

# Minimising Catheter Related Bloodstream Infections: Sharing Leadership

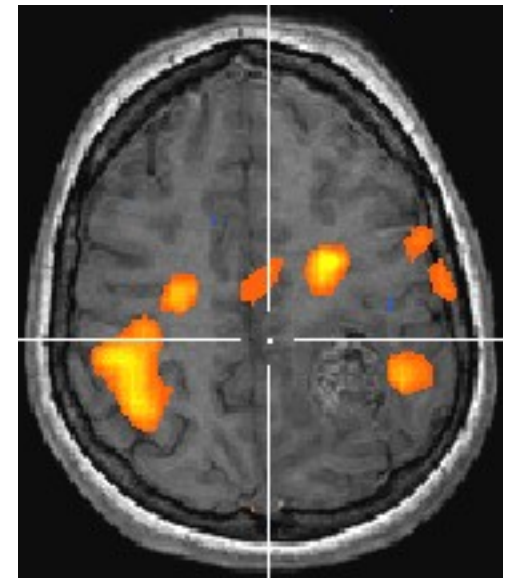
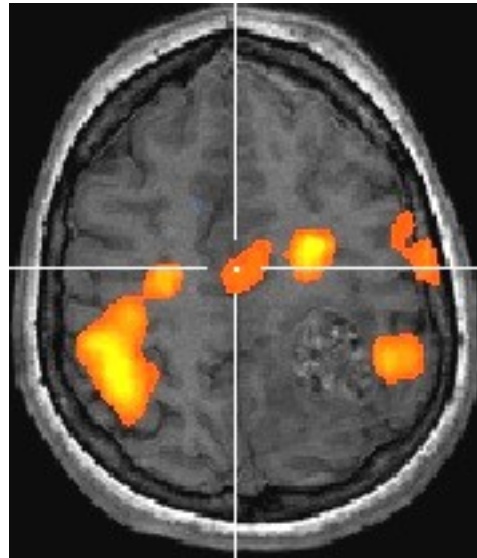
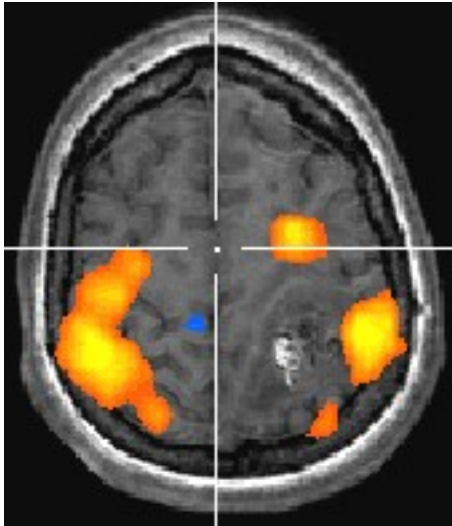
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September 16, 2009

