDC NHSN-based calculation for PFP use

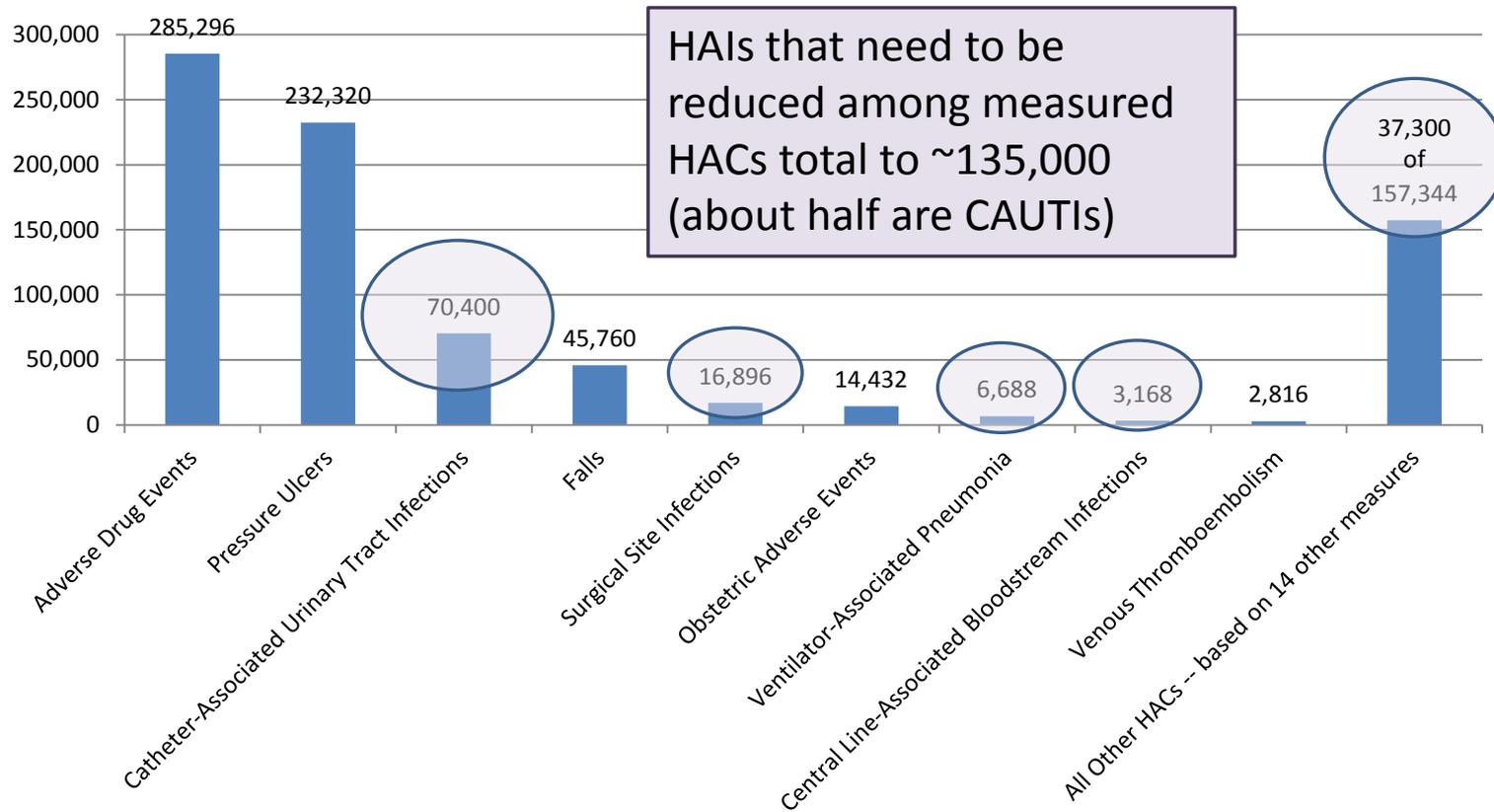
**** Including all apparently new cases identified would increase total 4 to 8-fold





Counting the “40% of Preventable (44% of) HACs” -- Nationwide Goals for 2013

Measured Events to Prevent in 2013 Compared to 2010





Take-Home Points

- Partnership for Patients Program has “targeted” 4 HAIs among 9 HACs for focused work to reduce their occurrences
- PFP is measuring 8 HAIs in the national measurement (4 targeted HAIs and 4 others)
 - in 2010 HAIs are about one-sixth of total measured HACs
 - overall goal is to get from 145 to 119 measured HACs per 1,000 admissions – 2010 to 2013
- PFP HENs and affiliated hospitals are measuring HACs (including HAIs) their own ways

(Time for discussions in acute-care breakout session this afternoon)

Or email: noel.eldridge@ahrq.hhs.gov, phone: 301-427-1156



Provider Perspective: Resource requirements for surveillance HAIs and other patient safety metrics

