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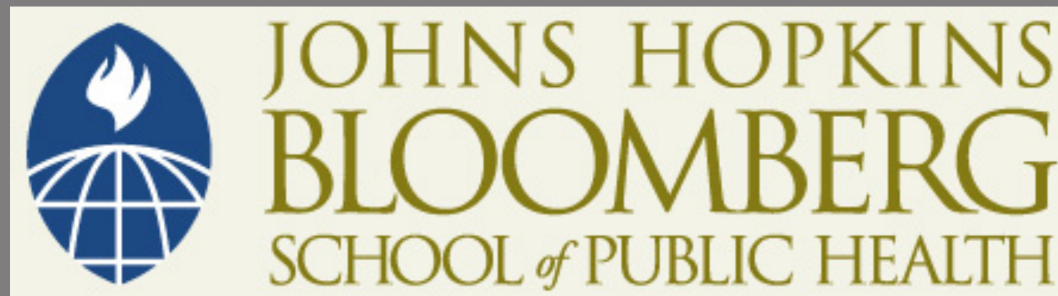

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JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

Overview of the STOP-BSI Program

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Learning Objectives

- To understand the goals of STOP-BSI
- To understand how the project is organized
- To understand the interventions
- How to apply in other areas of work

Goals

- To work to eliminate central line–associated blood stream infections (CLABSI); state mean < 1/10000 catheter days, median 0
- To improve safety culture by 50%
- To learn from one defect per month

Safety Score Card: Keystone ICU Safety Dashboard

	2004	2006
How often did we harm (BSI)	2.8/1000	0
How often do we do what we should	66%	95%
How often did we learn from mistakes*	100s	100s
Have we created a safe culture? Percent needs improvement in …		
Safety climate	84%	43%
Teamwork climate*	82%	42%

CUSP is intervention to improve these

Project Organization

- Statewide effort coordinated by Hospital Association
- Use collaborative model (two face-to-face meetings, monthly calls)
- Standardized data collection tools and evidence
- Local ICU modification of how to implement interventions

Translating Evidence into Practice

- Envision the problem within the larger health care system
- Engage Collaborative multi-disciplinary teams centrally (stages 1,2 & 3) and locally (stage 4)

1. Summarize the Evidence

- Identify Interventions associated with improved outcomes
- Select interventions with the largest benefits and lowest barriers to use
- Convert interventions to behaviors

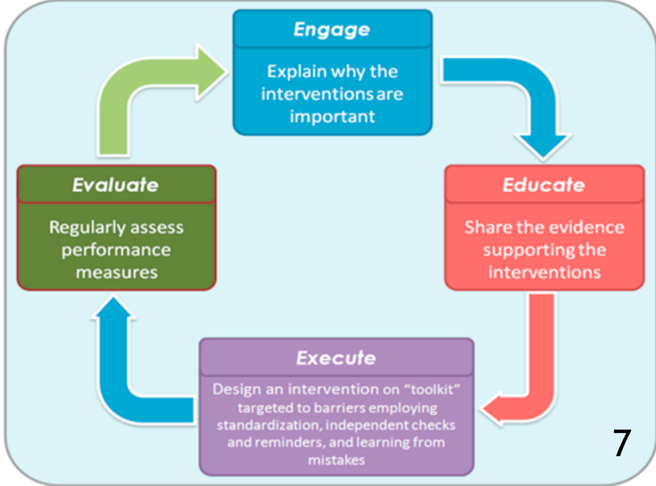
2. Identify local barriers to implementation: understand the process and context of work

- Observe staff performing the interventions
- "Walk the process" to identify defects in each step of intervention implementation
- Enlist all stakeholders to share concerns and identify potential gains / losses associated with intervention implementation

3. Measure Performance

- Select Measures (Process and/or outcome)
- Develop and pilot test measures
- Measure Baseline Performance

4. Ensure all patients receive the interventions



Evidence-Based Behaviors to Prevent CLABSI

- Remove unnecessary lines
- Wash hands prior to procedure
- Use maximal barrier precautions
- Clean skin with chlorhexidine
- Avoid femoral lines

Source: *MMWR*, *51*, RR-10. (2002).

