

# CLINICAL ADVISORY BOARD

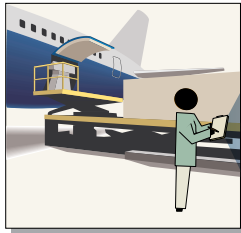
*2008 Clinical Executive Meeting*



## **The Journey to Zero**

*Innovative Strategies for Minimizing Hospital-Acquired Infections*

## Leaving Nothing to Chance Mandated Reliability Checks in Aviation



### Aeronautical Checklist

Airplane Power Source	Check
Battery Switch	On
Hydraulic Panel	Set
Landing Gear Lever	Down
Alternate Flaps Arm Switch	Off
Alternate Flaps Selector	Off
Bus Tie Switches	Auto
Electrical Power	Establish
Cockpit Lighting	As required
Pack Switches	Auto
Airplane Number	Verify
Overhead Maintenance Panel	Check
Cargo Temperature Selectors	As required
Circuit Breakers	Check

### MILES TO GO IN HEALTH CARE



August 2006

“In light of these challenges, health care has turned to ‘high-reliability organizations’ (i.e., aviation) who achieved a high degree of safety or reliability despite operating in hazardous conditions.”

Source: Pronovost PJ, et al., “Creating High Reliability in Health Care Organizations,” *Health Services Research*, 2006, 41: 1599–1617; Clinical Advisory Board interviews and analysis.

# Taking Flight

## Aiming for Zero

### Michigan ICU Focuses on Patient Safety

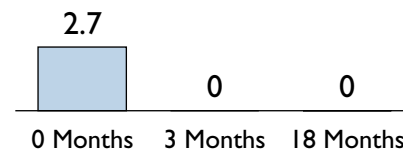
#### Initiative in Brief



MICHIGAN HEALTH & HOSPITAL ASSOCIATION

- Michigan Hospital Association began statewide initiative in 2003
- Teamed with infection control experts from Johns Hopkins University to develop intervention
- 103 participating ICUs reported 1,981 months, 375,757 catheter days

CR-BSI Rate (Median)  
per 1,000 Catheter Days



#### A STANDARDIZED APPROACH

“There’s a large potential to reduce infections by simplifying the process into three things: standardize what you do, create independent checks for known processes and when things go wrong, learn from them”

Peter Pronovost, MD, PhD  
Professor of Anesthesiology, Critical Care Medicine and Surgery  
Johns Hopkins University



Please see Appendix for ‘Line Insertion Checklist’


Source: Pronovost P, et al., “An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU,” *New England Journal of Medicine*, 2006, 355(26): 2725–2732; Clinical Advisory Board interviews and analysis.

