



The State of Safety

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June 7, 2011



American Hospital
Association's
PHYSICIAN LEADERSHIP FORUM



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Overview

- Framework for Safety
 - Reduce HACs
 - Reduce Readmissions
 - Reduce Inpatient Mortality
- National Priorities
- Creating a Culture of Safety



AHA Performance Commitments

STRATEGIC PERFORMANCE COMMITMENTS

Through the collective strategies and its association-wide Hospitals in Pursuit of Excellence (HPOE) strategy, AHA will provide advocacy, resources, and research to America's hospitals and health systems to support them in achievement of these commitments:

1. Central Line Associated Bloodstream Infections

Measure: Achieve reductions in central line associated blood stream infections (CLABSI) in America's hospitals with the long term goal of zero, by reducing to less than 1.5 per 1,000 in 2011; less than 1 per 1,000 in 2012; and less than .5 per 1,000 in 2013. (2010 baseline is 2 per 1,000 central line days)

2. Readmissions

Measure: Eliminate the preventable readmissions in America's hospitals as reflected by a reduction of the publicly reported all-cause 30 day readmission rates on CMS Hospital Compare for AMI, Heart Failure and Pneumonia to 21.0% in 2011, to 20.2% in 2012, and to 19.3% in 2013. (2010 baseline is 21.4%)

3. Mortality

Measure: Eliminate preventable mortality in America's hospitals as reflected by a reduction of the publicly reported all-cause 30 day mortality rates on CMS Hospital Compare for AMI, Heart Failure and Pneumonia to 12.1% in 2011, to 11.7% in 2012, and to 11.2% in 2013. (2010 baseline is 12.4%)



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Reduction of HACs



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On the CUSP: Stop BSI

- **Project Overview:**
 - National AHRQ-funded effort: 2009-2012
 - Let by Health Research & Educational Trust
- **Partners:**
 - Johns Hopkins Quality & Safety Research Group
 - Michigan Health & Hosp Assn Keystone Center
 - State Associations—hospitals in 47 states, District of Columbia and Puerto Rico



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On the CUSP: Stop BSI... Why?

CLABSIs result annually in:

- 84,551-203,916 preventable infections
- 10,426-25,145 preventable deaths
- \$1.7-21.4 billion avoidable costs

CUSP

- Safety climate & organizational culture are positively related
- Improved teamwork attitudes in OR – lower post-op infection rates
- Team Training results in 50% reduction in adverse outcomes



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On the CUSP: Stop BSI

Goals:

1. CLABSI rate to < 1 per 1000 central line days
2. To improve unit safety culture

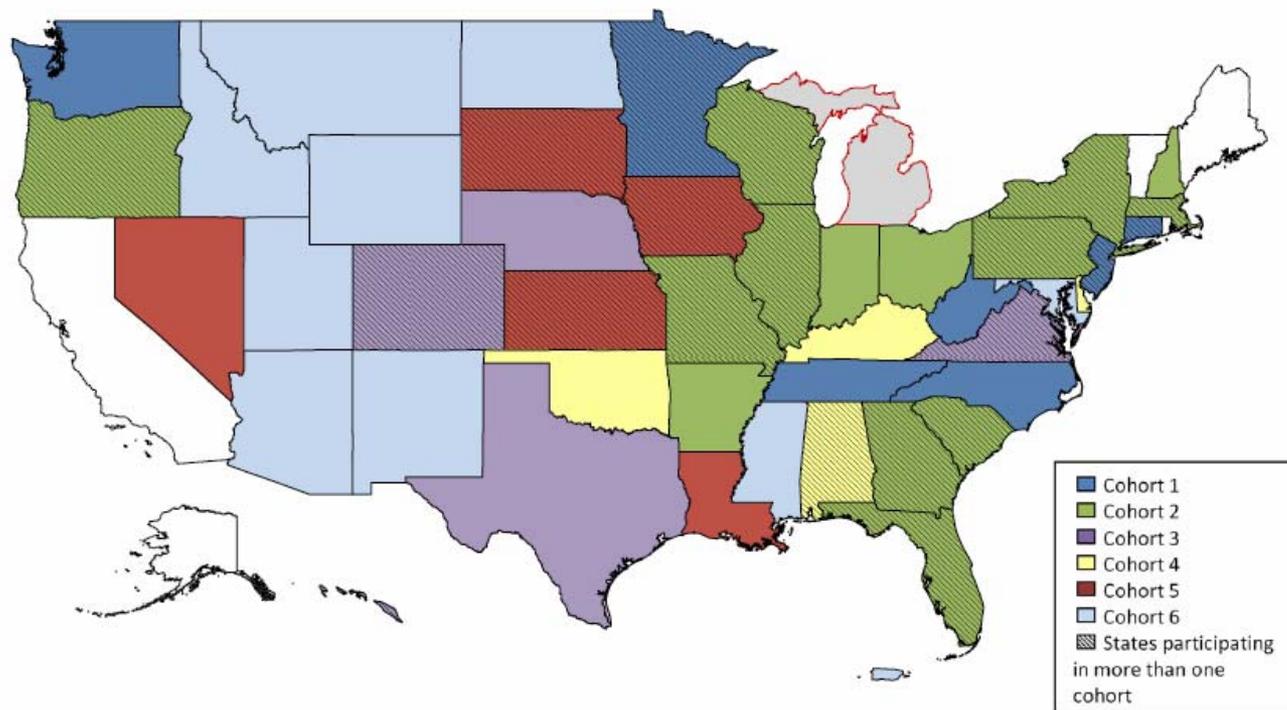
Components

1. Reliably implement CLABSI prevention bundle
2. Implement the Comprehensive Unit Safety Program (CUSP)



On the CUSP: Stop BSI States

State Participation in the On the CUSP: Stop BSI Project



- 1,012 hospitals participating
- 1,711 hospital units participating



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Measure



Have We Created a Safe Culture?
How Do We know We Learn
from Mistakes?

CUSP Comprehensive Unit based Safety program

1. Educate staff on science of safety
2. Identify defects
3. Assign executive to adopt unit
4. Learn from one defect per quarter
5. Implement teamwork tools



How Often Do we Harm?
Are Patient Outcomes
Improving?

(TRiP) Translating Evidence Into Practice

1. Summarize the evidence in a checklist
2. Identify local barriers to implementation
3. Measure performance
4. Ensure all patients get the evidence



IMPROVE

www.safercare.net

CUSP CLABSI Preliminary Results

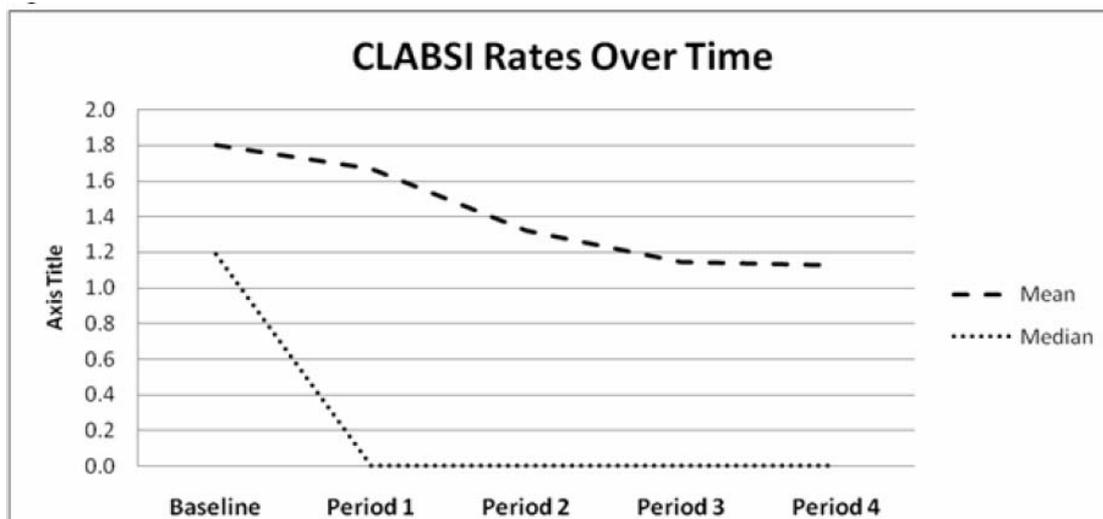
Table 2: Average CLABSI Rates

Cohorts 1 & 2 with units reporting during ANY of the five time periods

Information detailed reflective of data entered as of October 7, 2010.