Identify Barriers

- Ask staff about knowledge
  - Use team check-up tool
- Ask staff what is difficult about doing these behaviors
- Walk the process of staff placing a central line
- Observe staff placing central line

Ensure Patients Reliably Receive Evidence

	Senior leaders	Team leaders	Staff
Engage	*How does this make the world a better place?*		
Educate	*What do we need to do?*		
Execute	▪ *What keeps me from doing it?* ▪ *How can we do it with my resources and culture?*		
Evaluate	*How do we know we improved safety?*		

Source: Pronovost. (2006). *Health Services Research.*

The 4Es

- Ideas for ensuring patients receive the interventions: the 4Es
  1. Engage: stories, show baseline data
  2. Educate staff on evidence
  3. Execute
     - Standardize: create line cart
     - Create independent checks: create BSI checklist
     - Empower nurses to stop takeoff
     - Learn from mistakes: review infections
  4. Evaluate
     - Feedback performance
     - View infections as defects

Comprehensive Unit-Based Safety Program (CUSP)

- An intervention to learn from mistakes and improve safety culture
  - Educate staff on science of safety http://www.jhsph.edu/ctlt/training/patient_safety.html
  - Identify defects
  - Assign executive to adopt unit
  - Learn from one defect per quarter
  - Implement teamwork tools

Source: Pronovost, J. (2005). *Patient Safety*.

