

On the CUSP: STOP CAUTI

Technical Aspects and Cultivating Culture Change

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Project Overview

Project Goals for CAUTI are to:

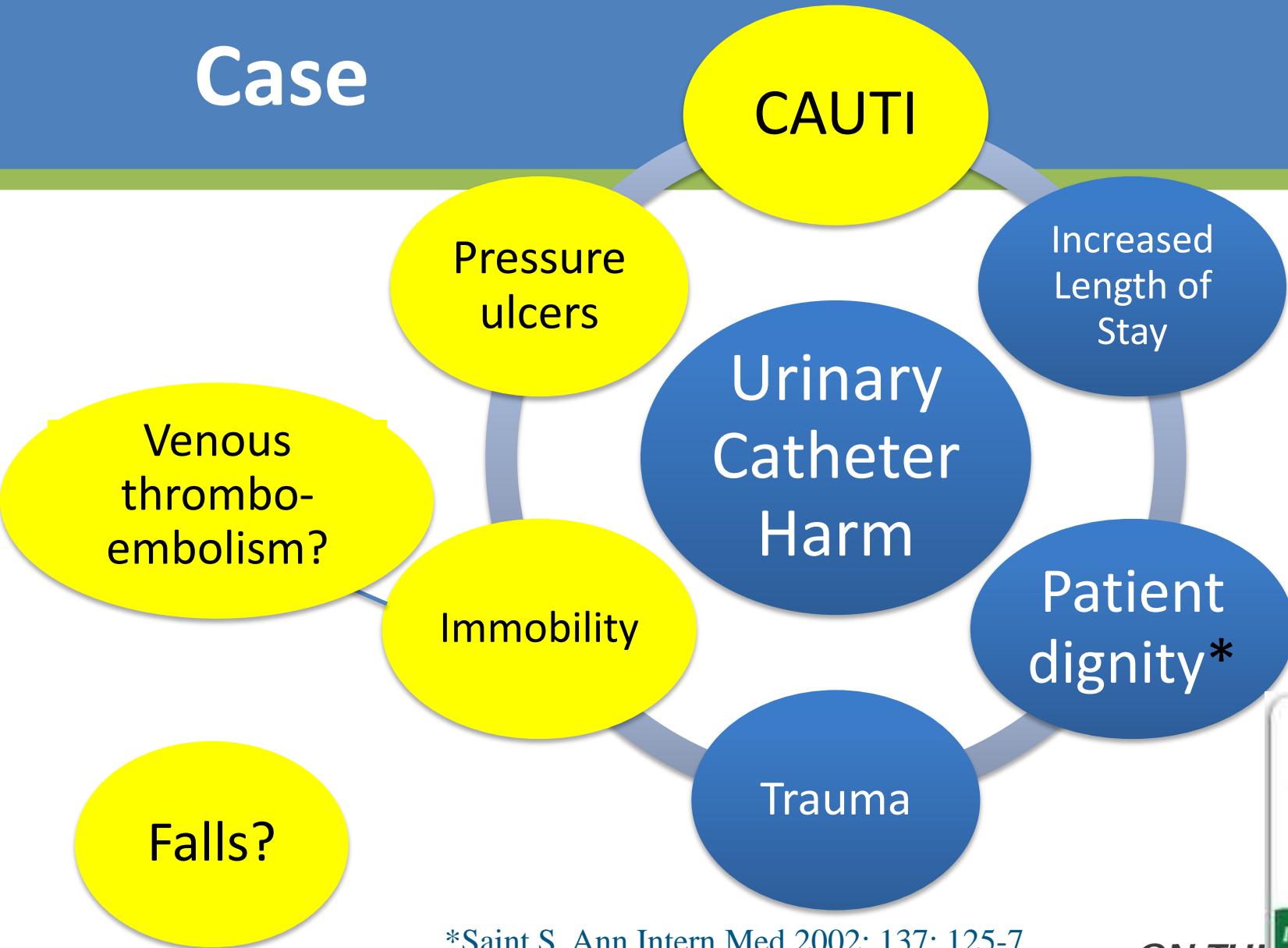
1. reduce mean CAUTI rates in participating clinical units by 25 percent; and
2. improve safety culture as evidenced by improved teamwork and communication by employing CUSP methodology.



Objectives

- Review technical aspects of CAUTI prevention
- Understand the CUSP framework for culture change
- Apply culture change principles to case scenarios

Case



*Saint S, Ann Intern Med 2002; 137: 125-7



ON THE

Epidemiology

- HAIs result in 99,000 deaths & \$30 billion annually
- CAUTI most frequent HAI
 - 35% of HAI
 - \$565 million in costs
 - > 8,000 deaths per year
- Urinary catheters are frequently used in the hospital setting.
- The presence of the indwelling urinary catheter increases the risk of urinary tract infections.