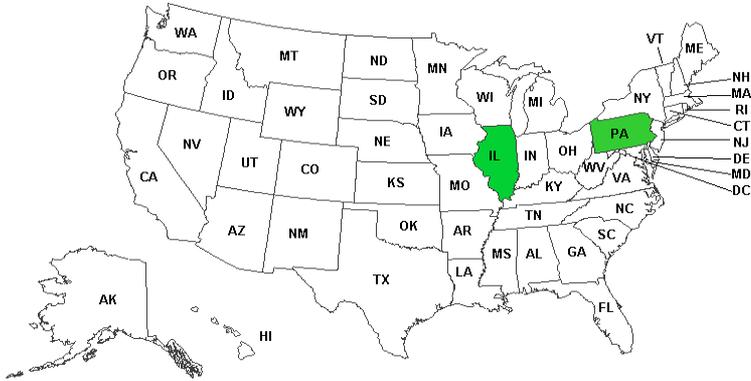
Russell N. Olmsted, MPH, CIC

Director, Infection Prev. & Control Services

Saint Joseph Mercy Health System, Ann Arbor, MI

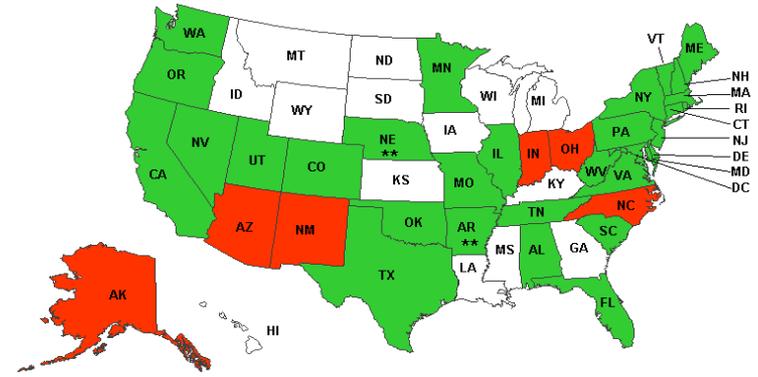


2003



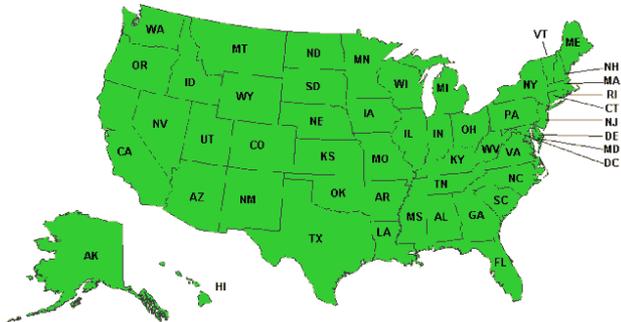
- States with study laws
- Mandates public reporting of infection rates
- * Mandates reporting only to state government
- ** Voluntary

2010



- States with study laws
- Mandates public reporting of infection rates
- ** Voluntary

2011



Power of the Consumer: Growth in State-based Legislation on HAI Reporting Mandates

Reporting of CLABSI in ICUs, 2011; Colon surg + Abd. Hyst, & CAUTIs 2012





On the Horizon: Inpatient Quality Reporting

HAI Event	Facility Type	Reporting Start Date
MRSA Bacteremia Lab ID*	Acute Care Hospitals – facility wide	January 2013
<i>C. difficile</i> LabID Event	Acute Care Hospitals – facility wide	January 2013
HCW Influenza Vaccination <i>(aggregate data will be allowed; updates to NHSN HCP module underway)</i>	Acute Care Hospitals	January – March 2013
* Lab ID = reports positive cultures detected \geq day 3 of hospitalization		





TOPIC	METRIC & TARGET	Progress Report
Central line-assoc. bloodstream infection (CLABSI)	CLABSI Std Infection Ratio (SIR); 50% drop	18% drop in 2009 <u>32% drop in 2010!</u>
CLABSI Inert. Bundle	Proportion of insertions using bundle; 100% adherence	Sample of Hospitals = 92% - on target, 2009
<i>C. difficile</i> Infection (CDI)	Rate/1000 discharges; 30% reduction	8.9 in 2009; 9.4 in 2010 – not likely to meet target
Catheter-assoc. UTI (CAUTI)	CAUTI rate ; 25% reduction	Estimate in '08 = 5% reduction 3-10 % reduction, 2010
MRSA	Rate invasive MRSA/100k pop.; 50% reduction	22.72 in 2009 = 13.4% drop compared to '07-'08 18% reduction, HA-MRSA, 2010
SSI	SIR; 25% reduction	5% reduction SSIs, 2009 8% reduction, 2010
SSI	Proportion SCIP measures; 95% adherence	≥ 92% in 2009 – on target



At-A-Glance: Patient Safety Care Improvement Projects; SJMH, 2012

Society of Thoracic Surgeons database	MI Surg. Quality Collaborative	Tumor Registry
National CV Registry: endarterectomy	Peripheral Vascular Initiative	BCBSM Vascular Interventions Consortium
BCBSM Cardiology Interventions	Pneumonia Collaborative Series Initiative	Leapfrog
Implantable defibrillator Registry	SCCM Project Impact	MHA Hosp Engagement Network [HEN]
MHA Keystone Surgery	Vermont Oxford Network: neonates	ACS Care Registry
MHA Keystone ICU: CLABSI, VAP*	MI Care Improvement Registry	Mi Dept of Comm Health SHARP Proj.
MHA HAI: CAUTI, Hand Hygiene	Payer-Specific Patient Registry	Trinity Health Patient Care Improvement Projects
MI Breast Oncology Initiative	CDC NHSN: SSI, CLABSI, VAP, CAUTI, MRSA, C. difficile infection	Core Measures: incl. SCIP,
Trauma Foundation Registry	Patient Satisfaction: HCAHPS	Jt. Commission Disease-Specific cert.
ACS NSQIP	NDNQI	Culture of Safety Training & Surveys
Medication Safety: pain mgmt, anti-coag., reconciliation, glycemic control, sedation safety	Others: patient falls & pressure ulcers, use of VTE prophylaxis	Readmissions and transitions of care: between units and physician handoffs