	Baseline 12 months prior to intervention	Period 1 Months 1-3 post intervention	Period 2 Months 4-6 post intervention	Period 3 Months 7-9 post intervention	Period 4 Months 10-15 post intervention
Number of States	20	20	20	20	20
Number of units reporting	384	436	435	434	402
Average CLABSIs/unit	3.12	0.93	0.72	0.65	0.64
Average CL days/unit	1680	510	508	507	556
Average BSI rate	1.80	1.64	1.31	1.14	1.17
95% confidence interval	(1.53, 2.08)	(1.39, 1.89)	(1.09, 1.53)	(0.94, 1.35)	(0.89, 1.44)
Change from baseline*	NA	-0.19	-0.53	-0.61	-0.59
95% confidence interval		(-0.58, 0.20)	(-0.89,-0.17)	(-0.97,-0.25)	(-1.01,-0.17)

* Based on unpaired comparison of unit rates between time periods



Other HACs

Bundle and Cultural Approach

- CAUTI
- SSIs
- Wrong Side Surgery
- Falls
- Decubiti



Reduction of Readmissions



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Readmissions

Condition at hospital discharge	Readmission rate
---------------------------------	------------------

Heart failure	26.9%
Psychosis	24.6%
Vascular surgery	23.9%
Chronic obstructive pulmonary disease	22.6%
Pneumonia	20.1%
Gastrointestinal problem	19.2%
Nonmajor hip or femur surgery	17.9%
Major bowel surgery	16.6%
Cardiac stent placement	14.5%
Major hip or knee surgery	9.9%



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Source: "Rehospitalizations among patients in the Medicare fee-for-service program,"
The New England Journal of Medicine, April 2, 2009

Case Studies

Piedmont Hospital, Atlanta

- 481-bed, acute-care hospital
- Potential costs of \$1 million to \$30 million a year
- Medicare Readmission rates pre-intervention
 - Under age 70 had a 30-day rate of 13.05%
 - Over 70: rate of 15.9%
- Interventions
 - Improving the medication-reconciliation process
 - Identifying patients at high risk for readmission and ensuring that they get appropriate follow-up care.
 - Preparing patients for what happens after they leave the hospital. Piedmont uses a document that is part of a tool kit offered by the Society of Hospital Medicine's Project Better Outcomes for Older adults through Safe Transitions
- Medicare Readmission rates post-intervention
 - Under 70 had a 30-day rate of 3.97%
 - Over 70: rate of 11.2%



Case Studies

Evergreen Hospital Medical Center, Kirkland, WA

- 275-bed hospital member of the STAAR Initiative for CHF follow-up care to avoid rehospitalization.
- Medicare Readmission rates pre-intervention
 - 30-day readmission rate CHF patients - 14% -- below the national rate of 24.7%
- Interventions
 - Identifying high-risk patients and referring them to a nurse practitioner-staffed outpatient clinic for care within three days of discharge.
 - First visit is 90 minutes long and involves a thorough explanation of the medication and lifestyle changes needed to avoid further heart troubles. Patients are counseled about weighing themselves in the morning, taking their medicines, following a low-sodium diet and watching for potential emergency symptoms.
 - Follow-up visits occur every two weeks until patients are stabilized on medication.
- Medicare Readmission rates post-intervention
 - the rate was 6% for the more than 800 patients referred to the hospital's cardiac clinic in 2009



Case Studies

UCSF Medical Center

- 600-bed academic medical center targeted CHF patients
- Medicare Readmission rates pre-intervention
 - 30-day rate 22%
 - 90 day rate 44%
- Intervention
 - Improving communication among key members of the care team
 - E-mails to keep primary care physicians, case managers, home-care and skilled nursing facility professionals and others up to date on a patient's admission, progress while in the hospital and plan of care upon discharge.
 - Offering intensive bedside counseling totaling about 90 minutes from admission to discharge. National average of eight minutes on discharge education
- Medicare Readmission rates post-intervention
 - 30 day rate 16%
 - 90 day rate 26%.



Key Question

**Will Prevention of HACs
Significantly
Reduce Readmissions?**



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Readmissions

- Synthesizes the underlying strategies from the interventions that have been successful in reducing unplanned readmissions
- Organized by the three stages of the care continuum: during hospitalization, at discharge, and in the period immediately following discharge
- An evaluation of the level of effort required for their implementation



Health Care Leader Action Guide to Reduce Avoidable Readmissions

January 2010



HRET
HEALTH REFORM &
EDUCATIONAL TRUST
ESTABLISHED 2008


hospitals in
pursuit of excellence[™]
Accelerating Performance Improvement

Camden Coalition of Healthcare Providers

- Mission to improve quality, capacity, and accessibility of health care system for vulnerable populations in Camden, NJ
- 3 health systems and the Coalition compiled database to analyze and quantify hospital utilization
- In one year, nearly half of city's residents visited an ED or hospital, a single patient visited ED/hospital a total of 113 times
- Most common diagnoses were colds, viral infections, ear infections, & sore throats
- 80% of costs spent on 13% of patients
- 90% of costs spent on 20% of patients
- Total cost for hospital/ED care in Camden over five years was \$650 million

The Coalition's Care Management Project helps 115 enrolled clients stabilize their social environment and health condition, with a goal of finding a long-term medical home for them using a outreach team consisting of a social worker, a health outreach worker/medical assistant, and a nurse practitioner.