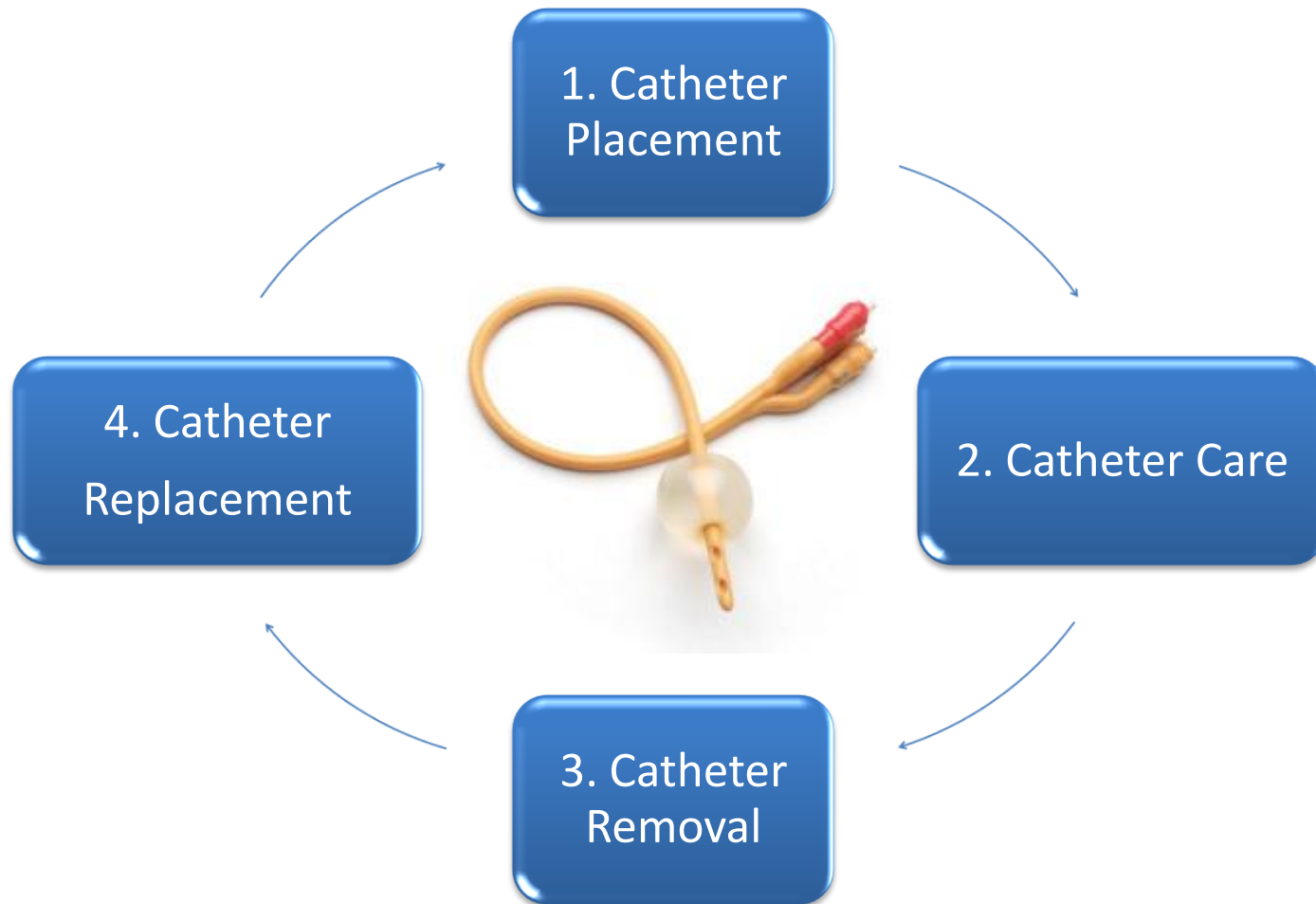
NHSN Surveillance Definitions for SUTI, January 2013

Criterion	Urinary Tract Infection (UTI)
	Symptomatic UTI (SUTI) Must meet at least 1 of the following criteria:
1a	Patient had an indwelling urinary catheter in place for >2 calendar days, with day of device placement being Day 1, and catheter was in place when all elements of this criterion were first present together. <i>and</i> at least 1 of the following signs or symptoms: fever (>38°C); suprapubic tenderness*; costovertebral angle pain or tenderness* <i>and</i> a positive urine culture of $\geq 10^5$ colony-forming units (CFU)/ml with no more than 2 species of microorganisms. Elements of the criterion must occur within a timeframe that does not exceed a gap of 1 calendar day (see Comments section below). -----OR----- Patient had an indwelling urinary catheter in place for >2 calendar days and had it removed the day of or the day before all elements of this criterion were first present together <i>and</i> at least 1 of the following signs or symptoms: fever (>38°C); urgency*; frequency*; dysuria*; suprapubic tenderness*; costovertebral angle pain or tenderness* <i>and</i> a positive urine culture of $\geq 10^5$ colony-forming units (CFU)/ml with no more than 2 species of microorganisms. Elements of the criterion must occur within a timeframe that does not exceed a gap of 1 calendar day (see Comments section below). *With no other recognized cause

>2 day duration of catheter use

1 day timeframe for clinical and lab criteria

“Lifecycle” of the Urinary Catheter



Meddings J, Saint S. Disrupting the life cycle of the urinary catheter. Clin Infect Dis 2011;52:1291-3.

Reducing Risk of CAUTI

Limit catheter use to indications (Avoid placing the catheter unless appropriately indicated)

Limit catheter use to indications (promptly remove those that are no longer necessary)

Appropriate Care of the Catheter

Proper Insertion Technique

Reduce urinary catheter days leading to a reduction in days at risk for CAUTI

Reduce risk of introducing organisms to the bladder leading to a reduction of risk of CAUTI when catheter in place

Appropriate Indications for Indwelling Urinary Catheter Use

Appropriate Indications

Patient has acute urinary retention or obstruction

Need for accurate measurements of urinary output in critically ill patients.

Perioperative use for selected procedures:

- urologic surgery or other surgery on contiguous structures of genitourinary tract,
- anticipated prolonged surgery duration (removed in post-anesthesia unit),
- anticipated to receive large-volume infusions or diuretics in surgery,
- operative patients with urinary incontinence,
- need to intraoperative monitoring of urinary output.

To assist in healing of open sacral or perineal wounds in incontinent patients.

Requires prolonged immobilization (e.g., potentially unstable thoracic or lumbar spine)

To improve comfort for end of life care if needed.

Inappropriate Indications for Indwelling Urinary Catheter Use

Inappropriate Indications

As a substitute for nursing care of the patient or resident with incontinence

As a means of obtaining urine for culture or other diagnostic tests when the patient can voluntarily void

For prolonged postoperative duration without appropriate indications (e.g., structural repair of urethra or contiguous structures, prolonged effect of epidural anaesthesia, etc.)

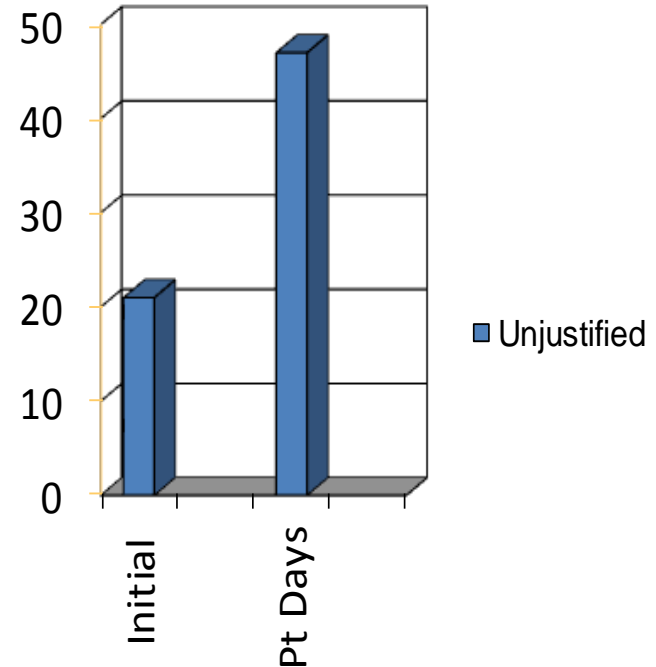
Routinely for patients receiving epidural anesthesia/analgesia.