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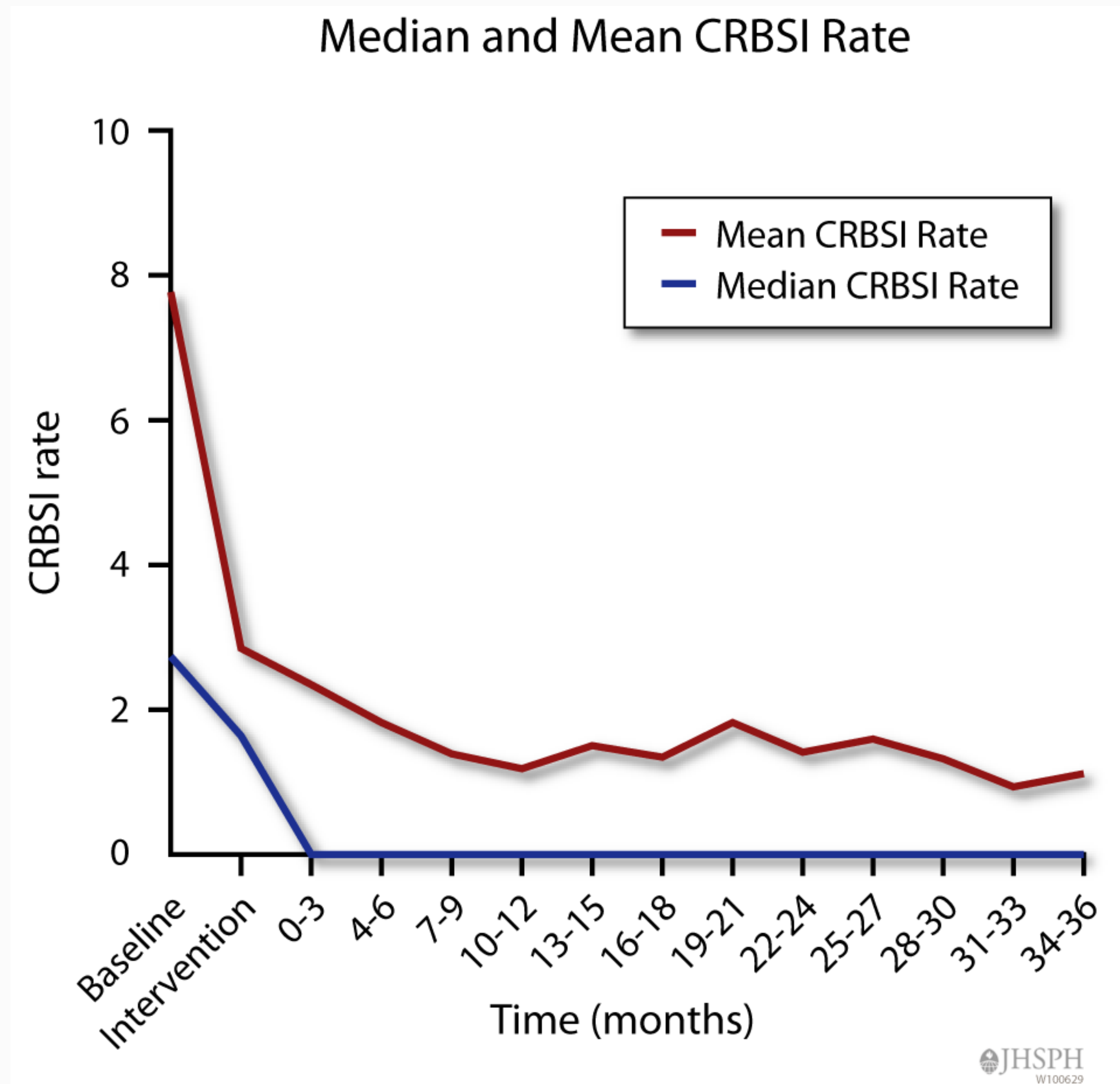