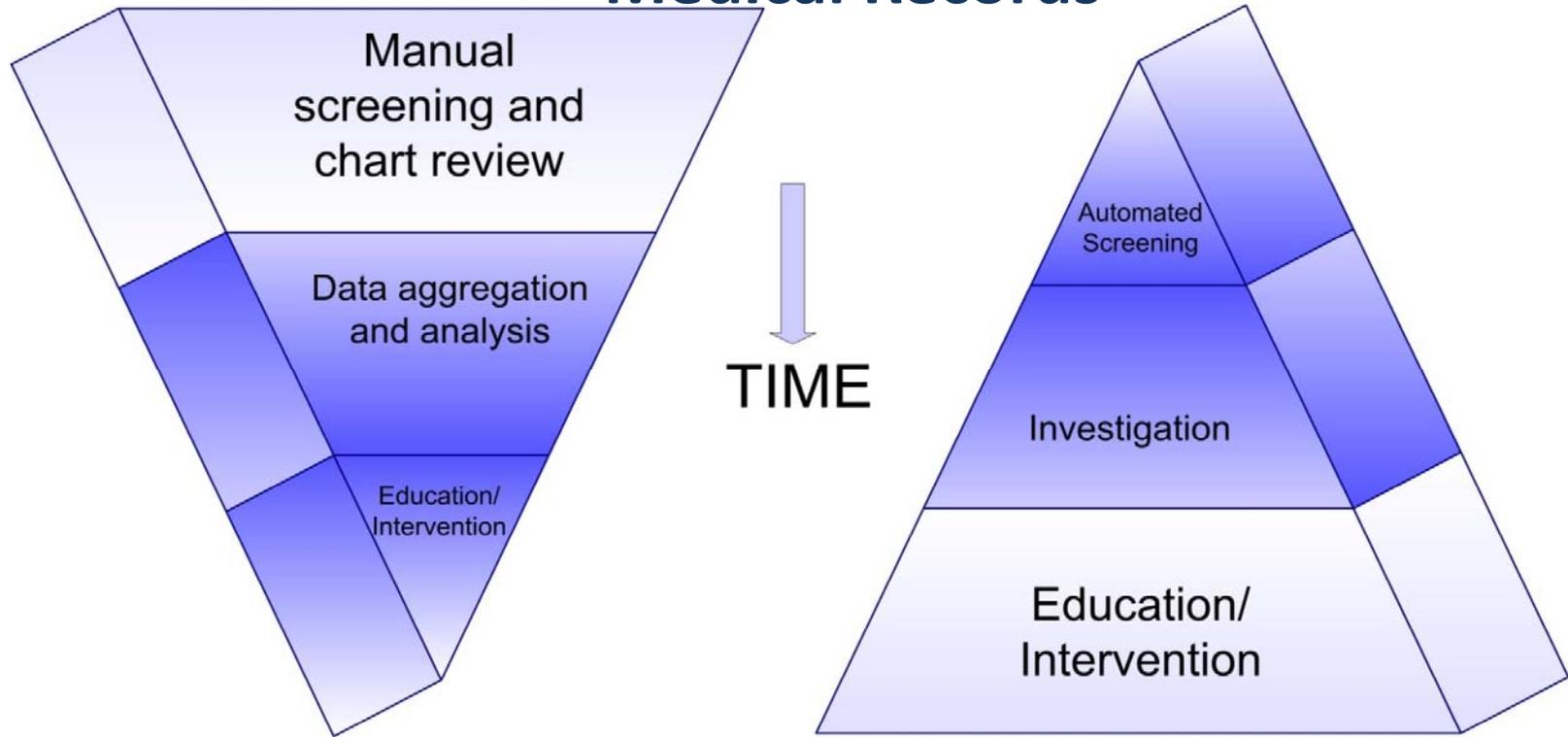
Are we at a Tipping Point in PI Collaboratives R/T Capacity?

* Collaboratives or benchmarking projects that include HAI data





Meaningful Use: The *Promise* of Functional Electronic Medical Records



Traditional

Automated

Atreja A, et al. AJIC 2008





Health Informatics Systems @ SJMH, Ann Arbor

- 537-bed community teaching hospital; member of Trinity Health (one of the largest Catholic health systems in the U.S.)
- Electronic medical record {Cerner}
 - Powerchart (main EMR platform)
 - FirstNet (emergency department)
 - Inet/Iview (pulls in data from devices such as vent., monitors)
 - PharmNet (medications); PathNet (LIS)
 - RadNet (Imaging – incl. archive/retrieval system)
 - SurgiNet (surgery services)
 - Supply chain (Lawson)
 - Scheduling System





Examples of Provider Support Tools in EMR Systems

Discern: Open Chart - AAAMEDAPTUS, NANCY

Foley Removal

Detail: AAAMEDAPTUS, NANCY has a **Foley Catheter** that was inserted on **October 13, 2011 19:47:45 EDT**