Urinary Catheter Removal

- Study by Jain (1995) examined number of unjustified or inappropriately placed urinary catheters
- Time of insertion, 21%
- Several days later, 47%
- “Urinary Incontinence” was most common reason cited

Jain. Arch Int Med 1995

Percent unjustified

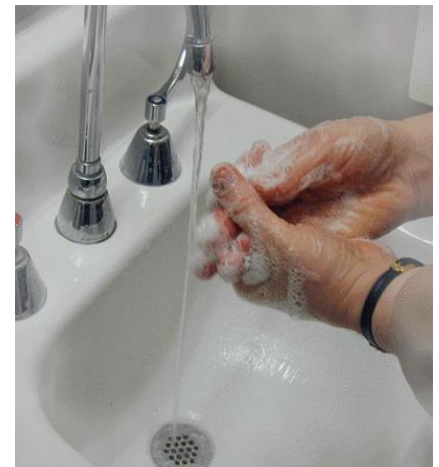


Urinary Catheter Removal

- Change in patient status
 - hemodynamic stability, post-op
- Change in patient location
 - ICU, PACU/OR, ED to floor
- Change in shift
 - Daily huddle or rounds
- Patient request

Urinary Catheter Insertion

- Ensure that only properly trained persons insert catheters.
 - Competencies for urinary catheter placement?
- Insert using aseptic technique
 - Goal is to avoid contamination of the sterile catheter during the insertion process
- Don't make it a one-person job



Urinary Catheter Insertion Checklist

<u>Components of checklist</u>	Compliant	
	Yes	Yes, with correction
Hand hygiene before and after procedure		
Sterile gloves, drapes, sponges, aseptic sterile solution for cleaning, and single use packet lubricant used		
Aseptic insertion technique (no contamination during placement)		
Proper securement of urinary catheter post-procedure		
Closed drainage system and bag below patient post-procedure		

Make the Steps for Insertion Easier



Urinary Catheter Maintenance

- Use securement device
- Maintain a closed drainage system



Maintain Unobstructed Flow

- Free of loops or kinks
- Keep it simple & safe



Urinary Catheter Maintenance



- Use routine hygiene
 - do not clean the peri-urethral area with antiseptics
- Keep collection bag below the bladder
- Empty the bag regularly

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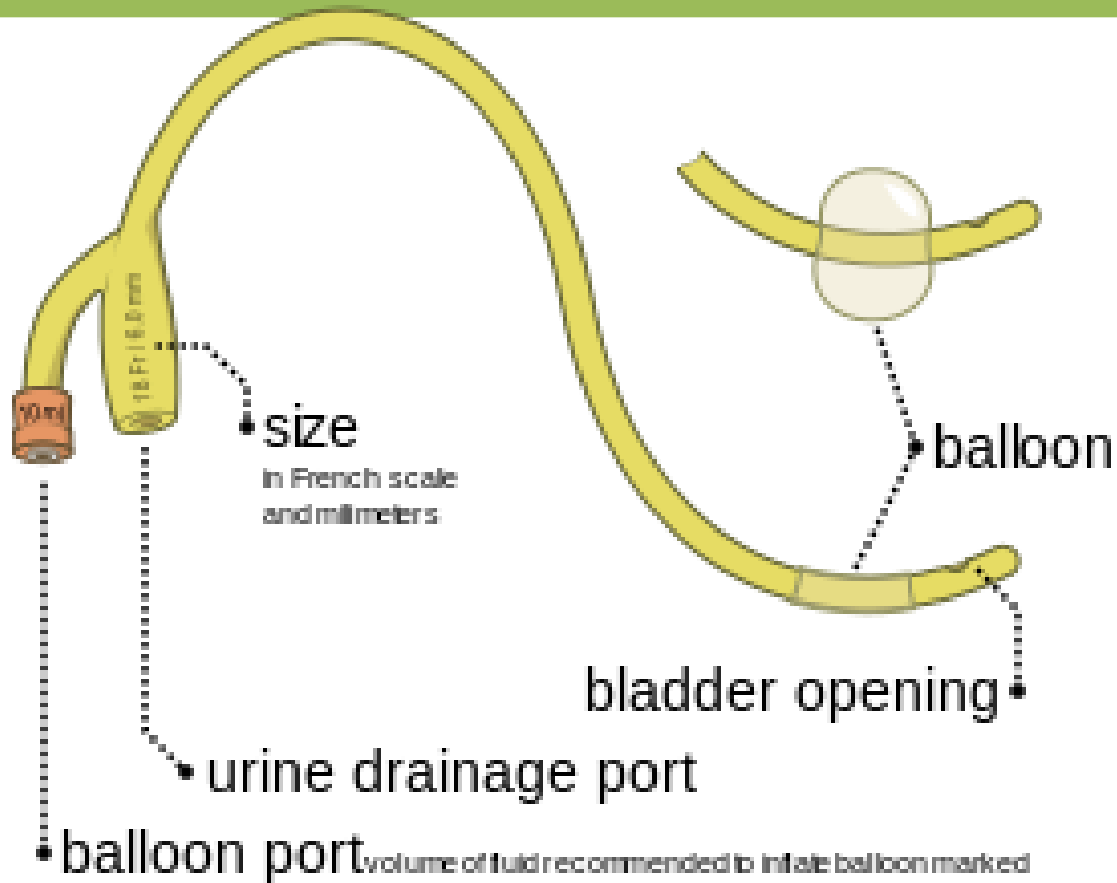
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Organizational Culture

...the shared set of social values and beliefs, both explicit and implicit, that guides actions and decisions within the organization

