



CUSP: Helping Teams Eliminate Preventable Harm

Armstrong Institute for Patient Safety and Quality

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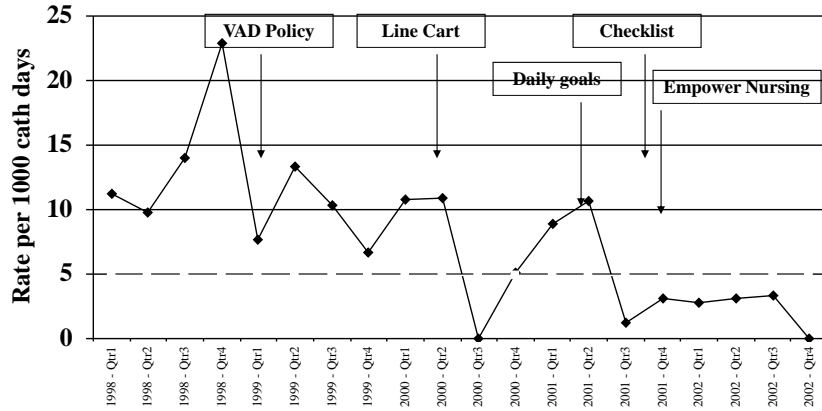
Learning Objectives

- To explain the philosophy and approach of CUSP
- To describe the steps in CUSP
- To explain how CUSP relates to evidence-based efforts to improve care

TRIP and CUSP Model	
TRIP ¹	CUSP ²
<ol style="list-style-type: none"> 1. Summarize the evidence 2. Identify local barriers to implementation 3. Measure performance 4. Ensure all patient receive the intervention 	<ol style="list-style-type: none"> 1. Educate on the science of safety 2. Identify defects 3. Assign executive to adopt unit 4. Learn from Defects 5. Implement teamwork & communication tools
¹ BMJ 2008;337:963-965	² Jt Comm J Qual Patient Saf 2010;36:252-60

Evidence-based Behaviors to Prevent CLABSI
<ul style="list-style-type: none"> • Remove Unnecessary Lines • Wash Hands Prior to Procedure • Use Maximal Barrier Precautions • Clean Skin with Chlorhexidine • Avoid Femoral Lines
MMWR. 2002;51:RR-10

Impact on Catheter-Related BSI

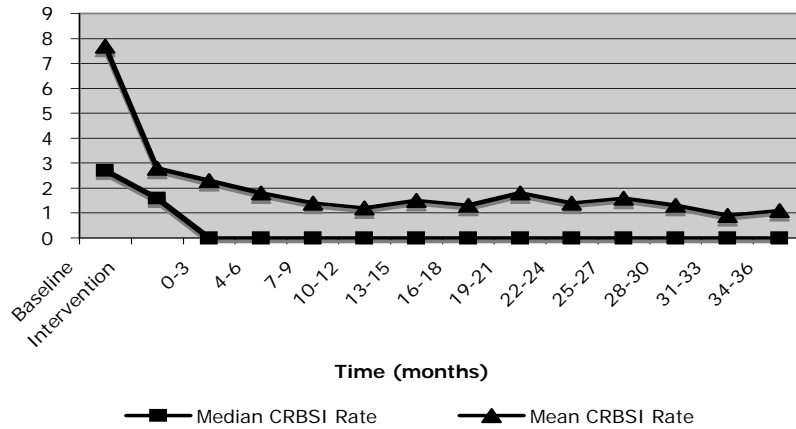


Crit Care Med 2004;32(10):2014.