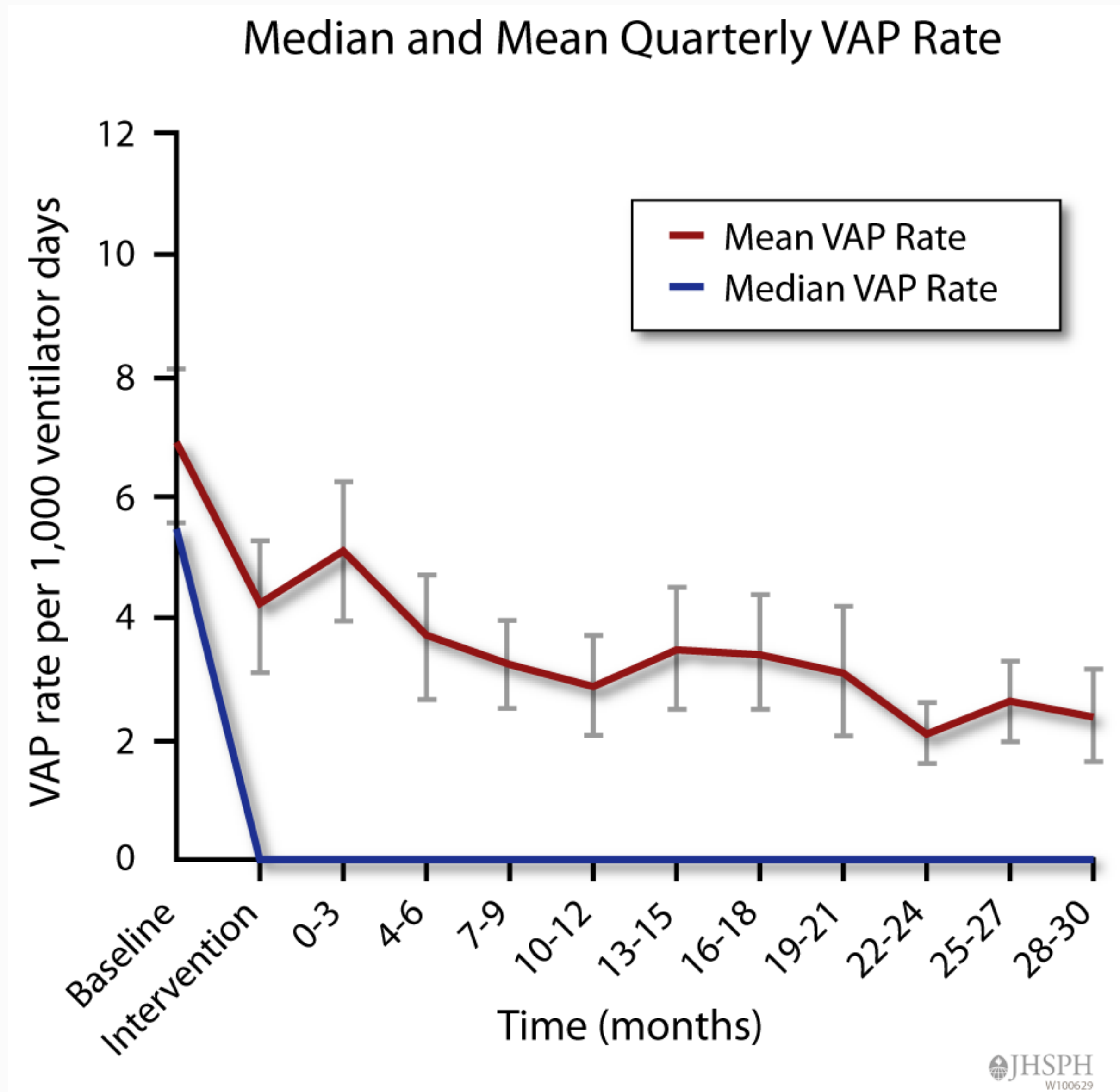
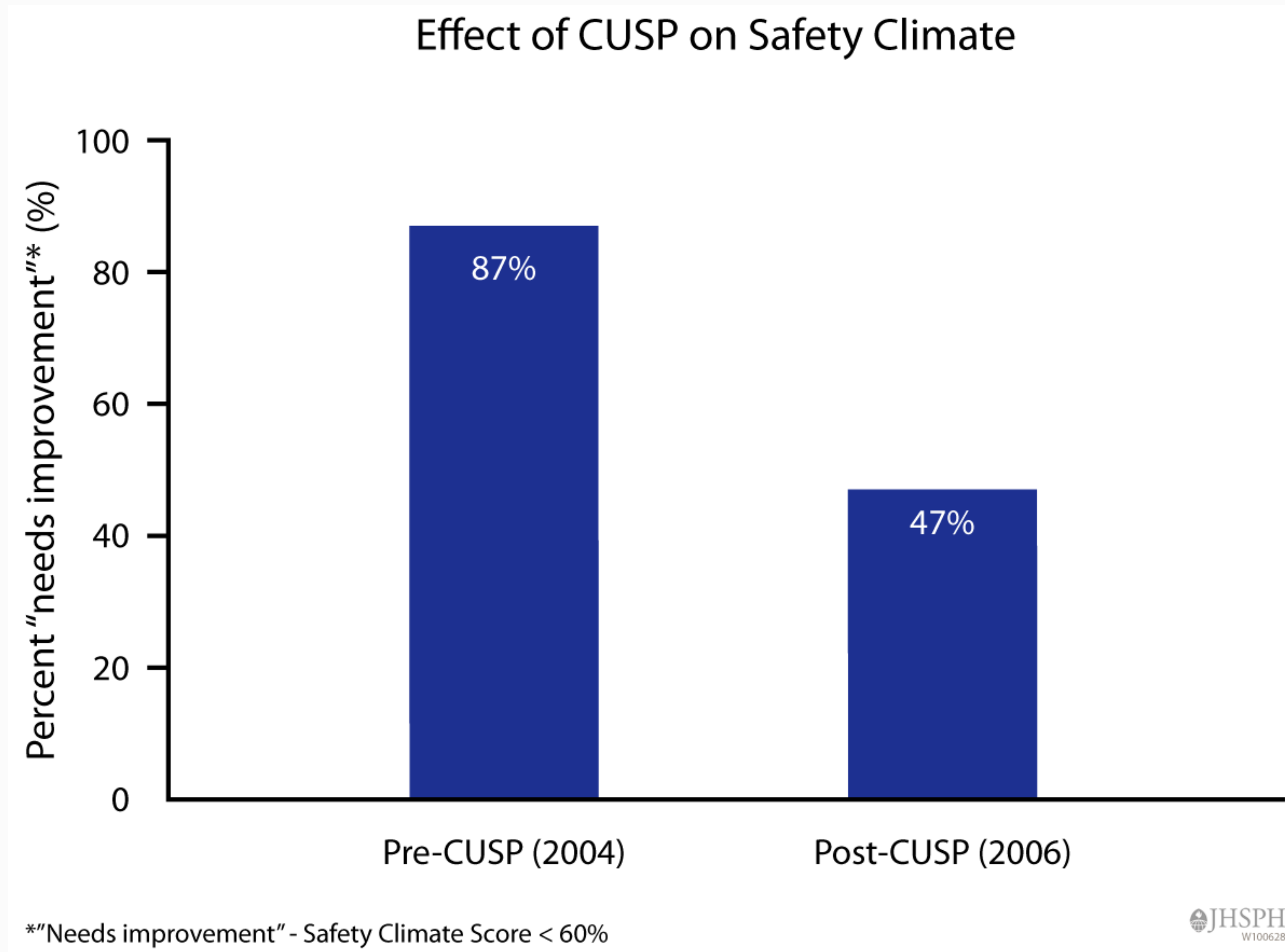
CRBSI Rate Over Time



