Preventing Infections and Sustaining Results Over Time

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PublicHealth

Basics of Infection Prevention
2-Day Mini-Course
2016

Key Objectives

1. Describe models for improvement in HAI prevention
2. Discuss essential elements necessary for sustainability

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Implementing an HAI Prevention Initiative

Use **Your Hospital's** favorite quality improvement model for HAI Prevention "Technical Work"

(Most QI models follow same basic principles)

Translating Evidence Into Practice	HAI Prevention Initiative
1. Know the evidence-based practices	1. Establish goals; implement Core prevention practices
2. Identify local barriers to implementation	2. Assess current practice
3. Measure performance • Infection data • Adherence to evidence-based clinical practices	3. Monitor infection rates over time; measure adherence to Core practices; implement supplemental prevention practices if rates remain high
4. Continue to ensure all patients get the evidence-based practice (evaluate)	4. Repeat

Technical Work

Adapted from www.hopkinsmedicine.org/armstrong_institute

Model for Improvement

One Model:
Rapid Cycle Improvement

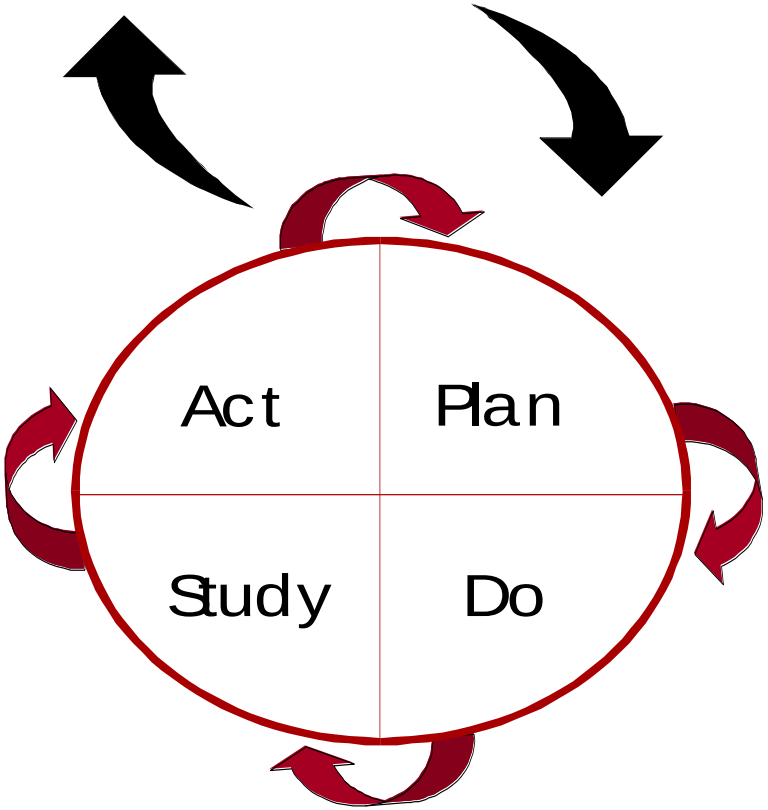
Concept

First try a change idea on a small scale to see how it works

Then modify it and try it again until it works very well for staff and patients

Then, and only then, does a change become a permanent improvement

What are we trying to accomplish?
How will we know that a change is an improvement?
What change can we make that will result in improvement?