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# Miracles of Technology

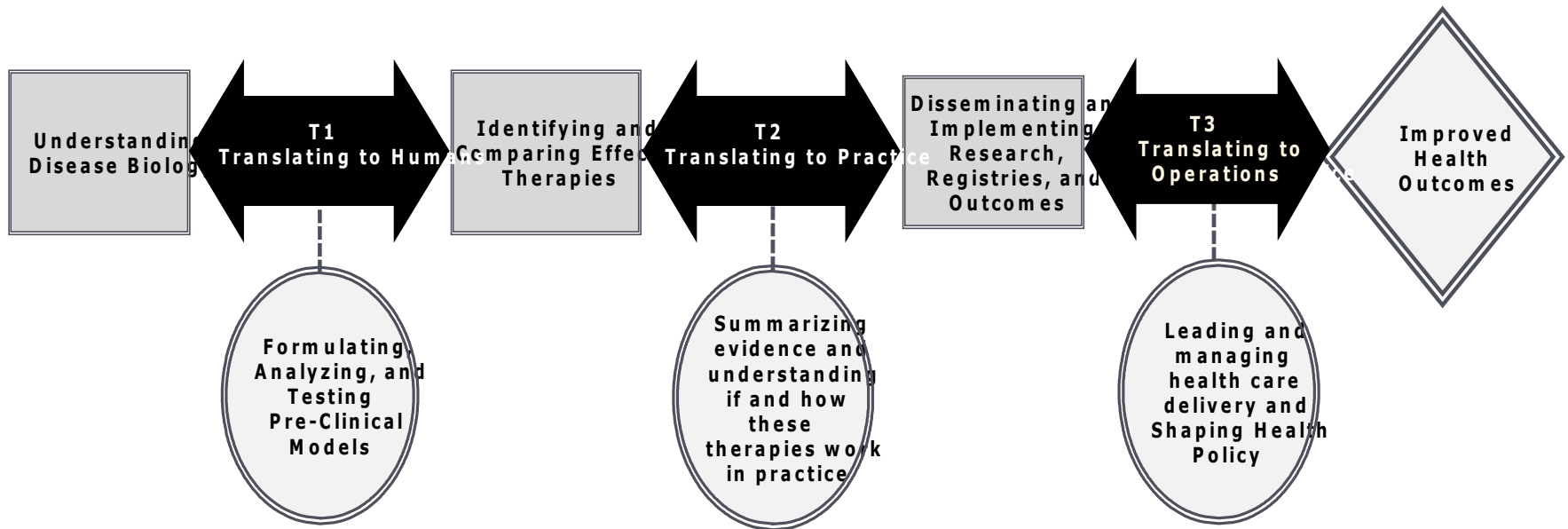


# Realities of Error



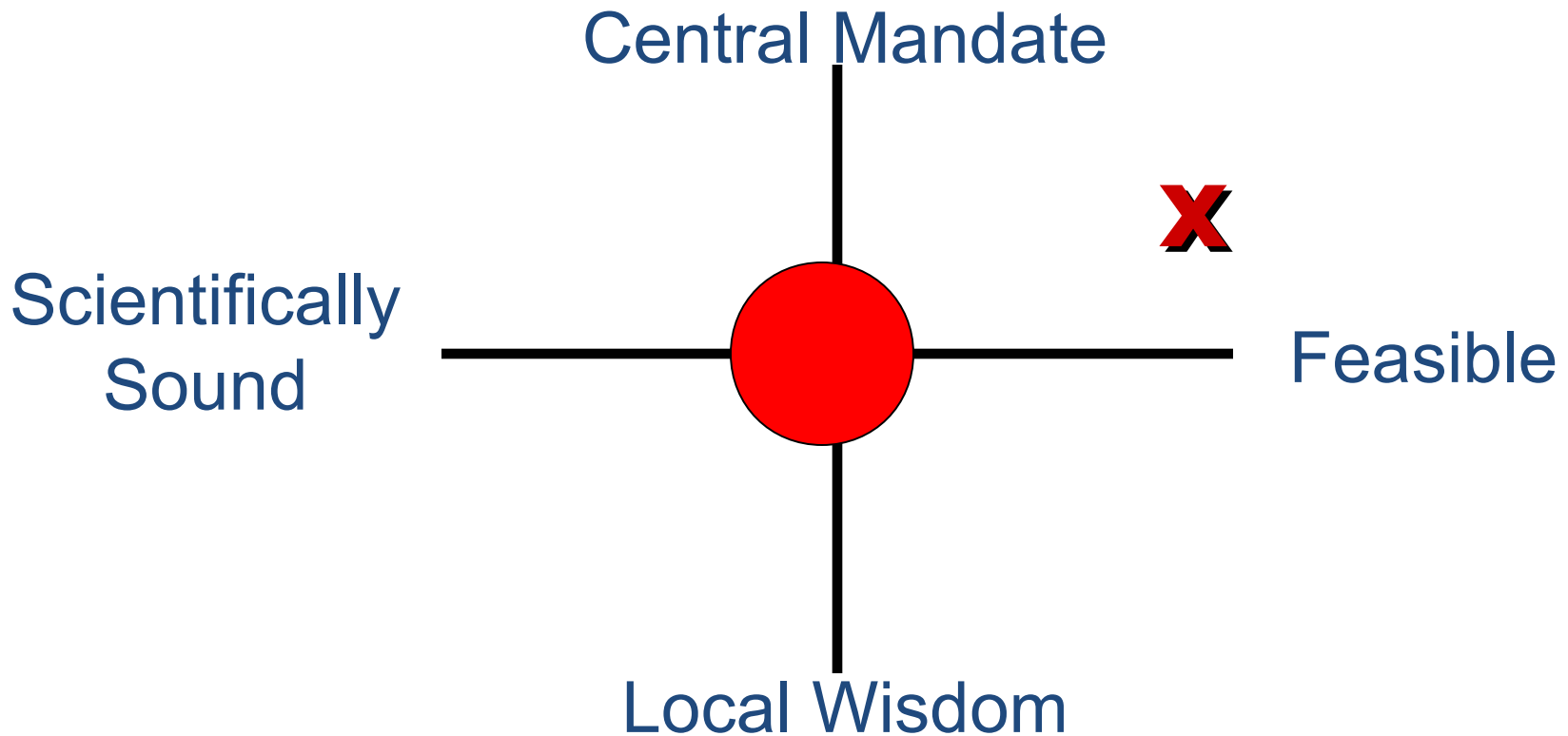
# Closing the Gap

## Translation Research Model



Pronovost JAMA 2008

# Current Efforts



# Technical Challenges

- Can be solved with existing science or technology “knowledge based”
- Issues or challenges for which there is “an answer”

# Adaptive Challenges

- Require a change of values, attitudes or beliefs
- “Behavior based”

# Leading Change

One of most common leadership mistakes is expecting technical solutions to solve adaptive problems....

*Ron Heifetz “Leadership without Easy Answers*

