Preventing Infections and Sustaining Results Over Time

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Basics of Infection Prevention
2-Day Mini-Course
2014

Key Objectives

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

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HAI Reduction Targets, 2009 HHS Action Plan

Progress as of 2012 data: **Green=**on target **Red=**not on target

Metric	Data	Target
Central line bloodstream infections	NHSN	↓ 50%
Adherence to central line insertion practices	NHSN	100%
Hospitalizations with *Clostridium difficile*	Admin	↓ 30%
Clostridium difficile infections	NHSN	↓ 30%
Catheter-associated urinary tract infections	NHSN	↓ 25%
MRSA incidence rate (healthcare-associated)	EIP	↓ 50%
MRSA bacteremia	NHSN	↓ 25%
Surgical site infections	NHSN	↓ 25%
Surgical Care Improvement Program adherence	SCIP	95%

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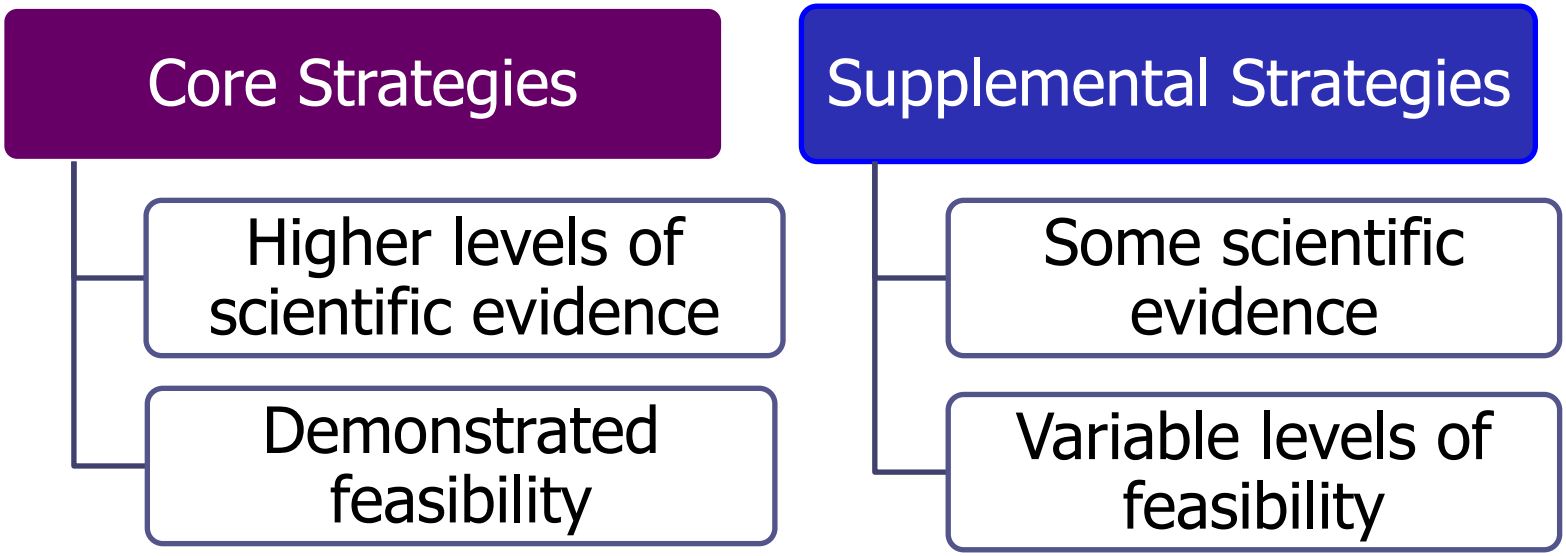
HAI Prevention Strategies



- Should become standard practice

- Consider implementing in addition to Core when infections persist or rates are high

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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