Action Required: Physician order needed to continue or discontinue

Continue takes you past the alert to the chart

Orders | Medication List | Document In Plan

View

- Orders for Signature
 - Plans
 - Document In Plan
 - IPOC
 - IPOC Adult Core
 - Deficient Knowledge (Planned Pending)
 - At Risk for Infection (Planned Pending)
 - Difficulty Coping R/T Hospital Stay (Planned Pending)
 - Pain (Planned Pending)
 - Deep Vein Thrombosis - At Risk (Planned Pending)
 - Fall Prevention (Planned Pending)
 - Pressure Ulcer - Risk of (Planned Pending)

Interventions	
<input checked="" type="checkbox"/>	Hourly Rounding
<input checked="" type="checkbox"/>	Maximize Mobility
<input checked="" type="checkbox"/>	Appropriate Lighting
<input checked="" type="checkbox"/>	Room Free of Clutter and Trip Hazards
<input checked="" type="checkbox"/>	Clothing and Accessories
<input checked="" type="checkbox"/>	Assisted Transfer
<input checked="" type="checkbox"/>	Call Light Within Easy Reach
<input checked="" type="checkbox"/>	Standardized Patient/Family Education Material and Signage
<input checked="" type="checkbox"/>	Bed Locked and in Low Position
<input type="checkbox"/>	Hearing Aid/Glasses, if Necessary

- ❑ For Contact Precautions and Contact Precaution-C there is a drop down box for selecting the organism and an order for the Patient Education / Teaching.

CONTACT PRECAUTIONS	
***To use this order, patient must have a positive culture or suspected infection needing Contact Precaution**	
CRITERIA FOR USE OF CONTACT PRECAUTIONS: include but not limited to: Respiratory syncytial virus (RSV), Extended spectrum beta lactamase (ESBL) producing gram negative bacteria; MRSA - ICU only: uncontained cannot be covered.	
Contact Precautions Orders Procedures:	
<input checked="" type="checkbox"/> Isolation-Contact Precautions (Contact Precautions)	▼ Select Organism
<input checked="" type="checkbox"/> Communication Order Patient Care	Contact Precautions nursing
<input checked="" type="checkbox"/> Patient Education/Teaching (Educate Patient)	Provide patient/family with M



The Resource Intensity of HAI Surveillance

- IPs surveyed from 222/224 acute care hospitals, NY
- Scope of responsibility for “average IP” 1.0 FTE:
 - 151 pt. Beds
 - 1.3 ICUs
 - 21 LTCF beds
 - 0.6 Dialysis ctrs
 - 0.5 ASC
 - 4.8 Amb. Care
 - 1.3 PCP offices

Table 4. Percent ICP work time dedicated to specific activities/responsibilities, New York State acute care hospitals (n = 221*), 2007

Activity/ responsibility	Mean, %	Minimum, %	Maximum, %	Number (%) reporting no responsibility
Infection surveillance	45.1	10	100	0
Staff education	12.5	0	35	7 (3.2%)
Quality assurance	9.2	0	50	21 (9.5%)
Employee health/ occupational	8.5	0	75	24 (10.9%)
Emergency/ bioterrorism	8.5	0	50	19 (8.6%)
Construction/ renovation	5.0	0	25	25 (11.3%)
Central supply/ general processing	3.6	0	37	46 (20.8%)
Risk management	3.2	0	50	72 (32.6%)





HAI Data: The Infection Preventionist's Lament!

The Good News:

Everybody wants HAI data

The Bad News:

Everybody wants HAI data





Gap Analysis: Current Capacity of EMR vs Ideal

- Weak Signal:Noise ratio
 - Lots of unfulfilled potential to tap EMR for HAI surveillance
 - Need studies on algorithmic detection of HAIs
 - Low proportion of enterprise-wide EHR currently in place
- Critical need: engage EMR vendors - infrastructure to facilitate HAI surveillance, e.g. device denominators, mapping surgical procedures to ICD codes, enterprise-wide data warehouse
 - Opportunities with meaningful use initiative?
- Advanced analytical tools, e.g. data mining, are helpful but are they cost effective?
- **The Holy Grail:** real time clinical decision support (CDS)
 - Antimicrobial stewardship
 - More precise application of HAI prev. strategies at adm.
 - Immunization against vaccine prev. diseases



State Perspective of Different HAI Reporting Systems



Stephen M. Ostroff, MD

Director, Bureau of Epidemiology

PA Department of Health





*“Confidence is a very
fragile thing.”*

Joe Montana





Why do we measure HAIs?

- Public Health
 - measure progress or lack thereof
 - target resources to maximize prevention opportunities
- Public
 - to make informed healthcare decisions





HHS Action Plan

- Set core Phase 1 conditions
- Defined metric for each condition
- Specified data source for each condition
- HHS has not waived from these metrics over the 5-year plan
- Priorities and metrics for other segments of healthcare system





Concerns

- Attempts to produce & present measures using alternative data sources
 - CLABSIs through HCUP data
 - CDI through NHSN
- National measures vs. state measures vs. facility-specific measures
- Data reliability for measuring trends





Concerns

- National measures vs. state measures vs. facility-specific measures
 - State-specific CLABSI/CAUTI/SSI through NHSN
 - State-specific CDI through HCUP
 - Hospital Compare data by CMS





Concerns

- Data reliability for measuring trends
 - Audits
 - Rapid expansion of NHSN
 - Quarterly outputs in Hospital Compare