## 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

#### Engage

Explain why the interventions are important

#### Evaluate

Regularly assess performance measures

#### Educate

Share the evidence supporting the interventions

#### Execute

Design an intervention on "toolkit" targeted to barriers employing standardization, independent checks and reminders, and learning from mistakes

# Ensure Patients Reliably Receive Evidence

	Senior leaders	Team leaders	Staff
Engage <i>adaptive</i>	<i>How does this make the world a better place?</i>		
Educate <i>technical</i>	<i>What do we need to know?</i>		
Execute <i>adaptive</i>	<i>What do we need to do?</i> <i>How can we do it with my resources and culture?</i>		
Evaluate <i>technical</i>	<i>How do we know we improved safety?</i>		

Pronovost: Health Services Research 2006

# Improving Care

## CUSP

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

## Translating Evidence Into Practice (TRiP)

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

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# Reducing ICU Central Line Infections

## CUSP

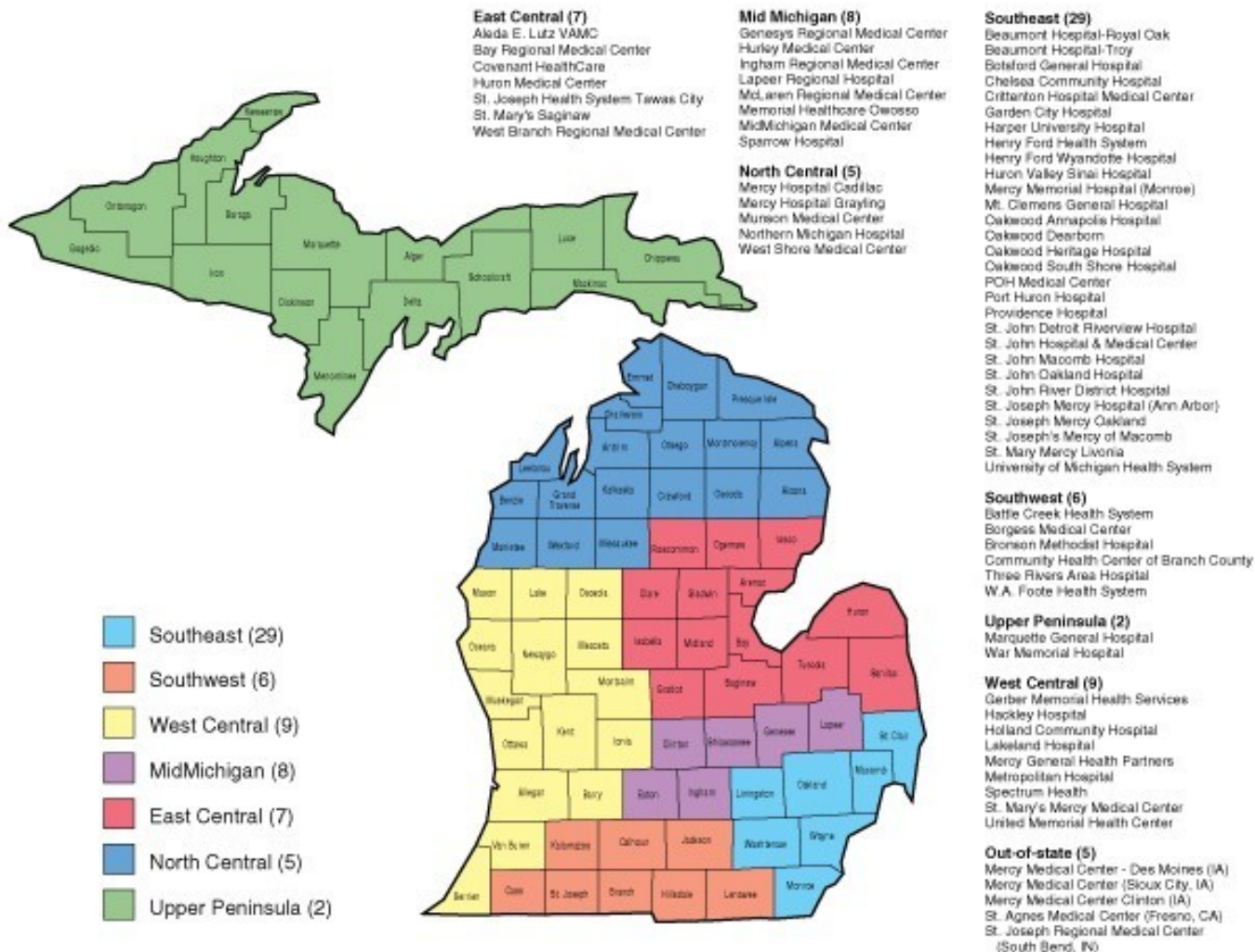
1. Educate staff on science of safety
2. Identify defects
3. Assign executive to adopt unit
4. Learn from one defect per quarter
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## CLABSI Checklist