One Model:
Rapid Cycle Improvement

Concept

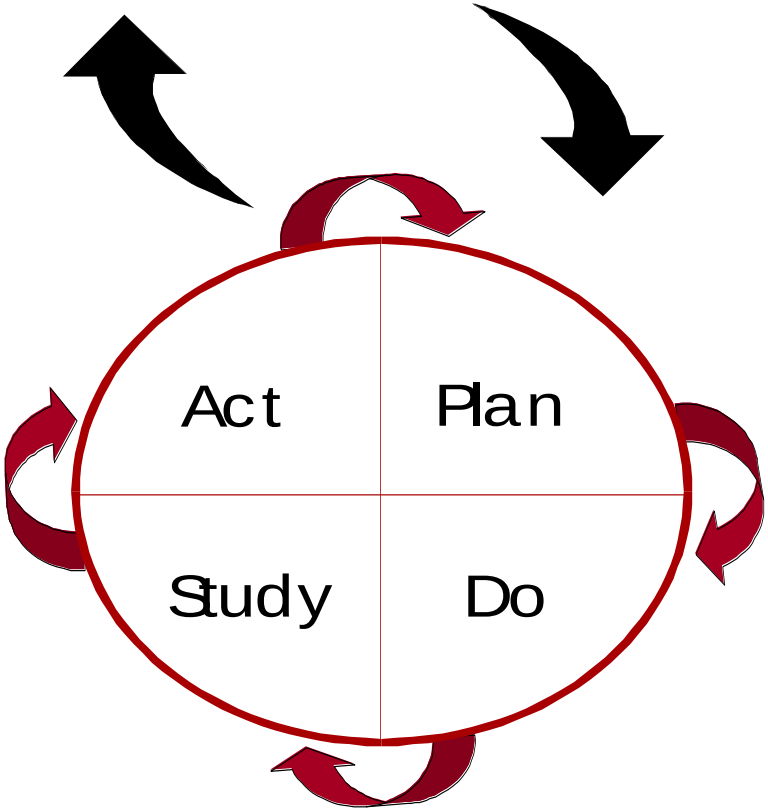
First try a change idea on a small scale to see how it works

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

Model for 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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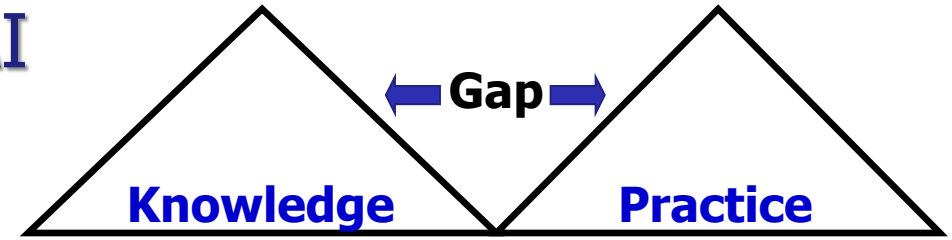
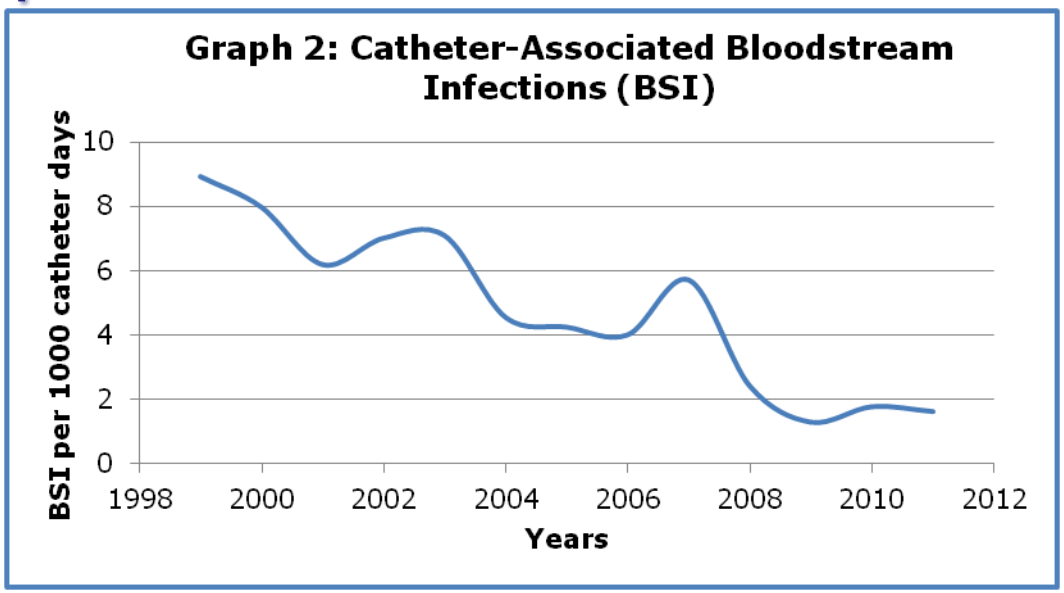
Critical to Prevention!