Foley Catheter



CUSP Culture

CUSP

Science of Safety

Standardize

Checks for processes

Learn from defects

Teamwork

Integration

Communication

Process

Structure



CAUTI Culture

CAUTI

Indications

Orders

HICPAC

Insertion and Maintenance

Technique

Competency

Removal

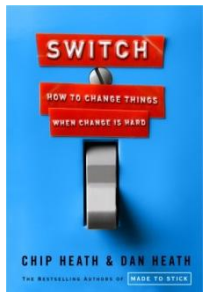
Process

Structure

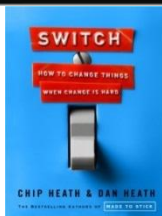
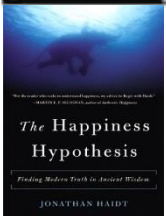
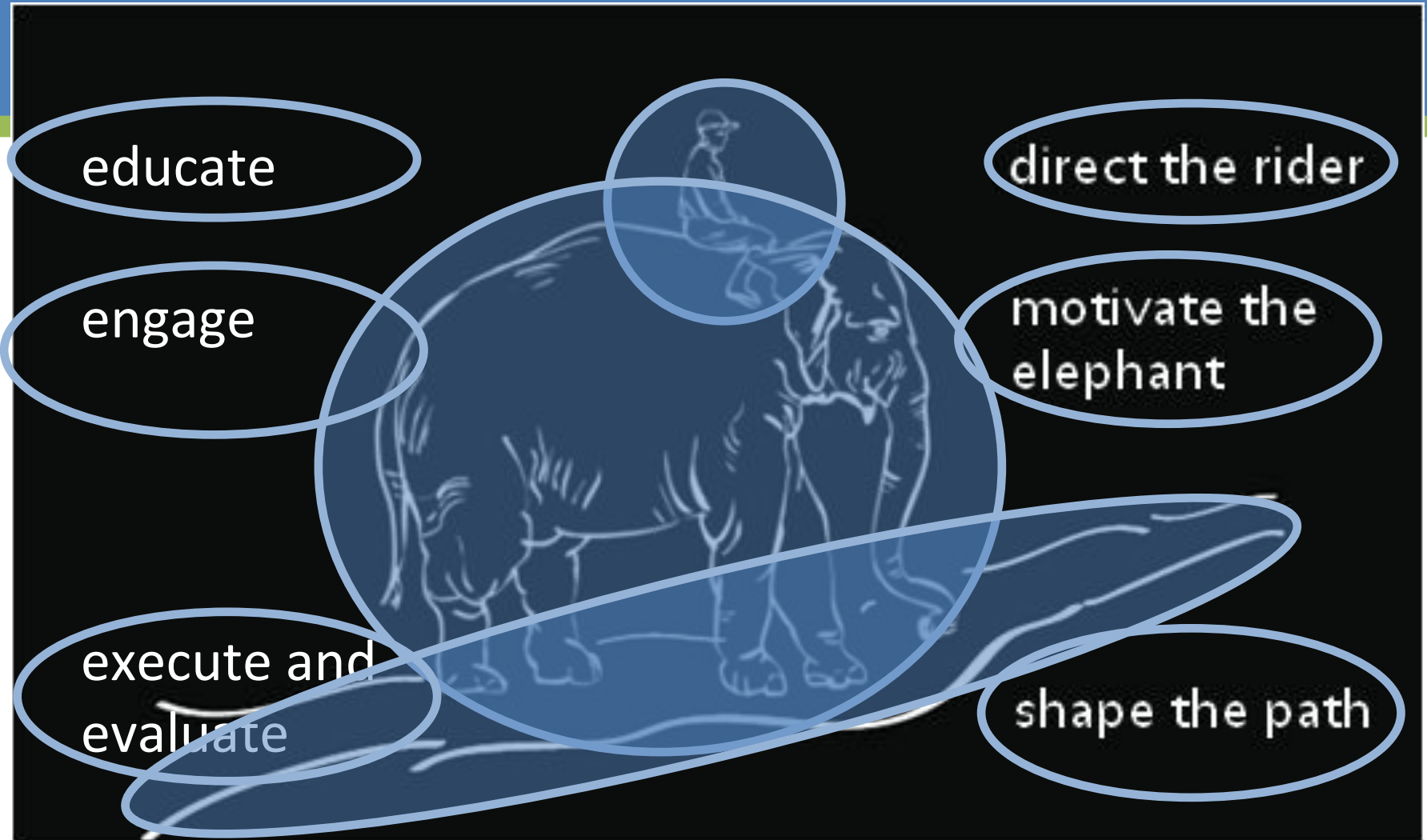


Leading Change

**For anything to change,
someone has to start acting differently.**



Can you get people to start behaving in a new way?



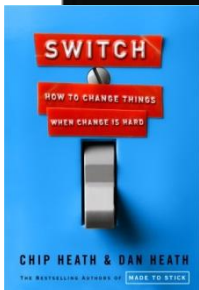
Can you get people to start behaving in a new way?



direct the rider

motivate the elephant

shape the path



What looks like resistance is often a lack of clarity.

ON THE CUSP:
STOP HAI

Can you get people to start behaving in a new way?