Source: www.camdenhealth.org



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Reduction of Mortality



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Ascension Health

- 69 hospitals in 20 states and DC
- **Goal:** Excellent clinical care with no preventable injuries or deaths
- 8 priorities:
 - Reducing mortality
 - Improving effectiveness of communication
 - preventing adverse drug events
 - avoiding birth trauma
 - reducing incidence of pressure ulcers
 - reducing incidence of falls and fall injuries
 - reducing hospital-acquired infections
 - reducing perioperative complications
- Hospitals served as innovation centers to find best practices to disseminate to the rest of the system



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Source: David Pryor, Ann Hendrich, Robert J. Henkel, James K. Beckmann and Anthony R. Tersigni, The Quality 'Journey' At Ascension Health: How We've Prevented At Least 1,500 Avoidable Deaths A Year --And Aim To Do Even Better, *Health Affairs*, 30, no.4 (2011):604-611

Ascension Health

Key Lessons

- Status quo must be viewed as unacceptable
- Quality must be focus of entire organization
- Integration with governance and operations critical
- Clearly defined, measurable goals essential
- Transparency of results will improve performance
- Caregivers must support and actively participate in designing the improvements
- Sufficient resources must be dedicated to the effort, including staff time and money

Source: David Pryor, Ann Hendrich, Robert J. Henkel, James K. Beckmann and Anthony R. Tersigni, The Quality 'Journey' At Ascension Health: How We've Prevented At Least 1,500 Avoidable Deaths A Year --And Aim To Do Even Better, *Health Affairs*, 30, no.4 (2011):604-611

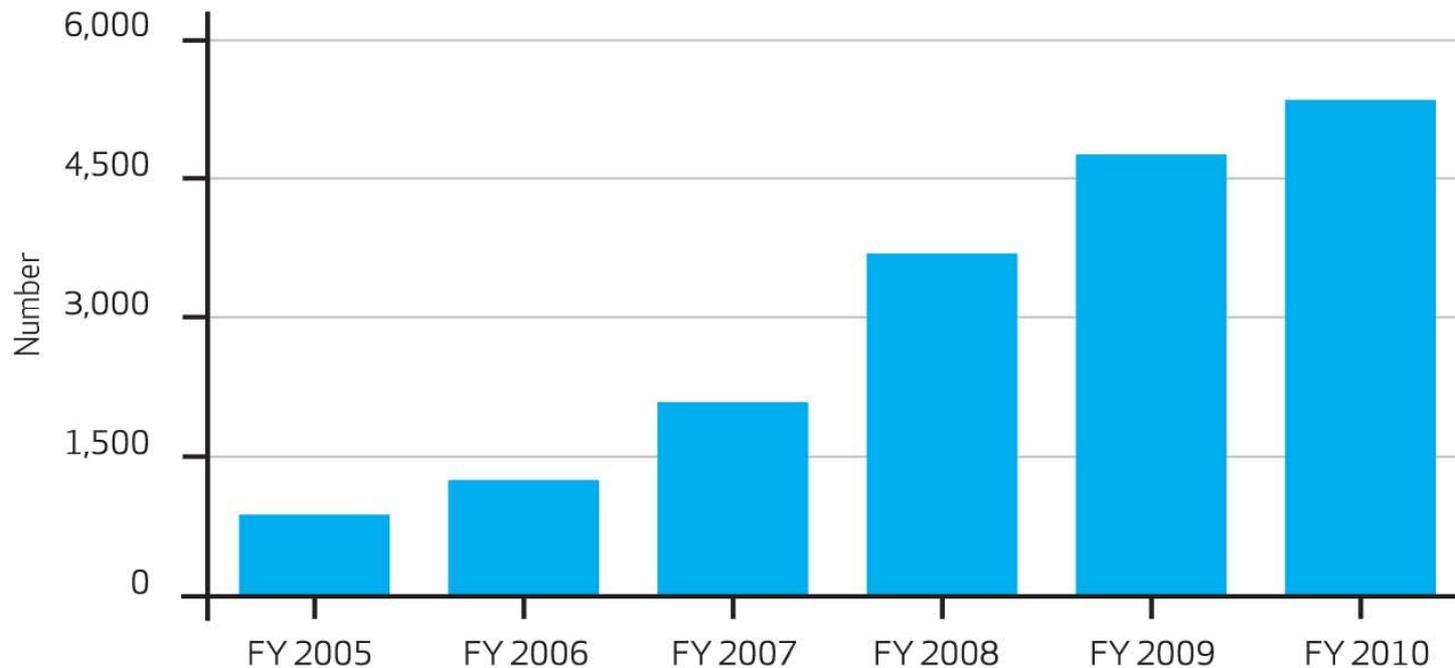


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Ascension Health Lives Saved

EXHIBIT 1

Lives Saved Each Year In Hospitals In The Ascension Health System: Observed-To-Expected Mortality, Fiscal Years 2005-10



SOURCE Authors' analyses. **NOTE** Compared to the baseline year (fiscal year 2004), more than 18,000 lives have been saved.