1. Wash Hands Prior to Procedure
2. Clean Skin with Chlorhexidine
3. Avoid Femoral Site
4. Use Maximal Barrier Precautions
5. Remove Unnecessary Lines

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# Keystone ICU: Michigan



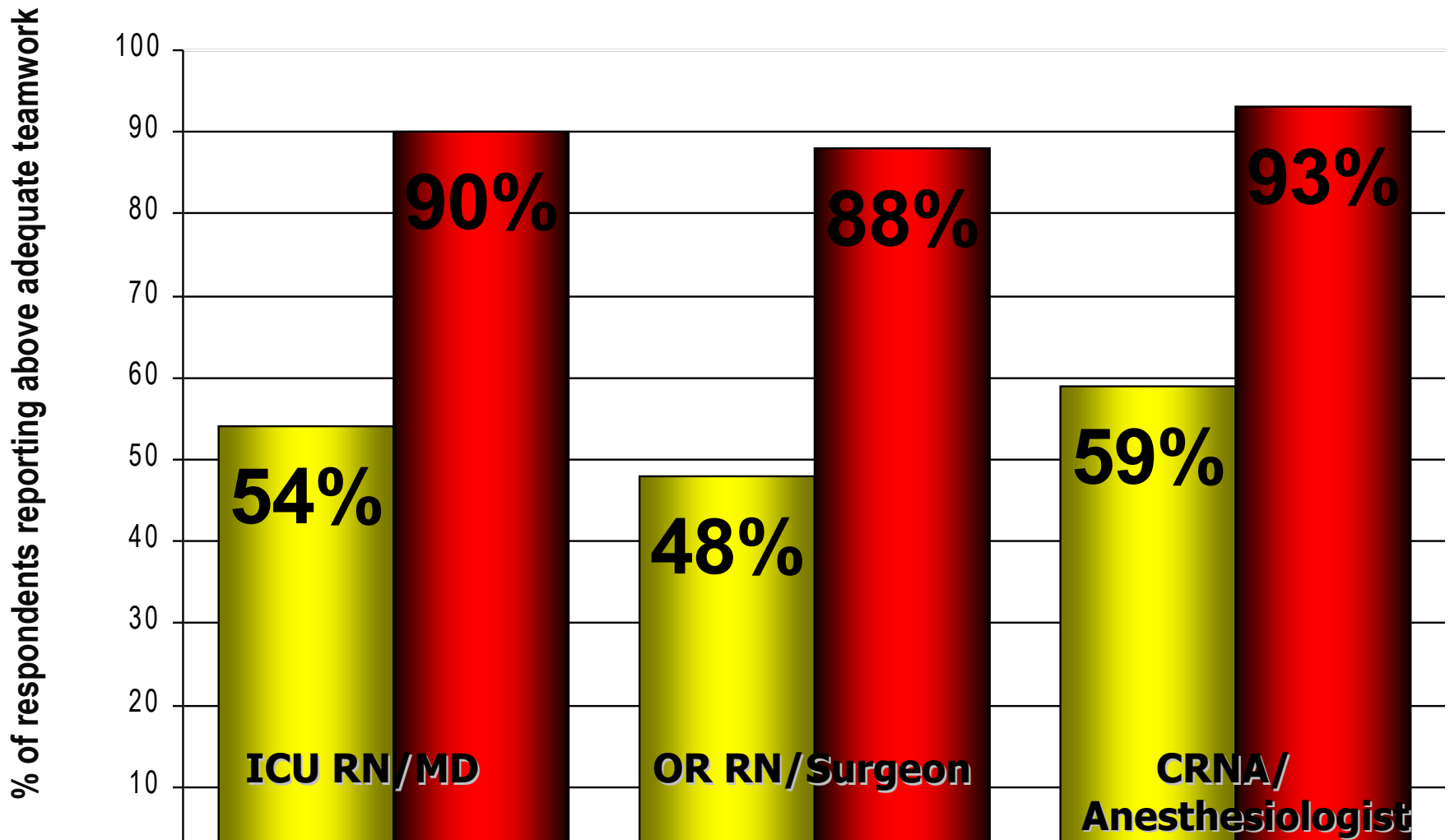
# Safety Score Card

## Keystone ICU Safety Dashboard

	2004	2006
How often did we harm (BSI) median 103 ICU's	2.8/1000	
How often do we do what we should	66%	
<b>How often did we learn from mistakes*</b>	?	
<b>Have we created a safe culture</b>		
<b>Needs improvement in</b>		
<b>Safety climate*</b>	84%	
<b>Teamwork climate*</b>	82%	