Concerns

- Incompatibility of measures between federal and state systems





Example

- Hospital Compare
 - CLABSI in ICUs
 - Standardized Infection Ratios
 - Compared to 2006-2008 baseline
 - Quarterly data (Jan-Mar 2011)
- NY State Department of Health
 - Reports rates/1000 central line days
 - Each ICU individually
 - Annual data (2010)





Result

Facility	Hospital Compare	NYSDOH ICU A	NYSDOH ICU B
Hospital A	Better (SIR 0.62)	No different	No different
Hospital B	Better (SIR 0.72)	No different	No different
Hospital C	Worse (SIR 2.22)	Worse	Better





Example

- Virginia
 - CLABSI adult ICUs
 - Reported quarterly (Jan-Mar 2011)
 - Rates (per 1000 CLD)

Facility	Hospital Compare	Virginia
Hospital A	Better	Worse
Hospital B	Worse	Worse
Hospital C	No infections	No infections





Example

- Pennsylvania
 - Housewide
 - Standardized Infection Ratio
 - Annual (2010)

Facility	Hospital Compare	Interpretation	PA 2010 Report	Interpretation
Hospital A	0.59	Better	0.2	Better
Hospital B	0.27	Better	1.7	Worse
Hospital C	0.74	Better	1.4	No different





Example

- Tennessee
 - All ICUs
 - Standardized Infection Ratios
 - Annual

Facility	Hospital Compare	Interpretation	Tennessee 2010	Interpretation
Hospital A	Too few to measure	x	5.5	Worse
Hospital B	0.53	Better	0.1	Better
Hospital C	0.53	Better	1.3	Same





Hospital Compare

- Likely same experience will occur with
 - CAUTI
 - SSIs
- State-specific data
 - State reports of CDI
 - States using completely different methods than AHRQ for measure





CDC State Specific reports

- Measures of state performance using SIR
- CLABSI, CAUTI, SSIs
- Compared to 2006-2008 baseline
- High variability due to
 - Mandates vs non-mandates
 - Variable hospital participation by state
- This problem should improve with higher participation due to CMS IPPS
- Variable approaches to validation will continue to produce limitations





Conclusions

- Early in evolution of HAI monitoring and reporting, variable approaches not so bad
- Limits ability to meaningfully monitor trends by public health, use data by consumers
- Important need to define outputs at each level of system (national, state, local)
- Need to standardize inputs and outputs to make maximal use of information



CDC National Healthcare Safety Network



Dawn M. Sievert, PhD, MS

Epidemiologist

Lead, NHSN Protocol and Public Reporting Team

Surveillance Branch

Division of Healthcare Quality Promotion, NCEZID,
CDC





CDC National Healthcare Safety Network

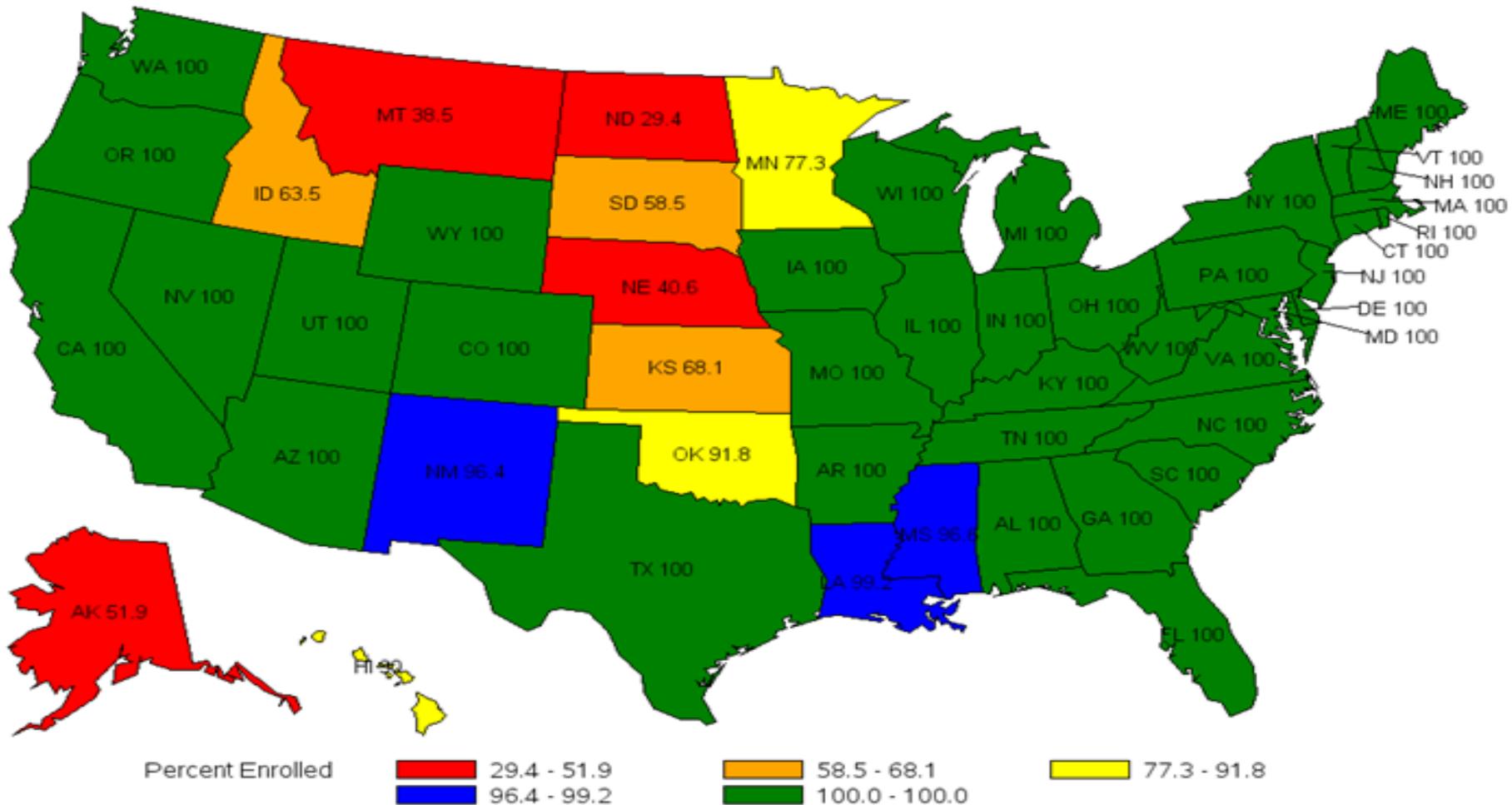
- Open to all types of US healthcare facilities
- Allows for timely data collection and sharing
- Maintains security, integrity, and confidentiality
- Uses specifically defined criteria and definitions
- Establishes guidance to eliminate subjectivity
- Implements internal business rules and edit checks to maintain accuracy of data