# Practice #4: Dedicated Insertion Team

# Pulling Catheter

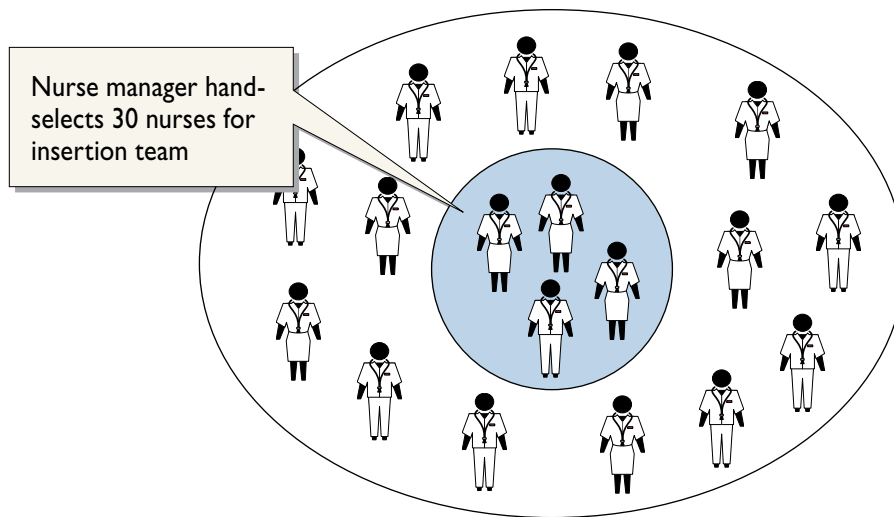
## Taking a Focused-Factory Approach

### CASE IN BRIEF

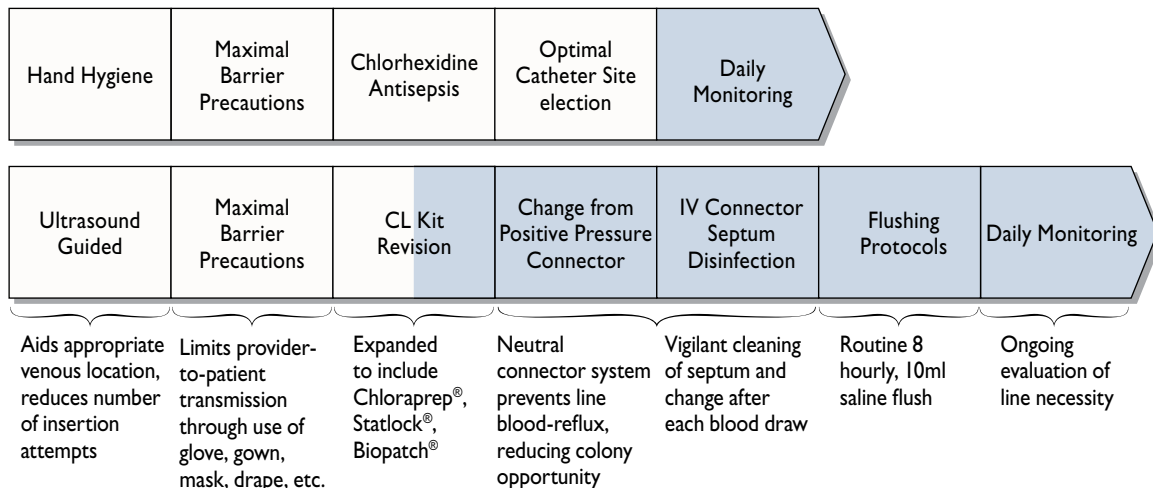


- A 225-bed Hospital in Roseville, CA
- Nurse leader recognized opportunity to reduce CR-BSI rate
- Conducted review of evidence, implemented nurse-based pilot program to standardize line insertion

### An Elite Unit



### Customizing a New Baseline

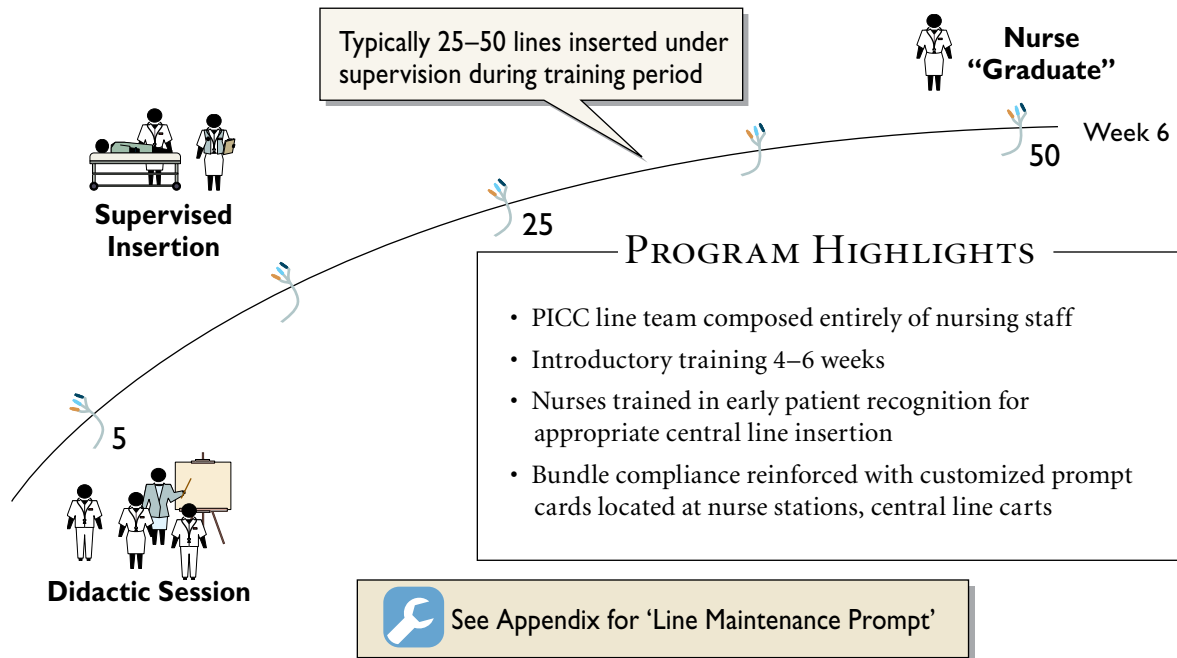


Insertion
 Maintenance

Source: Institute for Healthcare Improvement, available at: [www.ihl.org](http://www.ihl.org), accessed April 1, 2008; Harnage S, "Achieving Zero Catheter Related Blood Stream Infections: 15 Months Success in a Community Based Medical Center", *Journal of the Association for Vascular Access*, 2007, 12(4): 218-225; Clinical Advisory Board interviews and analysis.