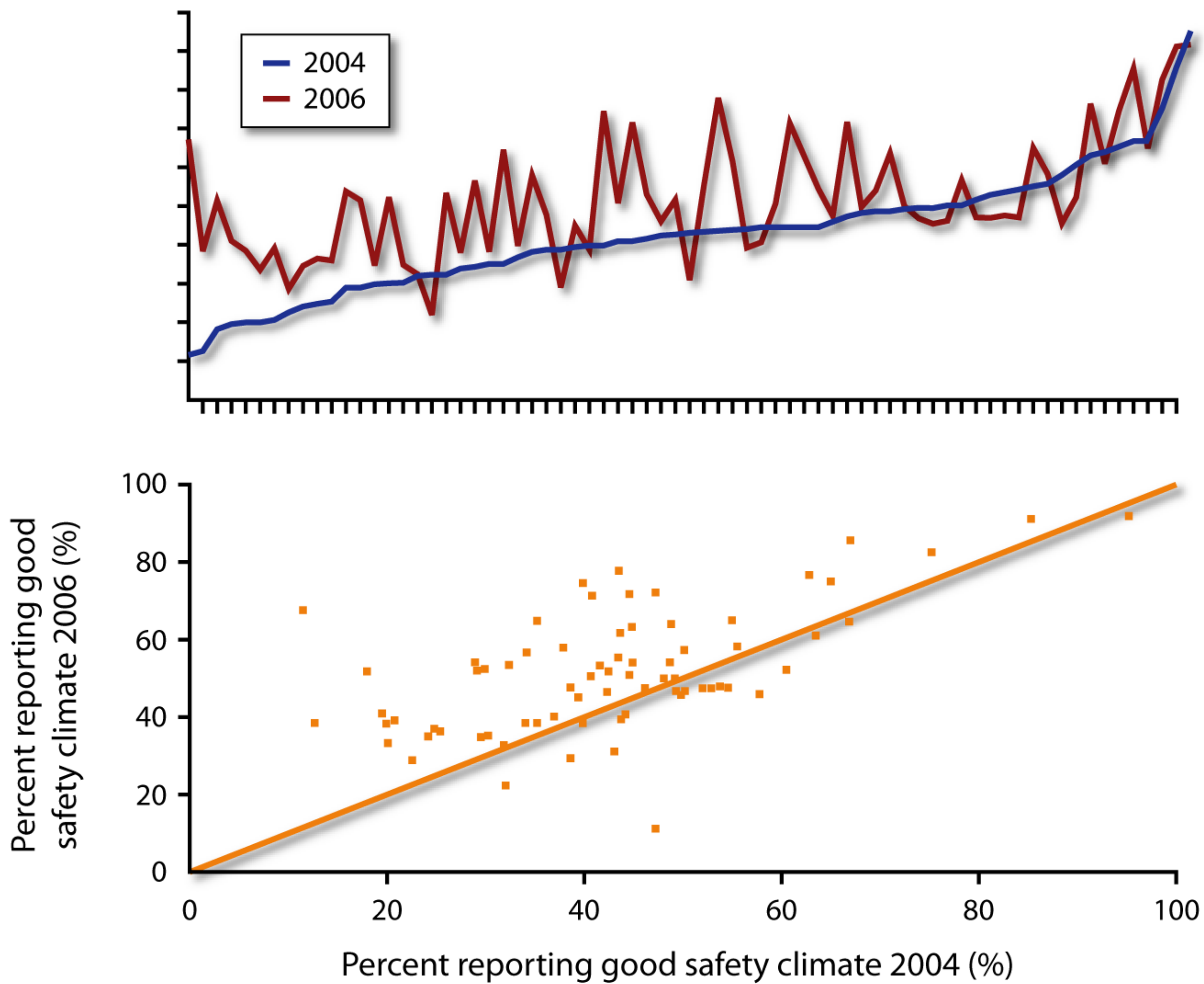
VAP Rate Over Time



Michigan ICU Safety Climate Improvement



Michigan ICU Safety Climate Score Distributions



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