Extent of Current NHSN Use

Percent of AHA Facilities Enrolled in NHSN by State





Variation in NHSN Reporting

- CMS and State requirements differ by:
 - Facility type
 - HAI type
 - Location type





Standardized Infection Ratio (SIR)

- Summary measure used to track HAIs at a national, state, or local level over time
- Adjusts for several risk factors within a facility found to be significantly associated with differences in infection incidence

Org ID=10018

Org ID	Location	Summary Yr/Half	Months	infcount	Number Expected	Central Line Days	SIR	SIR p-value	95% Confidence Interval
10018	22ICU	2009H1	6	40	7.293	2210	5.49	0.0000	3.918, 7.469
10018	22ICU	2009H2	6	1	9.217	2793	0.11	0.0010	0.006, 0.515
10018	71ICU	2009H1	6	10	2.013	1438	4.97	0.0000	2.695, 8.426
10018	71ICU	2009H2	6	6	2.016	1440	2.98	0.0171	1.296, 5.874
10018	BMT	2009H1	6	1	5.913	1569	0.17	0.0187	0.009, 0.802
10018	BMT	2009H2	6	0	5.577	1470	0.00	0.0000	0.507, 0.000



Data File Exports from NHSN to CMS

- Files to CMS
 - Data aggregated by participating facility for reporting quarter
 - Currently sending CLABSI, CAUTI, SSI (COLO and HYST)

orgid=10312

orgid	summaryYQ	infCount	numExp	numCLDays	SIR	SIR_pval	SIR95CI
10312	2011Q3	2	0.484	225	.	.	





NATIONAL AND STATE HEALTHCARE-ASSOCIATED INFECTIONS STANDARDIZED INFECTION RATIO REPORT

Using Data Reported to the National Healthcare Safety Network

Table 3a. State-specific Standardized Infection Ratios (SIRs) and facility-specific percentiles, NHSN facilities reporting during 2010:

Central Line-associated Bloodstream Infections (CLABSI), All Locations¹

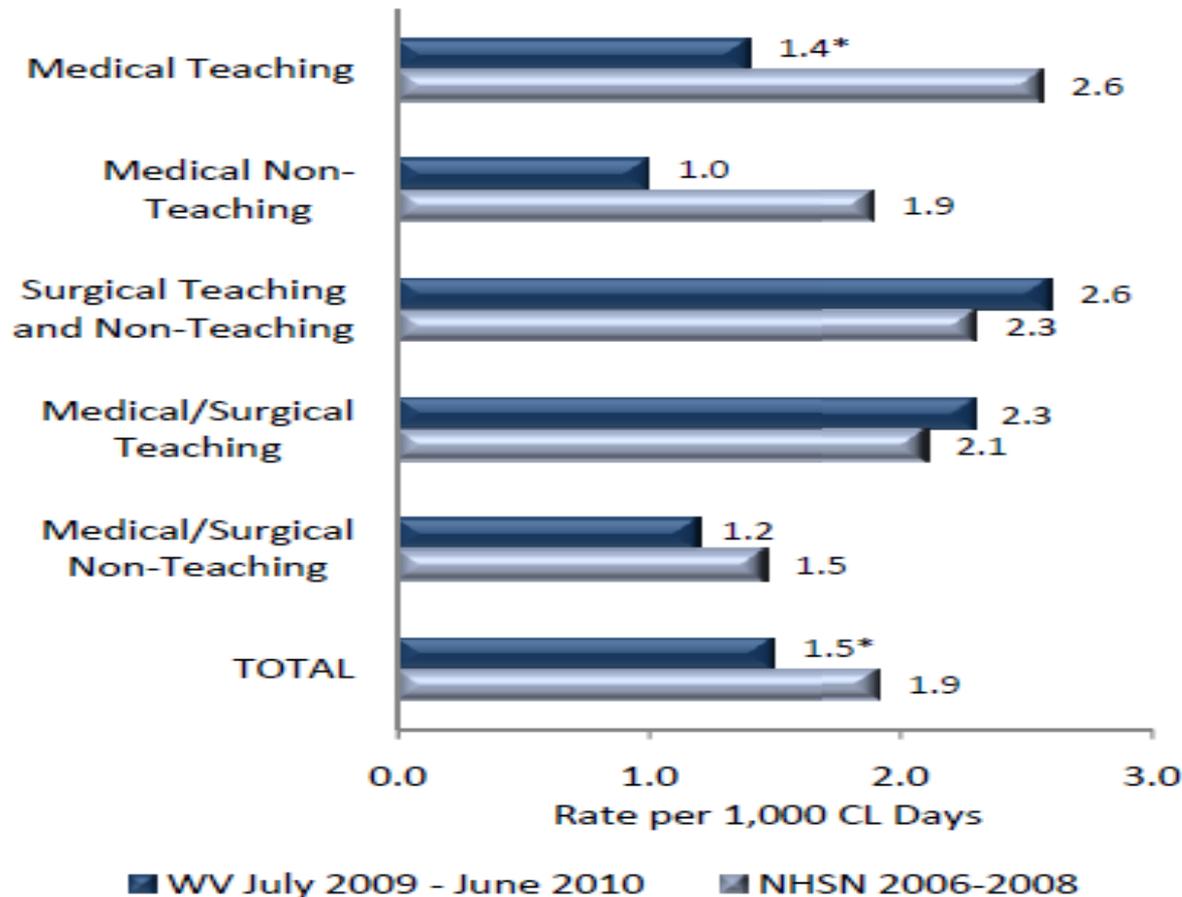
State	No. of Facilities Reporting	No. of Infections		95% CI for SIR			Facility-specific SIRs at Key Percentiles ²				
		Observed	Predicted	SIR	Lower	Upper	10%	25%	Median (50%)	75%	90%
Alabama	69	280	254.957	1.098	0.973	1.235	0.000	0.081	0.754	1.348	2.119
Alaska	1-4	.	.	.	.	.	.	.	.	.	.
Arizona	24	168	195.617	0.859	0.734	0.999	0.267	0.426	0.883	1.471	1.911
Arkansas	22	91	159.006	0.572	0.461	0.703	.	.	.	.	.
California	365	2910	4,516.662	0.644	0.621	0.668	0.000	0.191	0.495	0.809	1.328
Colorado	60	204	308.068	0.662	0.574	0.760	0.000	0.224	0.601	1.047	1.445
Connecticut	30	100	146.003	0.685	0.557	0.833	0.000	0.370	0.619	1.083	1.347



West Virginia—State CLABSI Aggregate Rates by ICU Type

Figure 1

CLABSI Rates by ICU Type, July 2009 – June 2010



* WV rate is significantly lower than the NHSN rate.