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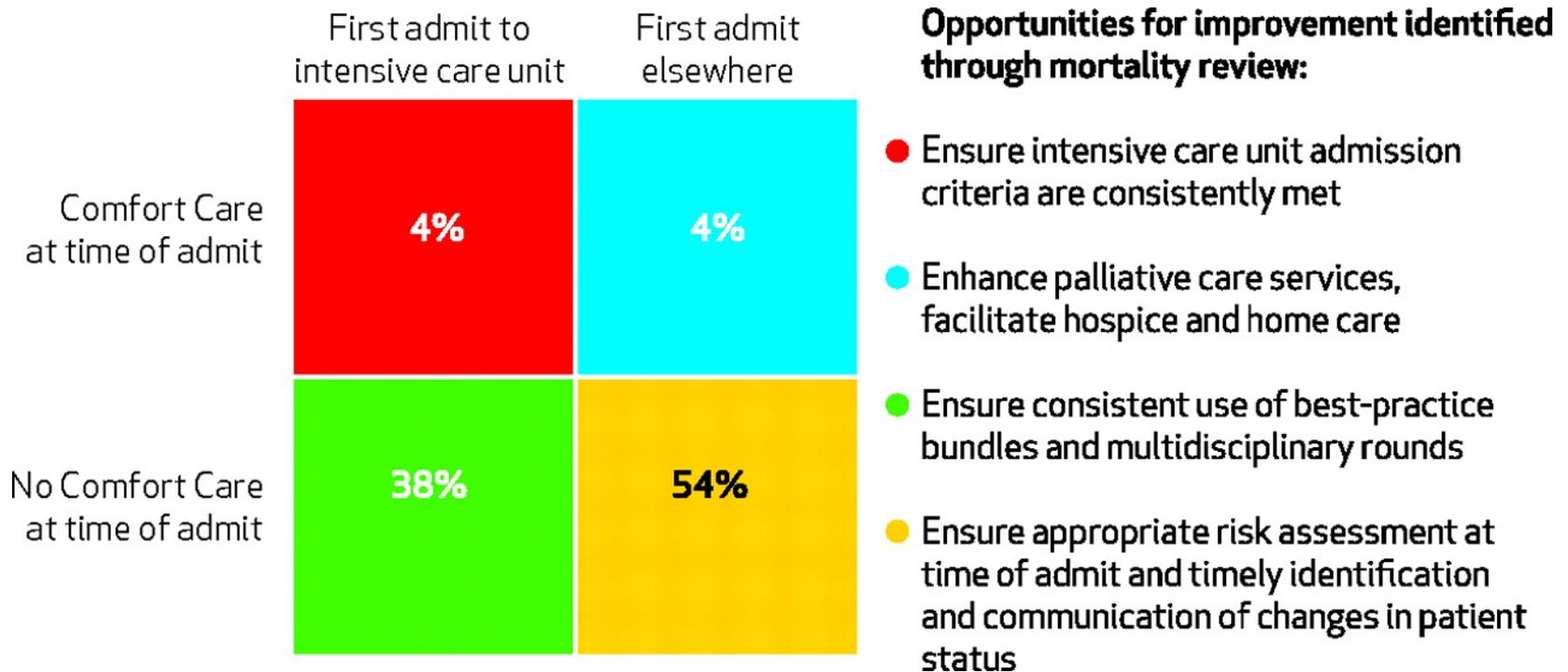
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Legacy Health

- Six hospital system, Portland, Oregon metro area
- Spring 2008 – “Big Aims” Initiative launched: eliminate needless deaths and eliminate preventable harm
- First year goal : reduce inpatient mortality 5–10% and reduce health care–associated infections 10–20%
- Key question: “What would fundamentally need to change to achieve a new level of performance in quality and safety?”
- Key drivers for change: consistency, communication, and engagement
- Three projects:
 1. Evidence-based best-practice bundles for associated infections
 2. Mortality review of fifty consecutive deaths at each hospital to identify patterns and to develop an action plan
 3. Processes and tools to support daily multidisciplinary rounds, where doctors, nurses, other staff, and family members jointly discuss plan of care.