direct the rider

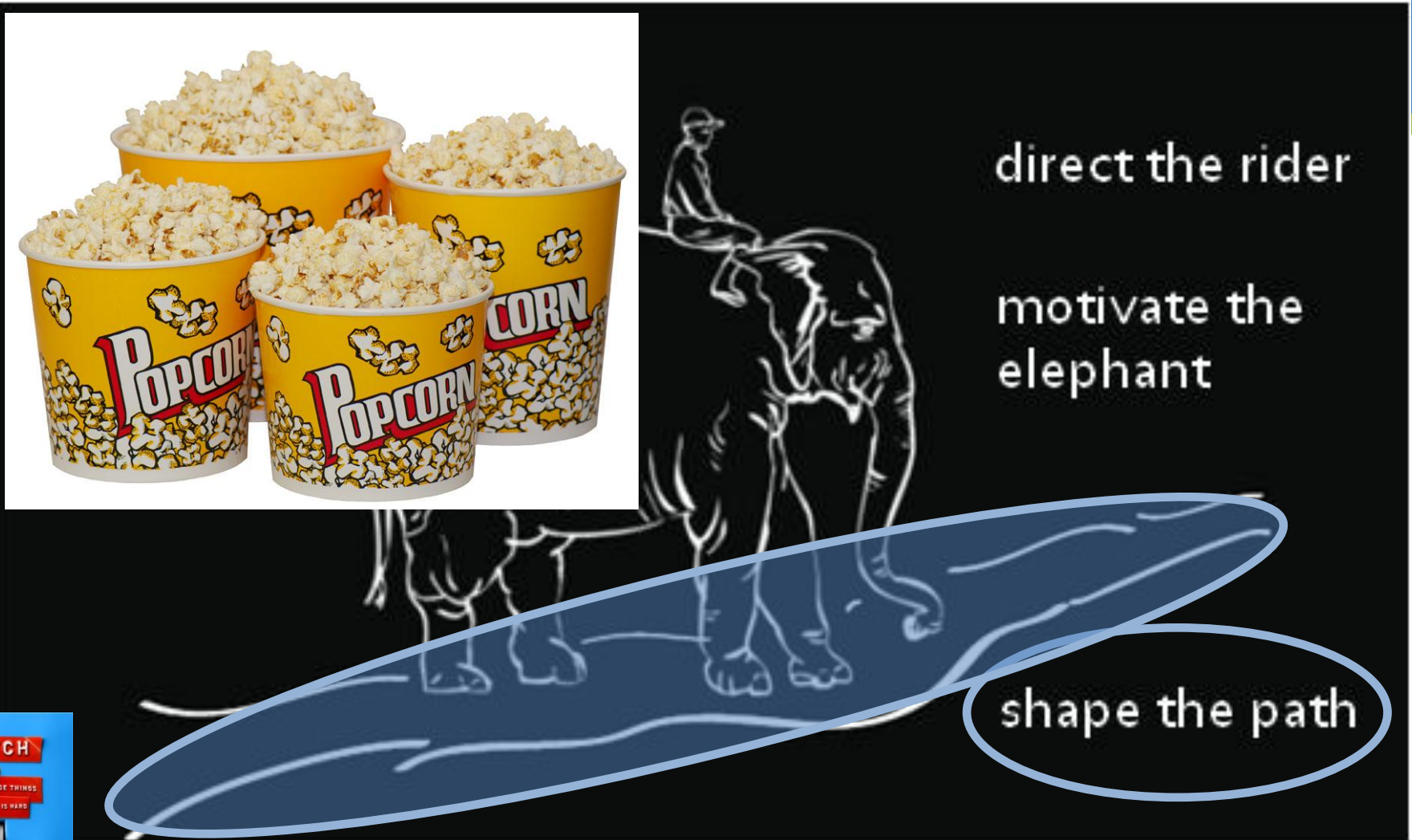
motivate the elephant



What looks like laziness is often exhaustion.

ON THE CUSP:
STOP HAI

Can you get people to start behaving in a new way?



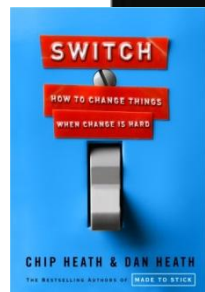
direct the rider

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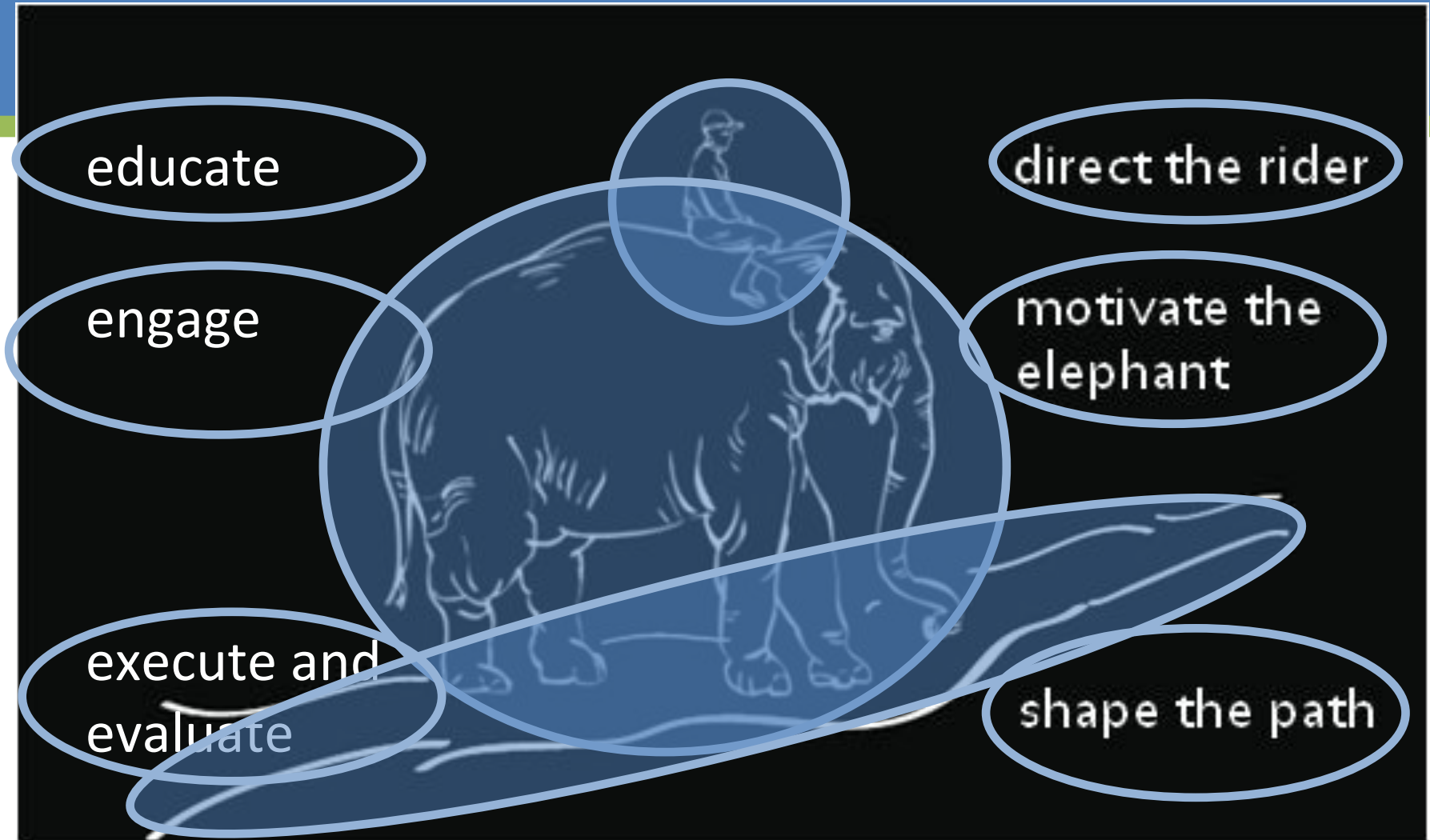
shape the path

What looks like a people problem is often a situation problem.

**ON THE CUSP:
STOP HAI**



Can you get people to start behaving in a new way?



CUSP Culture Change

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

Josie King





<http://www.onthecuspstophai.org/on-the-cuspstop-cauti/toolkits-and-resources/cusp-resources/>

ON THE CUSP:
STOP HAI

Challenging ...So Many Solutions?