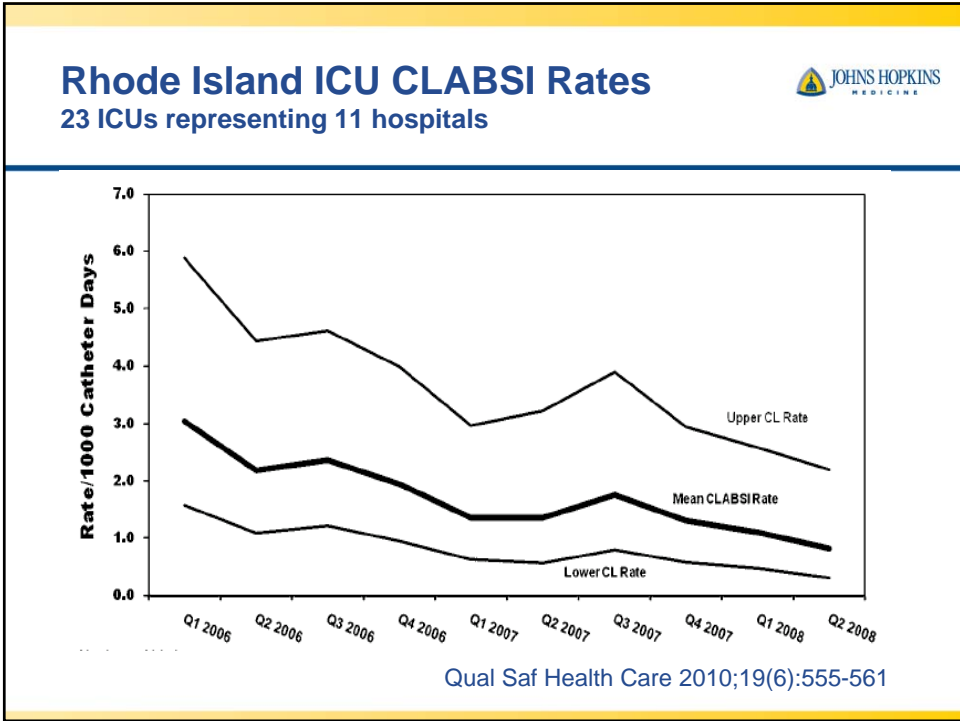
Michigan Keystone ICU



Median and Mean CRBSI Rate



N Engl J Med 2006;355:2725-32;
BMJ 2010;340:c309.



A SUCCESS STORY IN AMERICAN HEALTH CARE:

Eliminating Infections & Saving Lives in Michigan

The Keystone Project's Five Steps to Success

**SAVING
1,500 lives
&
\$200 Million**

The Keystone Project reduced infections by 66% throughout the state, saving over 1,500 lives and \$200 million in the first 18 months alone.

The Keystone Project

**APPROXIMATELY
\$1 INVESTED
\$200 SAVED**

This work was funded by a grant from the Agency for Healthcare Research and Quality, and for every dollar invested, approximately \$200 was SAVED.





1 in 20

About 1 in 20 patients gets an infection each year while receiving medical care.

41,000

About 41,000 bloodstream infections strike hospital patients with central lines each year.

37,000

About 37,000 bloodstream infections happen each year to kidney dialysis patients with central lines.

Making Health Care Safer

Reducing bloodstream infections

A central line is a tube that a doctor usually places in a large vein of a patient's neck or chest to give important medical treatment. When not put in correctly or kept clean, central lines can become a freeway for germs to enter the body and cause serious bloodstream infections. These infections can be deadly. Of patients who get a bloodstream infection from having a central line, up to 1 in 4 die. Bloodstream infections in patients with central lines are largely preventable when healthcare providers use CDC-recommended infection control steps. Medical professionals have reduced these infections in hospital intensive care unit (ICU) patients by 95% since 2001. Even so, many still occur in ICUs, in other parts of hospitals, and in outpatient care locations. In 2008, about 37,000 bloodstream infections occurred in hemodialysis* outpatients with central lines.

*Use of a machine to clean or filter the blood when kidneys no longer work.

Learn what you can do to reduce central line bloodstream infections.