Mortality Review Admission Categories At Legacy Health June–October 2008



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Severe Sepsis Mortality

Condition	US incidence	No. of Deaths	Mortality Rate
AMI (1) 2004-05	920,000	156,800	17%
Stroke (1) 2004-05	780,000	150,100	19%
Severe Sepsis (2) 1995	751,000	215,000	29%

Source

(1) American Heart Association. Heart Disease and Stroke Statistics – 2005 Update.

Available at: www.americanheart.org.

(2) Angus DC et al. *Crit Care Med* 2001;29(7): 1303-1310



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Case Study

UCSF Integrated Nurse Leadership Program

- Nine Bay Area hospitals over two years with the goal of reducing deaths from sepsis
- Intervention
 - Implement the Sepsis Resuscitation Bundle
 - Blood cultures obtained prior to antibiotic administration
 - Improve time to broad-spectrum antibiotics: within 3 hours for ED admissions and 1 hour for non-ED ICU admissions
 - In the event of hypotension and/or lactate >4 mmol/L (36mg/dl): 1) Deliver an initial minimum of 20 ml/kg of crystalloid (or colloid equivalent) as appropriate(considering contraindications); 2) Apply vasopressors for hypotension not responding to initial fluid resuscitation to maintain mean arterial pressure (MAP) > 65 mmHg.
 - require all patients in the medical-surgical and critical care units to be screened every 12-hour shift for sepsis
- Results
 - A 40 percent average reduction in sepsis mortality rates



Michigan Regional Collaborative

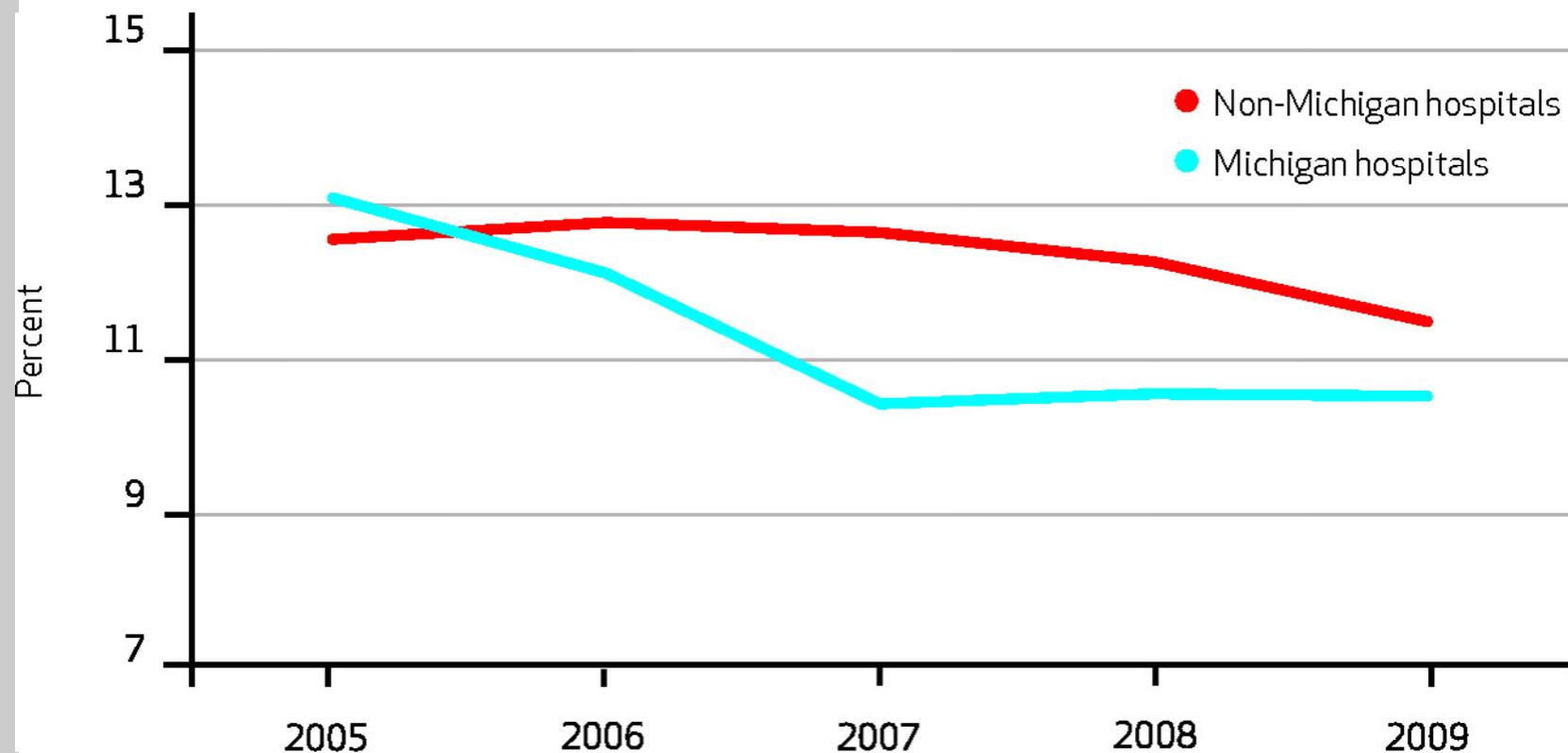
- Michigan regional collaborative improvement program sponsored by Blue Cross/Blue Shield of Michigan
- BCBS of Michigan invests \$30 million annually for 9 programs
- 200,000 Michigan patients
- Improvements seen for clinical conditions
 - General & vascular surgery complications dropped 2.6 percent
- Reduced costs measured
 - Estimated annual savings = \$20 million
- Participating hospitals improved faster
- More robust, rapid assessment of effects of quality improvement interventions across collaborative participants