Lean Manufacturing Toyota Production System Success Story



Toyota Production System

- 5S
- 7 Wastes
- Suggestion System
- Visual Controls
- Defect Warning
- Total Preventive Maintenance (TPM)
- Standard Operations

Just In Time (JIT) Autonomation

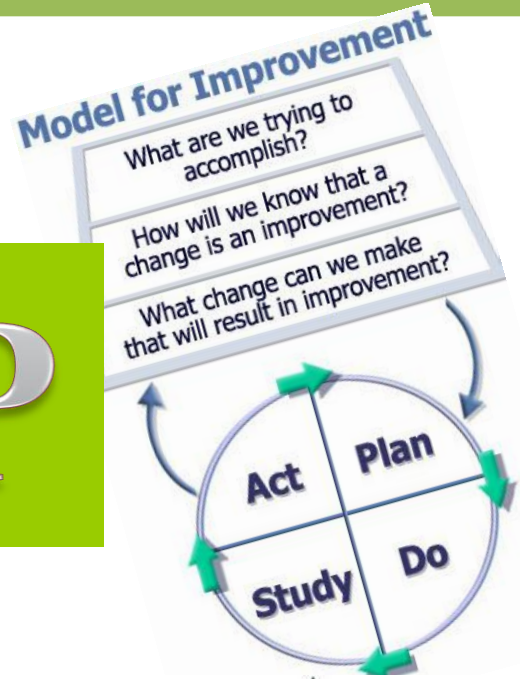
Load Leveling

Results for a sample year:

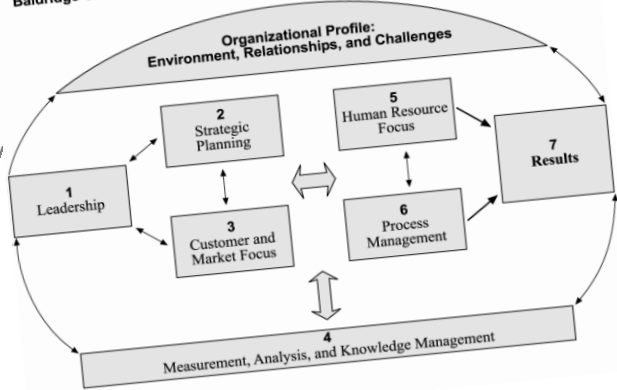
- More than 700,000 improvement suggestions.
- That is an average of over 10 improvement suggestions per employee per year.
- Over 99% of suggestions were implemented.

1000x

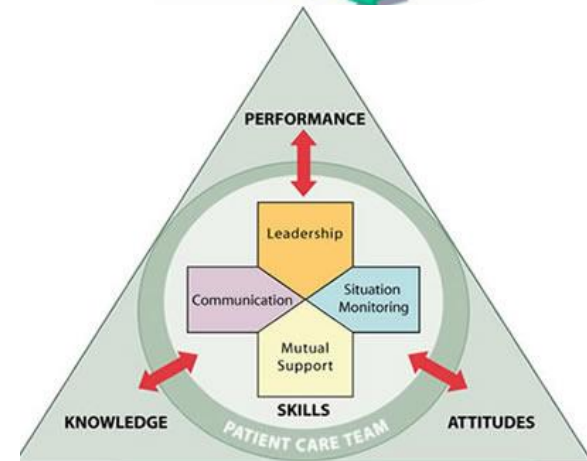
CUSP



Baldrige Criteria for Performance Excellence Framework: A Systems Perspective



Source: Baldrige (2006)



What is HSOPS?

Hospital Survey on Patient Safety Culture

- ❑ Overall perceptions of safety
- ❑ Frequency of events reported
- ❑ Number of events reported
- ❑ Overall patient safety grade
- ❑ Staffing
- ❑ Hospital management support for patient safety
- ❑ Teamwork across hospital units
- ❑ Hospital handoffs and transitions
- ❑ Supervisor/manager expectations & actions promoting safety
- ❑ Organizational learning – continuous improvement
- ❑ Teamwork within units
- ❑ Communication openness
- ❑ Feedback and communication about error
- ❑ Non-punitive response to error



References:

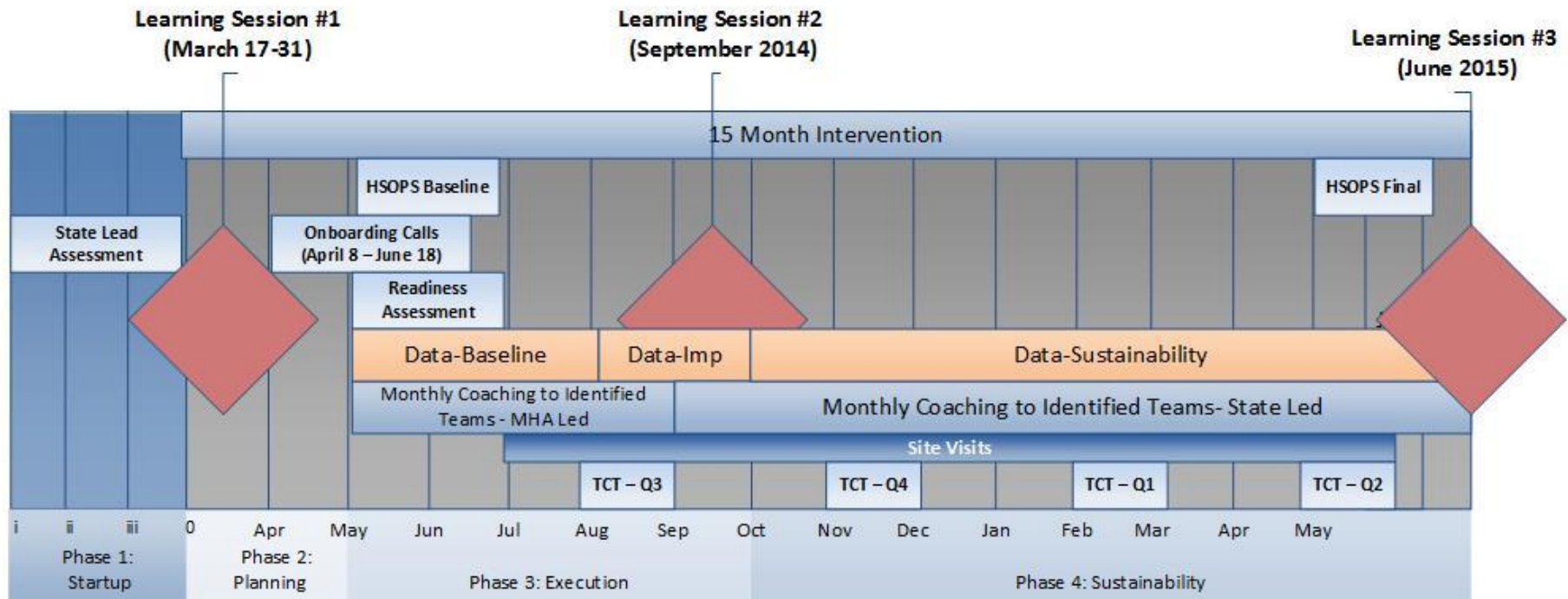
AHRQ (Agency of Healthcare Research and Quality)
<http://www.ahrq.gov/qual/patientsafetyculture/hospsurvey/index.htm#Resources>