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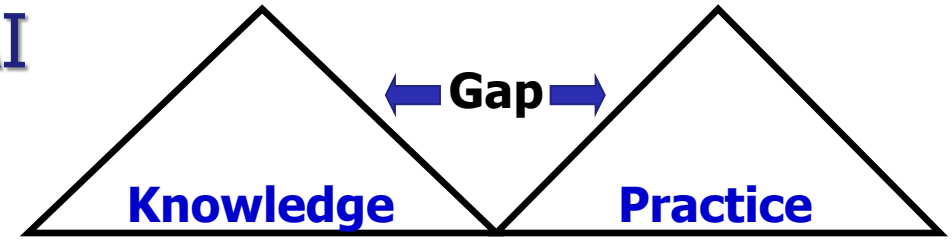
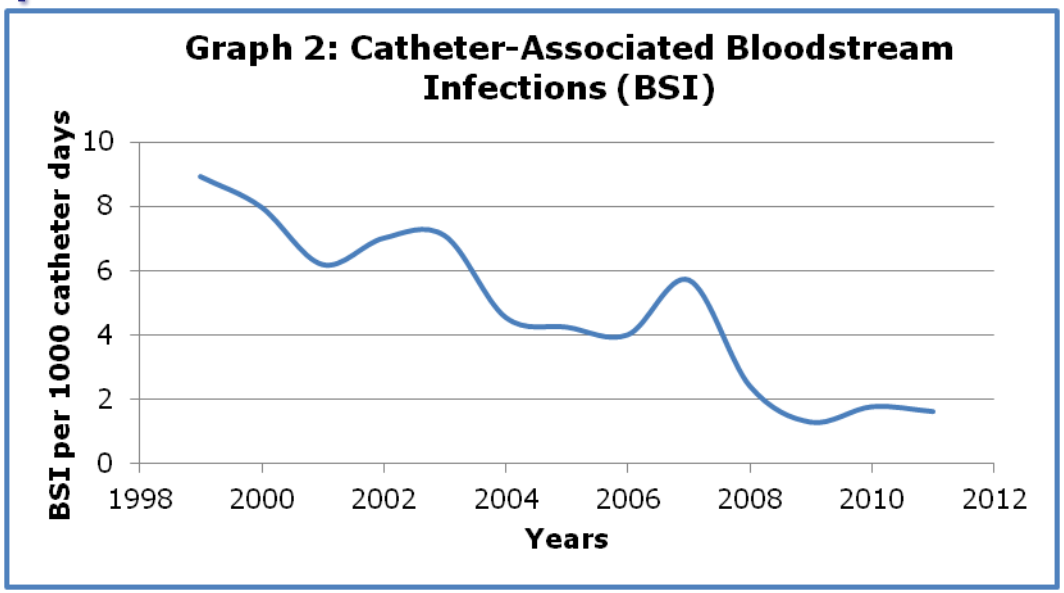
Critical to Prevention!

1. Measure adherence to practices known to prevent HAI



2. Monitor infection rates to assess progress of your HAI prevention efforts



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Change, Improvement, Sustainability

"Of all changes I've observed, about 5% were improvements; the rest, at best, were illusions of progress."

W. Edwards Deming

As Preventionists…

- We must become masters of improvement
- We must learn how to improve rapidly
- We must learn to discern the difference between short-term improvement and illusions of progress
- **We must recognize that only real improvement results in <u>sustainable</u> change**

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Sustainability

- When a new practice or innovation loses its separate identity and becomes part of regular activities (institutionalization)
- When desired health benefits are improved and the improvements are maintained over time (i.e. reduced infection incidence)
- When hospital staff maintain "building capacity" (i.e. share expertise and provide ongoing support to others)

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Commit to Sustaining Prevention Progress!

- Requires same level of work as the technical components of a clinical improvement project
- Must start early in the implementation of the clinical improvement project (e.g. HAI prevention)
- Needs to be an integral part of the improvement project

Sustainability is difficult to achieve as a "latent goal"

Shediac-Rizkallah, Health Educ Res 1998; 13: 87-108

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Model for Sustainability: The Comprehensive Unit-Based Safety Program (CUSP)

- A 5-step program to implement simultaneously with a clinical improvement initiative for sustainability
- Recognizes change needs to occur locally (at the unit-level)
- Empowers staff to assume responsibility for identifying and learning from mistakes without fear of reprisal
- Designed to change **workplace culture** to bring about significant safety improvements

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What is a Workplace Safe Culture?