David A. Share, Darrell A. Campbell, Nancy Birkmeyer, Richard L. Prager, Hitinder S. Gurm, Mauro Moscucci, Marianne Udow-Phillips and John D. Birkmeyer, How A Regional Collaborative Of Hospitals And Physicians In Michigan Cut Costs And Improved The Quality Of Care, *Health Affairs*, 30, no.4 (2011):636-645



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Risk-Adjusted Morbidity - General & Vascular Surgery 2005–09



Share D A et al. Health Aff 2011;30:636-645

Partnership for Patients

Partnership for Patients: Better Care, Lower Costs

- Public-private partnership launched by CMS April 2011
- Improve quality, safety and affordability of health care
- \$1 billion in funding
 - \$500 million - CMS Innovation Center testing models of safer care and promoting best practices in patient safety
 - \$500 million – Community-Based Care Transition Program – reducing readmissions for high risk Medicare patients



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Partnership For Patients Goals

- **Keep patients from getting injured or sicker.**
 - By 2013 - reduce preventable HACs by 40%
 - Adverse drug reactions
 - Childbirth complications
 - Decubiti
 - Surgical site infections
- **Help patients heal without complication.**
 - By 2013 – reduce preventable complications so that all hospital readmissions would be **reduced by 20%**.
 - **1.6 million patients** would no longer need re-hospitalization within 30 days of discharge.
- **\$35 billion in savings** across the health care system by 2013
- **\$50 billion in savings** over 10 years for Medicare and billions more in Medicaid savings



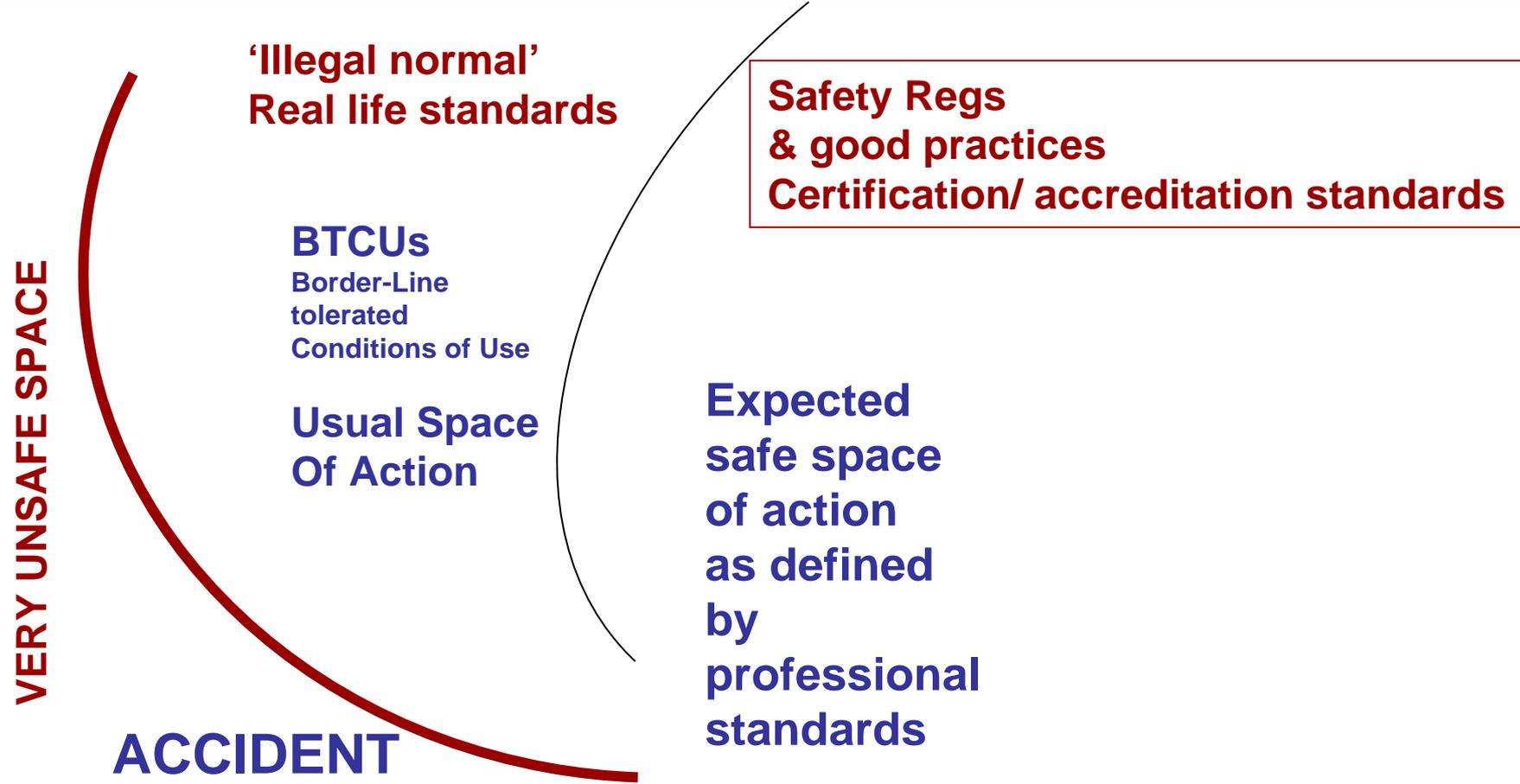
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Culture of Safety