# Practice into Line

## Accelerating the Learning Curve Ensuring Consistency with Hands-On Training



Source: Harnage S, "Achieving Zero Catheter Related Blood Stream Infections: 15 Months Success Community Based Medical Center" *Journal of the Association for Vascular Access*, 2007; 12(4): 218–225; Clinical Advisory Board interviews and analysis.

# Infection Reduction

## Emulating Success

### Translating Unit Success to Housewide Strategy



#### Expanding Domain

- Demonstrated benefit expands scope of PICC use
- Physicians endorsed increase in volume of lines inserted by dedicated team



#### Increasing Compliance

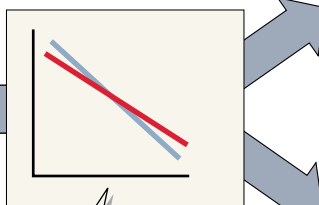
- Infection rate success encouraged bundle adoption by physicians
- CR-BSI achievement drove internal awareness of compliance necessity

#### Focusing Practice



- Initial practice exclusively used by specialized line team
- Efficacy of method illustrated potential for larger scale impact

#### Achieving Gains



Physician acceptance driven by reduced infection rates, significant workload alleviation

### SEEING IS BELIEVING

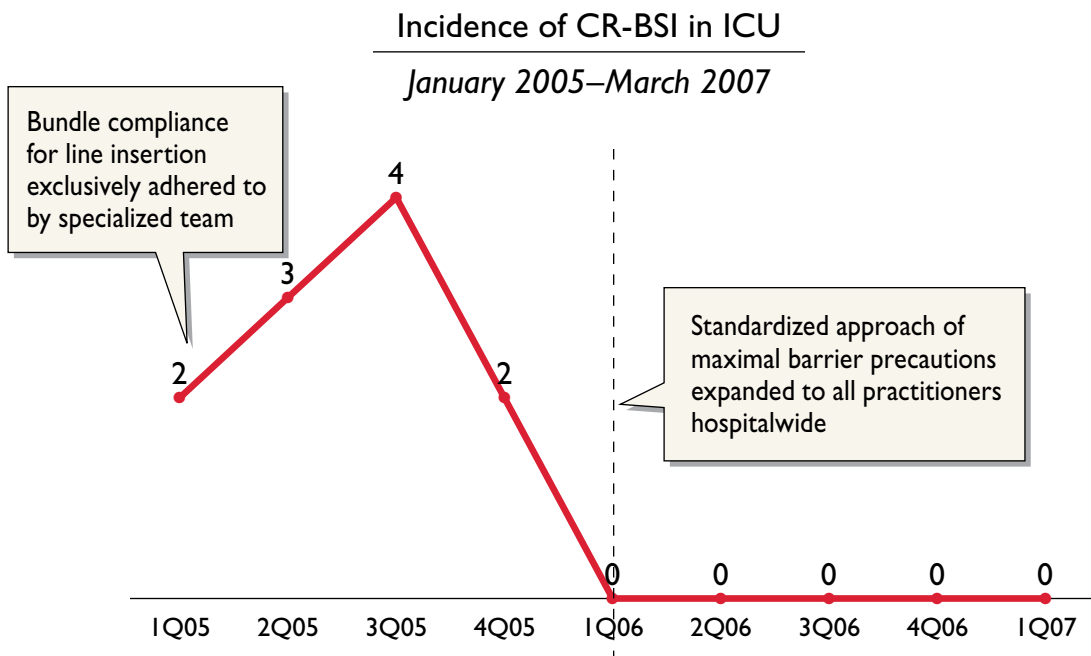
“The trauma docs didn’t believe it at first because they didn’t think (the specialized line team) could get all these lines in. However after doing it month after month... they started to say ‘This works for me’ and they began asking ‘Why do I have to do this? They can do this and they do a great job and there is the added benefit of reduced infections’. The trauma docs think this is terrific, but the buy in took about a year.”

Sophie Harnage BSN, RN  
Nurse Infusion Therapy Services Manager  
Sutter Health

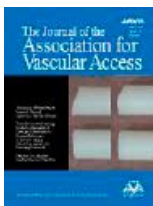
Source: Clinical Advisory Board interviews and analysis.

# Roll Out

## Bringing Down the House Global Implementation Yields Sustained Reduction



### A WIN-WIN



“The success of this bundle in preventing CR-BSI has improved patient care and promoted advance practice for our PICC nurse team.”

Sophie Harnage BSN, RN  
Nurse Infusion Therapy Services Manager  
Sutter Health

Source: Harnage SA, “Achieving Zero Catheter Related Blood Stream Infections: 15 Months Success in a Community Based Medical Center,” *Journal of the Association for Vascular Access*, 2007, 12:218–225; Clinical Advisory Board interviews and analysis.