- An environment where teamwork is embraced
- Frontline workers **speak up** if they have concerns and **are heard** when they express concern
- Acknowledgement that wise decisions are made when there is diverse and independent input
- Recognition that patient care is a team effort
- Many viewpoints are sought to prevent harm

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Science of Safety

Every system is perfectly designed to achieve its end result

- Systems determine performance
- **Safety** is a property of the system

Basic principles of **safe design** include

- Standardize work
- Create independent checks for key processes (i.e. checklists)
- Learn from mistakes

Safe work principles must be adopted by every member of the **team**

Safe design principles apply to

- **Technical work** (e.g. science, clinical practice improvements) and
- **Adaptive work** (i.e. teamwork, culture change, CUSP)

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HAI Prevention Technical Work ***WITH*** Sustainability Adaptive Work

Translating Evidence Into Practice	HAI Prevention Initiative	Comprehensive Unit based Safety Program (CUSP)
1. Know the evidence-based practices 2. Identify local barriers to implementation 3. Measure performance (i.e. adherence with evidence-based practices) 4. Continue to ensure all patients get the evidence-based practice (evaluate)	1. Establish goals; implement Core prevention practices 2. Assess current practice 3. Monitor infection rates over time; measure adherence to Core practices; implement supplemental prevention practices if rates remain high 4. Repeat	Science of safety Senior executive support (hands-on) Learn from defects (errors) Unit-level intervention Teamwork Culture change
Technical Work		**Adaptive Work**

Adapted from www.hopkinsmedicine.org/armstrong_institute

www.ahrq.gov/cusptoolkit

CUSP Framework

1. Train staff in the **science of safety**
   - Every person who spends ≥60 percent working time on unit
2. Engage staff to **identify defects**
   - Defined as "likely ways patients may be harmed on our unit"
3. Partner with **senior executive**; perform safety rounds
4. Continue to **learn from defects**
5. Implement **tools** for improvement

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www.ahrq.gov/cusptoolkit

4 Essentials for **Sustainable** Improvement

- Engaged senior executive
- Regular "CUSP" meetings
  - Not less than monthly
  - Target 60% of staff participating
- "Learning from Defects" tool used and mastered
- Accountability through timelines and appropriate pace

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www.ahrq.gov/cusptoolkit

Learn from Defects

- Ask 4 questions
  1. *What happened?*
  2. *Why did it happen?*
  3. *What can you do to reduce risk?*
  4. *How will you know risks have been reduced?*
- Develop a plan for addressing the selected defect
  - Select the best strategy to reduce the risk

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CUSP "Learning from Defects" Tool (aka Root Cause Analysis)

Purpose of tool: To reduce possibility of harm to future patients

- Provides structured approach to identify types of systems that contributed to the defect
- Assesses contributing factors related to the error or defect

Patient Factors	Task	Providers	Team
Training and education	Information technology	Local environment	Institutional environment

- ALL staff involved in delivery of care related to the defect should be present to evaluate the defect