MHA Keystone Center for Patient Safety & Quality



Evaluate

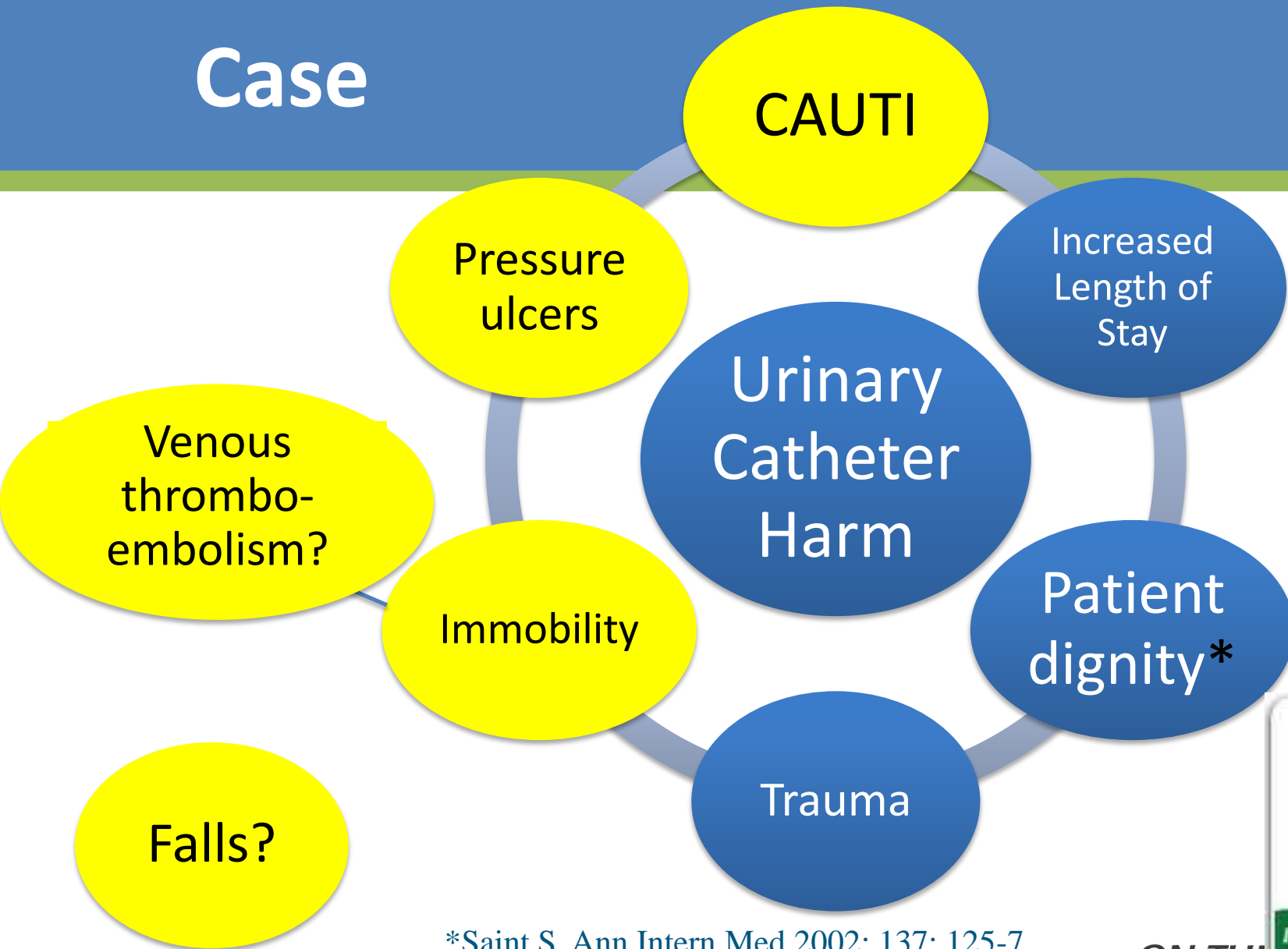
On the CUSP- Stop CAUTI Timeline



CAUTI Culture Change

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ON THE

Sample Costs

Daily Census	ALOS	Yearly Admits	Foley Rate	Annual Savings
800	4	73,000	25%	\$1.1M
400	4	36,500	25%	\$552k
200	4	18,250	25%	\$276k

www.catheterout.org



Reducing Risk of CAUTI

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Alternatives to Urinary Catheters



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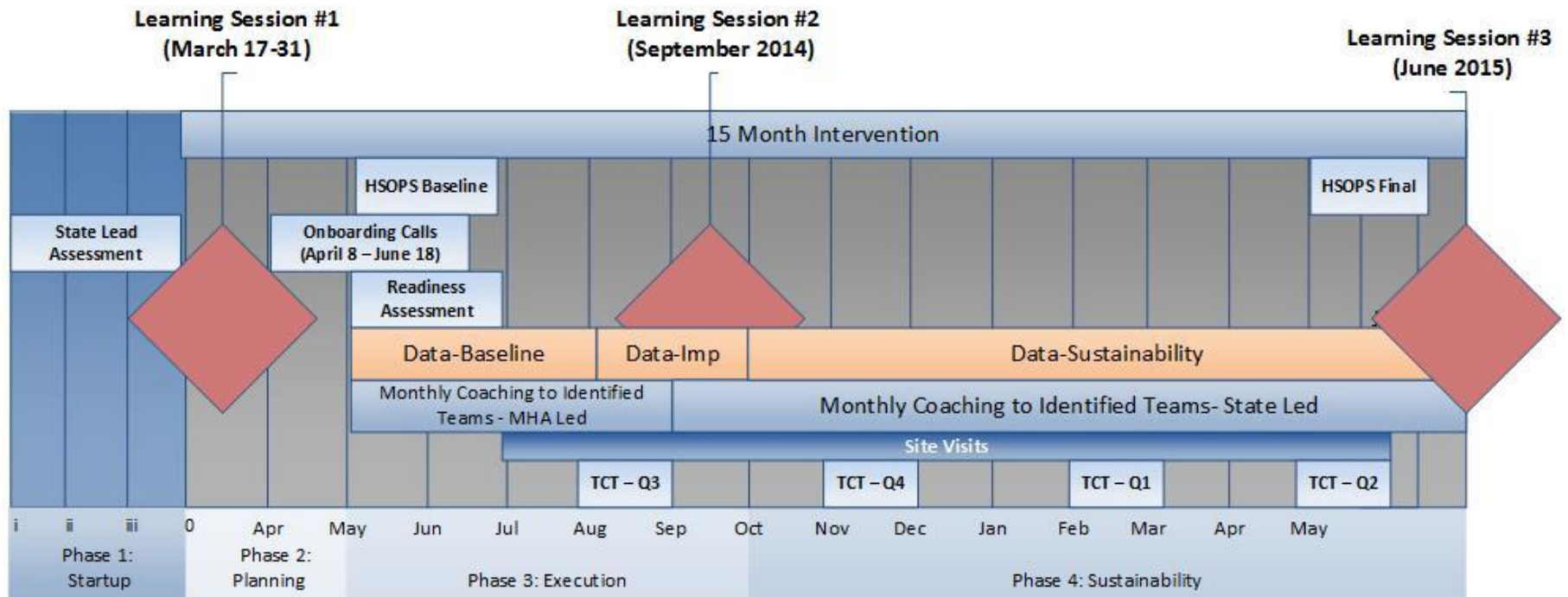
**ON THE CUSP:
STOP HAI**