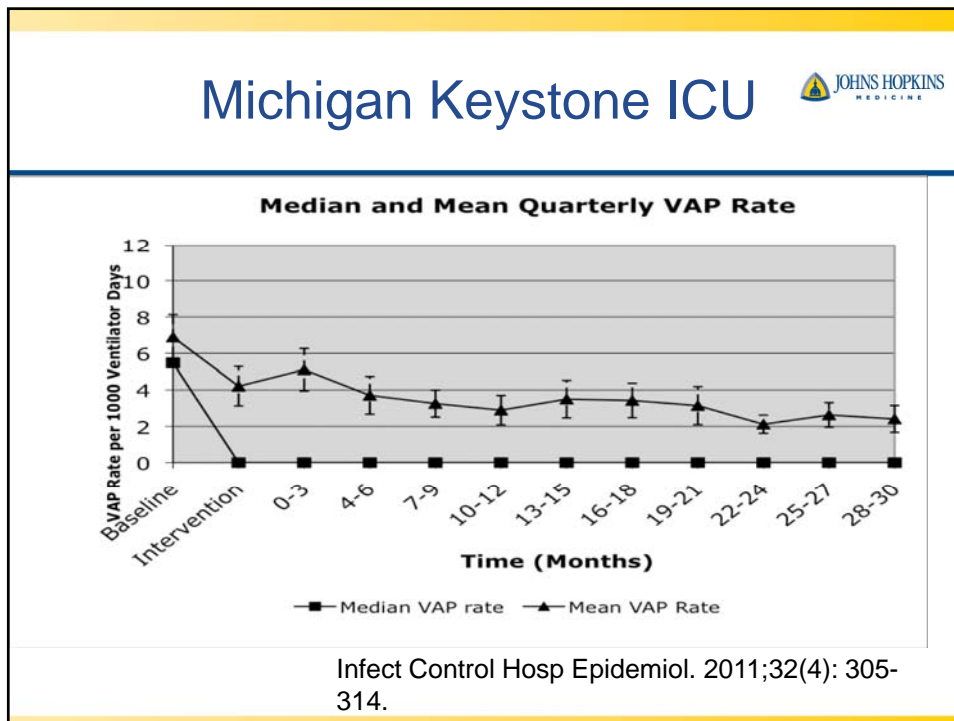
→ See page 4

Want to learn more? Visit

<http://www.cdc.gov/vitalsigns>

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





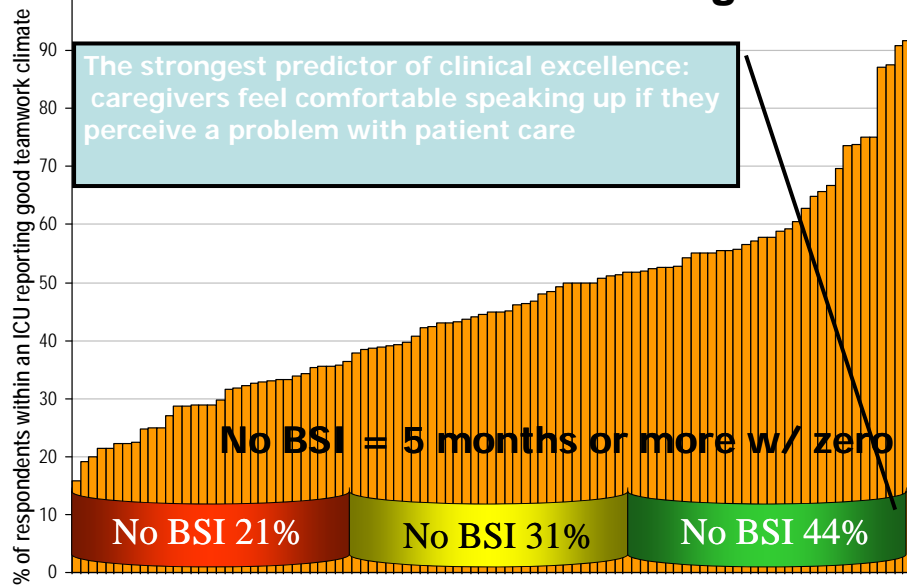
Improving Care takes technical work, and adaptive (culture) work



The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management.

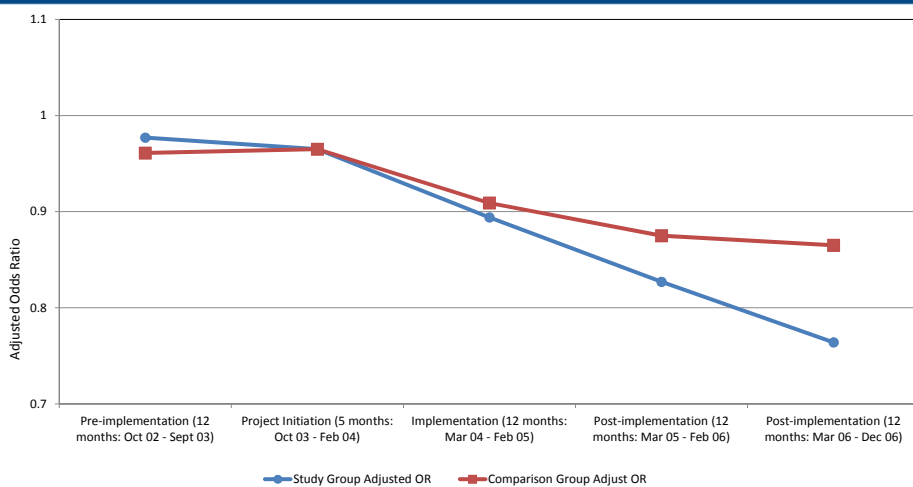
“ The Way We Do Things Around Here”