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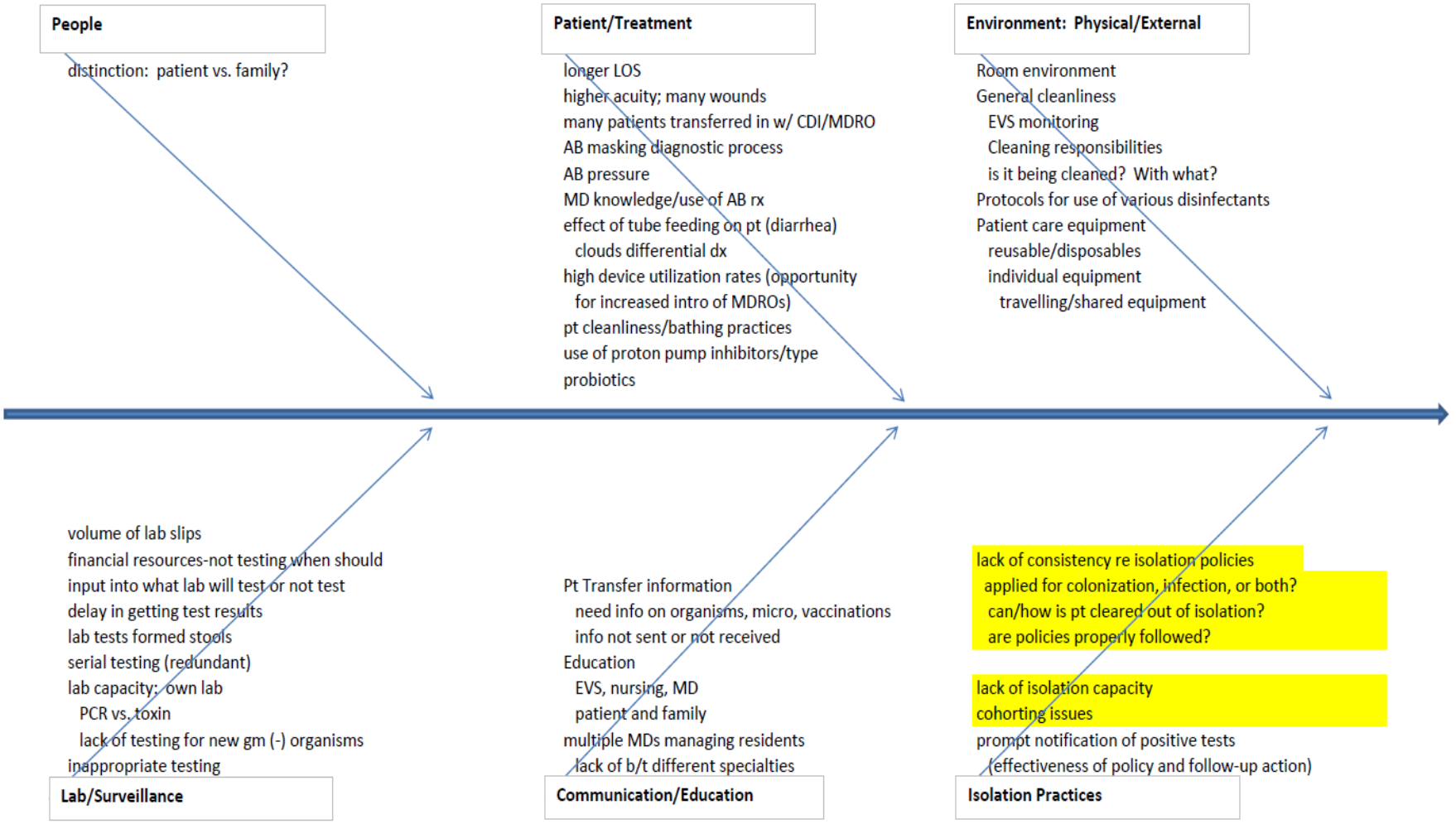
Sample Root Cause Analysis for a CDI Project



Who should be on facility MDRO/CDI prevention team?

HOW CAN HUMAN SYSTEMS ENGINEERING BE APPLIED TO THESE ISSUES?

HAI Prevention Technical Work ***WITH*** Sustainability Adaptive Work

Translating Evidence Into Practice

1. Know the evidence-based practices
2. Identify local barriers to implementation
3. Measure performance (i.e. adherence with evidence-based practices)
4. Continue to ensure all patients get the evidence-based practice (evaluate)

HAI Prevention Initiative

1. Establish goals; implement Core prevention practices
2. Assess current practice
3. Monitor infection rates over time; measure adherence to Core practices; implement supplemental prevention practices if rates remain high
4. Repeat

Comprehensive Unit based Safety Program (CUSP)

Science of safety

Senior executive support (hands-on)

Learn from defects (errors)

Unit-level intervention

Teamwork

Culture change

Technical Work

Adaptive Work

Adapted from www.hopkinsmedicine.org/armstrong_institute

CUSP Tools for Improvement – Available on the Website

- "CEO / Senior Leader Checklist"
  - For use by senior leader to track progress, ensure organizational integration, and disseminate outcomes to employees and the board
- "Hospital Survey on Patient Safety" (HSOPS)
- Science of Safety Training Video and Sign-in Sheet
- "Staff Safety Assessment"
- "Safety Issues Worksheet for Senior Executive Partnership"
- "Learning from Defects"

MANY teaching and program implementation tools at

www.ahrq.gov/cusptoolkit

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Take-Home Messages

1. Accept that mistakes are made
2. To improve safe practices for the prevention of HAI: **Standardize**, **create independent checks**, and **learn from mistakes**
3. Focus on improving systems rather than blaming people
4. Speak up if you have concerns, listen when others do
5. Create clear **HAI Prevention** goals that include working on **Sustainability** through culture change

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Questions?

For more information, please contact any of the HAI Liaison Program IPs

Thank you!

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