Execute

- Insertion
 - Mandatory order with indication
 - Urinary retention protocol
- Insertion and maintenance technique
 - Competency evaluation
- Removal
 - Nurse driven protocol

Evaluate

On the CUSP- Stop CAUTI Timeline



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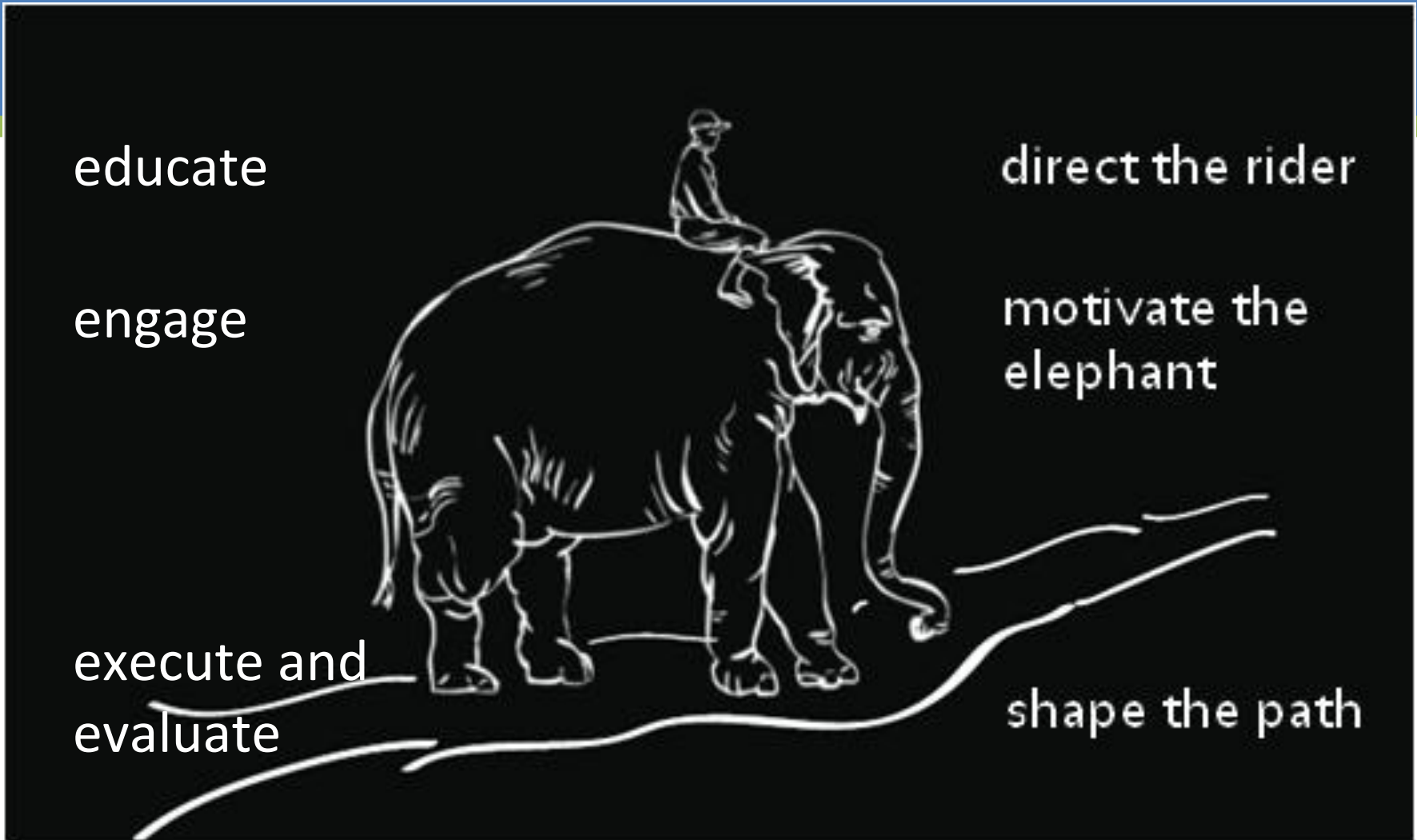
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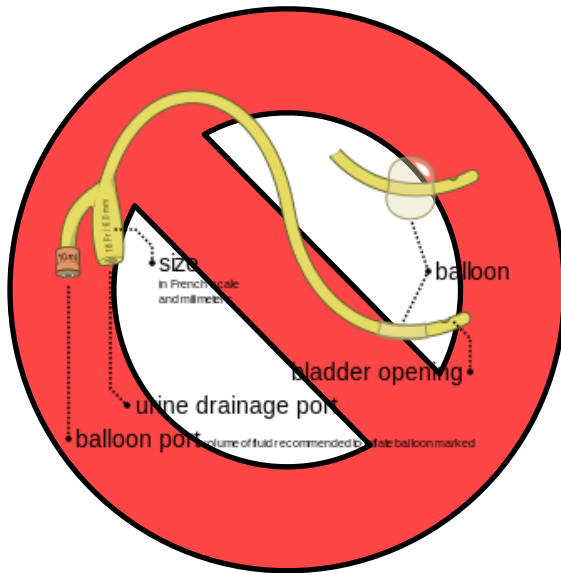
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Case Scenarios



Case Scenario #1

- Three months into the initiative you find that >50% of the seals are broken in ICU patients with urinary catheters.
- You investigate and find that urinary catheters placed in the ED do not have urimeters.

Case Scenario #1

- What are the possible reasons for a lack of urimeters in urinary catheters placed in the ED?
- What are possible solutions?



Case Scenario #2

- Ten months into the initiative, you hear that one specific physician is overriding the urinary catheter placement order set by listing the reason as “other” and ordering foley catheters for I&O monitoring in non-critically ill patients.

Case Scenario #2

- You interview the physician who says it is very important to have good I's and O's.
- He also says he doesn't have a problem with CAUTI.

Case Scenario #2

- What is preventing this physician from changing his practice?
- How would you facilitate a change in this physician's practice with regards to urinary catheters?

Thank You!