Teamwork Climate Across Michigan ICUs



Health Services Research, 2006;41(4 Part II):1599. 12

Impact of Statewide Quality Improvement Initiative on Hospital Mortality



BMJ 2011;342:d219

Keystone ICU project: Business Case



- 30 CLABSIs averted annually
- 18 VAP cases averted annually
- Financial benefits exceed costs of intervention
 - \$1.1 million saved per year for average hospital

Am J Med Qual. 2001;26:333-339

Lessons Learned



- Harm is preventable
 - Majority of healthcare acquired infections are preventable; should be viewed as defect
- Focus on systems; Not individuals
- Far more complex than checklists
 - Imperative for frontline staff to be engaged and take ownership
 - Able to achieve unprecedented improvements in patient safety

Implementing CUSP is a Continuous Journey



- Add science of safety education to orientation
- Learn from one defect per quarter, share or post lessons (answers to the 4 questions) with others
- Implement teamwork tools that best meet your teams needs
- Details are in the CUSP manual

CUSP Lessons Learned



- Culture is local
 - Implement in a few units, adapt and spread
 - Include frontline staff on improvement team
- Not linear process
 - Iterative cycles
 - Takes time to improve culture
- Couple with clinical focus
 - No success improving culture alone
 - CUSP alone viewed as 'soft'
 - Lubricant for clinical change

17

CUSP CAUTI



- National Program
- HRET is national leader with MHA
- Model similar to CUSP Stop BSI
- Mid implementation ~many states already fully engaged
- Reducing CAUTI
- Reducing use of catheters
- Improving safety culture

CUSP for Safe Surgery “SUSP”



- AHRQ Funded Surgical Safety Project~ similar to “CUSP” StopBSI and StopCAUTI programs
- 4 year project designed as National Program
- Innovations beyond past work:
 - Pronovost Co-PI with American College of Surgeons (Ko)
 - Begin with ACS NSQIP participants /complications of colon surgery
 - Ethnographic study/small cohort (Bosk,UPenn)
 - CUSP expanded toolkit for easy online upload and training
 - International Partner (WHO Patient Safety Program)

SUSP: WHO may participate



- Project is for at ALL hospitals in all states, the District of Columbia and Puerto Rico
- The FIRST group of hospitals (recruitment now) ~ NSQIP participants
 - Reason? Ability to provide baseline data and be up and running quickly
- All other cohorts will include non-NSQIP hospitals ~
- Second wave of participants: Fall 2012

What must coordinating groups do?



- State Hospital Associations, Hospital Engagement Networks (HENS), other state level coordinating groups play a key role in organizing and facilitating the work in their network hospitals
 - Recruit hospitals
 - Provide conference call line for Hopkins coaching
 - Facilitate regional/state face to face meetings or videoconferences/webinars
 - Participate in monthly coordination/ improvement call with your designated Hopkins faculty leader

What must hospitals do?



- Commit to participate for 24 months
 - Letter of commitment by CEO
- Designate at least one surgery team to implement the program
 - Prefer general surgery (initial focus: colorectal surgeries)
- Allocate time so the team can do its work

What must hospital teams do?



- submit pre-launch data (readiness survey and baseline outcomes data*)
- submit a limited monthly data set
- participate in monthly project calls or webinars
- Implement the interventions (CUSP plus activities to reduce surgical complications)
- participate in biannual face to face meetings or videoconferences
- share what they learn

What must hospital teams do?



- Implement the Comprehensive Unit based Safety Program “CUSP” with specific features and applications designed specifically for the surgical setting
 - The CUSP improvement intervention was developed at Johns Hopkins by this project team, and is now widely used in projects around the world
 - ***CUSP is an intervention to improve teamwork, communication and facilitate behavior change***

What must hospital teams do?



- Implement technical interventions to make surgery safer and to reduce surgery complications.
 - Reduce SSI
 - Briefings and Debriefings
 - Antibiotic redosing
 - CHG bathing
 - Glucose control

Hopkins/National Project Responsibilities



- National Coordination with SHAs, HENS etc
- All program content, tools, coaching
- Centralized data collection, report generation

Next Steps



- Recruit now for first cohort
- Begin Active work in APRIL
- Recruit late summer for second cohort

References



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- Thompson DA, Holzmüller CG, Cafeo CL, Sexton JB, Pronovost PJ. A morning briefing: Setting the stage for a clinically and operationally good day. *Jt Comm J Qual and Saf*. 2005; 31(8):476-479.