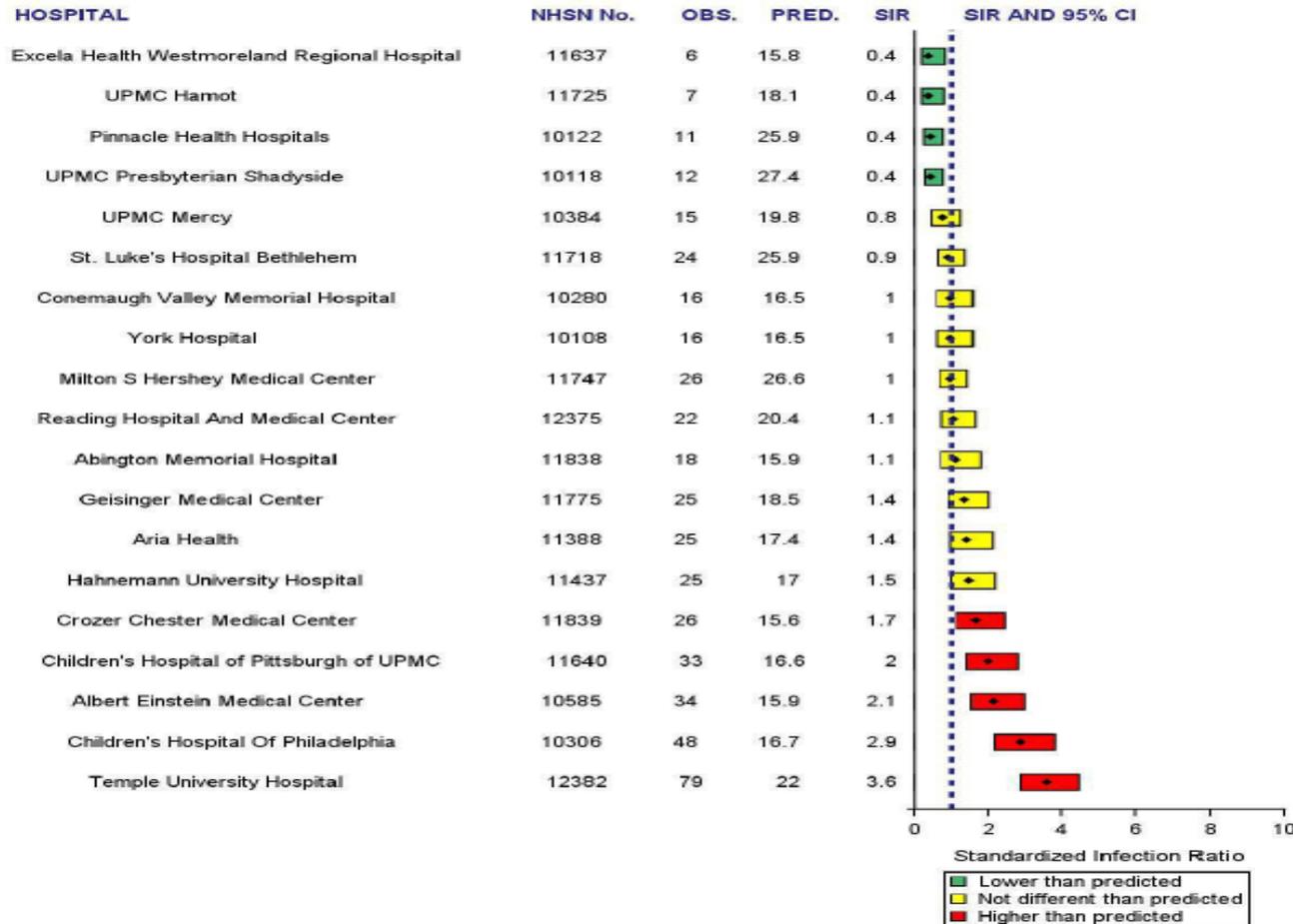




Pennsylvania—CLABSI Adjusted SIRs

Table 16 - Hospitals with 15 - 29.99 Predicted Infections

Ranking of PA Hospitals by Adjusted SIR for CLABSIs - ICU and other Wards
January 1, 2010 to December 31, 2010



Obs. = observed number of CLABSI
 Pred. = statistically 'predicted' number of CLABSI, based on statewide model
 SIR = Standardized Infection Ratio (observed number / statistically 'predicted' number of CLABSI)





ConsumerReports.org®

Hospital name	i Bloodstream infections	i Surgical-site infections
<p>New York Downtown Hospital New York, NY</p>		
<p>Lenox Hill Hospital New York, NY</p>		
<p>Memorial Sloan-Kettering Cancer Center New York, NY</p>		



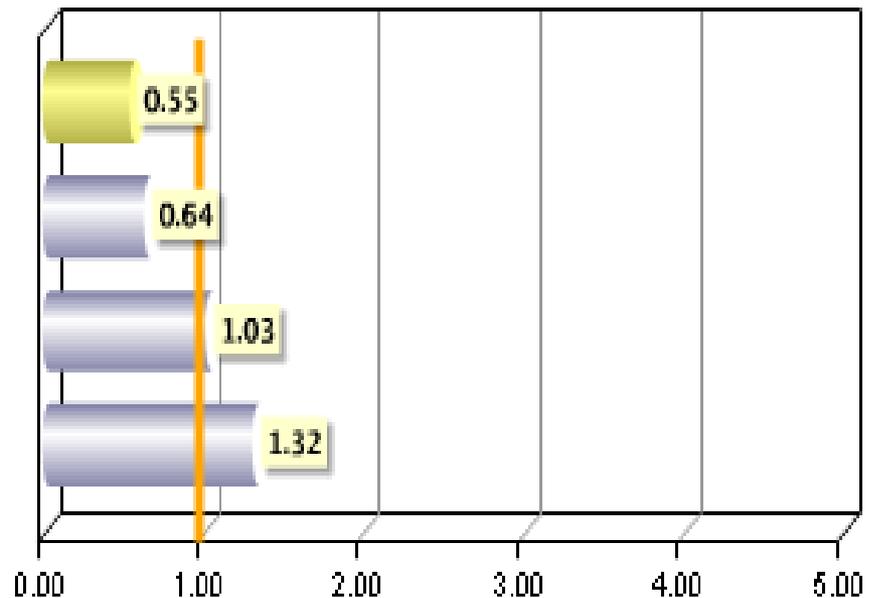
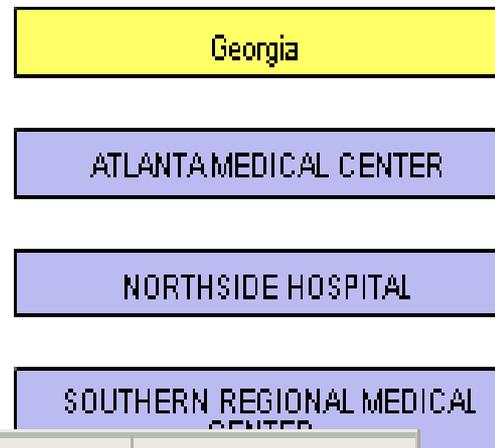
BETTER < < < < > > > > WORSE





Hospital Compare

Central Line Associated Blood Stream Infections (CLABSI)



Standardized Infection Ratio (SIR)
National Benchmark = 1

ATLANTA MEDICAL CENTER ^x	NORTHSIDE HOSPITAL ^x	SOUTHERN REGIONAL MEDICAL CENTER ^x
Better than the U.S. National Benchmark	Worse than the U.S. National Benchmark	Worse than the U.S. National Benchmark



Work in Progress

- Need governance processes in collaboration with:
 - CMS
 - CSTE - HAI Standards Committee
 - Consumers Union
- Goal is to achieve standardized reporting and harmonized presentation of data for public display
- Moving closer to a consistent message but still work ahead and challenges to overcome





Thank you!



Questions & Answers