**\*CUSP is intervention to improve these**

# Physicians and RN Collaborator

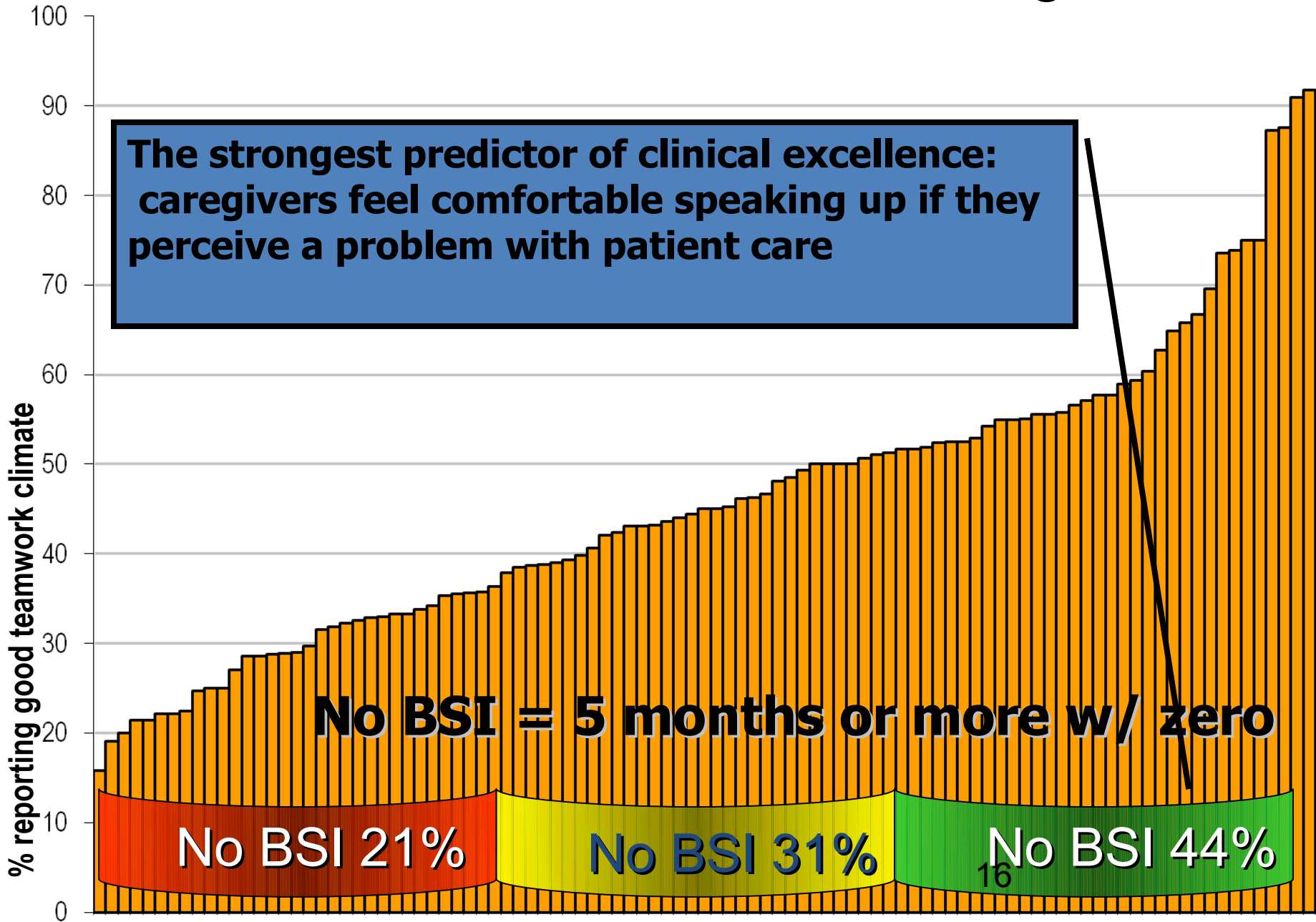


**■ RN rates Physician**

**■ Physician rates RN**

# 2004 Teamwork Climate Across Michigan ICUs

**The strongest predictor of clinical excellence:  
caregivers feel comfortable speaking up if they  
perceive a problem with patient care**



**No BSI = 5 months or more w/ zero**

**No BSI 21%**

**No BSI 31%**

**No BSI 44%**  
16

# Safety Score Card

## Keystone ICU Safety Dashboard

	2004	2006
How often did we harm (BSI) median 103 ICU's	2.8/1000	0
How often do we do what we should	66%	95%
<b>How often did we learn from mistakes*</b>	100s	100s
<b>Have we created a safe culture</b>		
<b>Needs improvement in</b>		
<b>Safety climate*</b>	84%	43%
<b>Teamwork climate*</b>	82%	42%

**\*CUSP is intervention to improve these**

# Diverse Interest: Pressing Need

*The New Yorker*

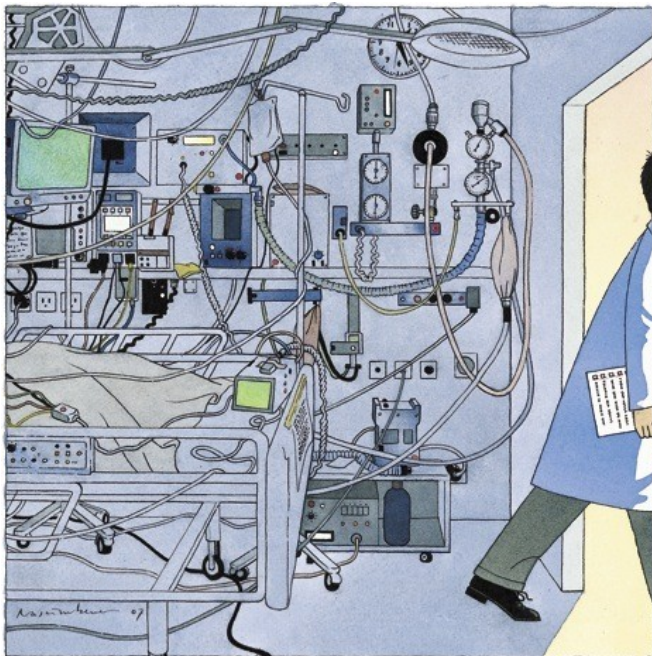
ANNALS OF MEDICINE

## THE CHECKLIST

*If something so simple can transform intensive care, what else can it do?*

BY ATUL GAWANDE

If a new drug were as effective at saving lives as Peter Pronovost's checklist, there would be a nationwide marketing campaign urging doctors to use it.