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Systemic Migration to Boundaries



Adapted from R. Amalberti



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On The CUSP Stop BSI

Assemble a CUSP team,
Partner with a senior executive;
Baseline CLABSI Data
Exposure Survey and Technology Survey

PRIMARILY Technical (CLABSI)

CVC Insertion

CVC Line
Cart

1. Contents inventory

Evidence based
BSI prevention
(hands, site, skin
prep, barrier,
removal)

1. Presentation of evidence
2. CLABSI factsheet
3. Insertion checklist
4. Vascular access quiz
5. Vascular access manual/
policy
6. Annotated
bibliography

CVC Management

1. Daily goals
2. Dressing
change
3. Vascular
access manual/
policy protocol

PRIMARILY Adaptive (CUSP)

Science of Safety Training

1. Science of
safety
presentation
3. Attendance
sheet

Staff Identify Defects

1. Staff
safety
assessment
form
2. Identifying
hazards
presentation

Senior Executive Partnership

Briefings

Learning from Defects

LFD toolkit

Implement Tools for Teamwork and Communication

1. Daily goals
2. Shadowing
3. AM briefing
4. Call list
6. Team check up
tool



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What is “Culture”?

“Shared values (what is important) and beliefs (how things work) that interact with an organization’s structures and control systems to produce behavioral norms (the way we do things around here)”

B. Utal, Fortune, 17 October, 1983



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Current Concepts of Safety Culture in Healthcare

- Health care has discussed a “safety culture” primarily as issues of {per Reason}:
 - A non-punitive “just culture”
 - A “reporting culture”
- These are important, but they ignore other crucial aspects of a culture of safety



Characteristics of HROs

- Hypercomplexity
- Tight coupling
- Extreme hierarchical differences
- Multiple decision makers in a complex communications network
- High degree of accountability
- Need for frequent, immediate feedback
- Compressed time constraints



Culture of Safety

Based on the Concept of Mindfulness

“the combination of ongoing scrutiny of existing expectations, continuous refinement...based on newer experience, willingness and capability to invent new expectations..., a more nuanced appreciation of context...[resulting in] improve(d) foresight and current functioning”

Weick and Sutcliffe



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Culture of Reliability

- Anticipating the Unexpected
 - Preoccupation with Failure
 - Reluctance to Simplify Interpretations
 - Sensitivity to Operations
- Containing the Unexpected
 - Commitment to Resilience
 - Deference to Expertise

Weick K, Sutcliffe KM: *Managing the unexpected*. San Francisco, Jossey-Bass, 2001



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Summary

- National Priorities for Safe Care
 - Reducing HACs
 - Reducing Readmissions
 - Reducing Inpatient Mortality
- Implementing Evidence-Based Approaches
- Creating Cultures of Reliability





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