## The NEW ENGLAND JOURNAL of MEDICINE

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### An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

Peter Pronovost, M.D., Ph.D., Dale Needham, M.D., Ph.D., Sean Berenholtz, M.D., David Sinopoli, M.P.H., M.B.A., Haitao Chu, M.D., Ph.D., Sara Cosgrove, M.D., Bryan Sexton, Ph.D., Robert Hyzy, M.D., Robert Welsh, M.D., Gary Roth, M.D., Joseph Bander, M.D., John Kepros, M.D., and Christine Goeschel, R.N., M.P.A.

## The New York Times

December 30, 2007

A Lifesaving Checklist

### Medical Breakthrough '08: Lifesaving Hospital Checklist

A detailed checklist has been saving lives -- and money -- in the ICU.

By Tara Conry

From [Reader's Digest](#)

# A Success Story

## The Keystone Project's Five Steps to Success



## The Keystone Project







# Facing the Challenge

Please answer each question with a score of 1 to 5.

1 is below average, 3 is average and 5 is above average

- How smart am I
- How hard do I work
- How kind am I
- How tall am I
- How good is the quality of care we provide

# International Learning



## Matching Michigan



# England

- NPSA commissioned by DH
- Baseline Infection Data Pilot tested
  - all ICUs in Northeast SHA
    - 15 adult units & 4 PICUs
  - Royal Brompton & Harefield Trust
    - 2 adult & 1 PICU
  - ICUs test process of data collection (May-July 2009)
  - National roll out October/November 2009
  - Intervention – adaptive & technical

# NPSA Matching Michigan Team

- Peter Hibbert
- Jeanette Beer
- Gowri Sivakumaran
- Pam Quao
- Sharon Jefferson
- Julian Bion
- Annette Richardson
- Vivian Tang

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# Imagine

With a level of resolve similar to our world efforts to eradicate polio, healthcare leaders from around the world join forces to eradicate healthcare associated infections

And we succeed

How else might we make healthcare safer?

Together

# Our Opportunity

“Never doubt that a small group of thoughtful committed citizens can change the world. Indeed, it’s the only thing that ever has.”

*Margaret Meade*

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# On the CUSP: Safer Care



# THANK YOU

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# References

- **Measuring Safety**
- Pronovost PJ, Goeschel CA, Wachter RM. The wisdom and justice of not paying for "preventable complications". JAMA. 2008; 299(18):2197-2199.
- Pronovost PJ, Miller MR, Wachter RM. Tracking progress in patient safety: An elusive target. JAMA. 2006; 296(6):696-699.
- Pronovost PJ, Sexton JB, Pham JC, Goeschel CA, Winters BD, Miller MR. Measurement of quality and assurance of safety in the critically ill. Clin Chest Med. 2008; in press.

# References

- **Translating Evidence into Practice**
- Pronovost PJ, Berenholtz SM, Needham DM. Translating evidence into practice: A model for large scale knowledge translation. *BMJ*. 2008; 337:a1714.
- Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *NEJM*. 2006; 355(26):2725-2732.
- Pronovost PJ, Berenholtz SM, Goeschel C, et al. Improving patient safety in intensive care units in michigan. *J Crit Care*. 2008; 23(2):207-221.

# References

- Pronovost P, Weast B, Rosenstein B, et al. Implementing and validating a comprehensive unit-based safety program. *J Pat Safety*. 2005; 1(1):33-40.
- Pronovost P, Berenholtz S, Dorman T, Lipsett PA, Simmonds T, Haraden C. Improving communication in the ICU using daily goals. *J Crit Care*. 2003; 18(2):71-75.
- Pronovost PJ, Weast B, Bishop K, et al. Senior executive adopt-a-work unit: A model for safety improvement. *Jt Comm J Qual Saf*. 2004; 30(2):59-68.
- 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.