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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Workplace Safety 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

Preparing to Implement CUSP with an HAI Prevention Project

1. Assemble an interdisciplinary unit-based team
   - All disciplines working on unit must be represented
   - Nurses, physicians, pharmacists, support staff, etc.
   - Physician buy-in and participation is critical

2. Partner with a senior executive
   - Preferably vice-presidential level or higher
   - Should be someone who can
     - advocate for project success with other senior leaders
     - influence resource allocation
     - hold staff accountable for reducing patient risks
   - Serves as member of unit-based Team, attends monthly meetings, safety rounds

*up to 2 months prior to kick-off

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Preparing for CUSP (continued)

3. Measure "safety culture"
   - Attitudes held within workplace, from leaders to frontline staff
   - Includes how **open** HCW are to discussing safety concerns, how **safe** they feel speaking up, and how well they **believe** they work as a team
   - Can't manage what you can't measure – need to assess baseline to track progress made
   - Use a standardized, validated tool (e.g. Hospital Survey on Patient Safety Culture (HSOPS))

4. Gather all unit-specific information together and share with senior executive
   - Include safety culture survey results, adverse events, claims, outcome data (e.g. infection rates), compliance

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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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Broad Unit Staff Involvement

- Aim for 60% of all unit staff from various disciplines to be involved in the project
- Discuss the role of all staff in patient safety at huddles, staff meetings and unit councils
  - Make Science of Safety education available during all shifts
  - Have staff sign-off on receiving education (e.g. video viewing)
- Introduce the "Staff Safety Assessment" tool
  - Use to identify defects in care
  - Share stories of where harm is occurring and identify defects for resolution as part of CUSP project

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"Staff Safety Assessment" Tool

- Taps into the experience of frontline patient care staff
- Used to determine risks present on the unit that have (or could) jeopardize patient safety

> *Please describe how you think the next patient in your unit or clinical area will be harmed.*
>
> *Please describe what you think can be done to prevent or minimize this harm.*

- Allow health care providers and staff to submit anytime.
  - At a minimum, each person should complete form 2x/year

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Senior Executive "Safety Rounds"

- Senior executive sponsor must have a role in understanding areas of harm/defects on the unit
- Perform monthly safety rounds with executive interacting with unit staff
  - Most effective approach to bridge the gap between senior leaders and frontline staff
  - Evidence shows improvement in safety culture if done regularly
- Presence of Senior executive supports an environment of "**psychological safety"**
  - Defined as the degree to which team members feel they are supported when asking for help or learning from mistakes
  - Interpersonal risk minimized

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Learn from Defects and Mistakes

- Identify defects:
  - Clinical event or operational situation that you would not want to happen again
  - Any incident that someone believes caused harm or put patient at risk for harm
- Identify and prioritize defects by the potential level of risk to one or more patients
- Select one defect per month
- Address with the support of senior executive

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Learn from Defects - continued

- 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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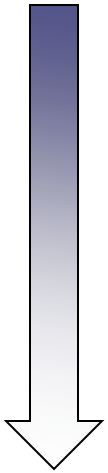
Hierarchy of Risk Reduction (or Error Prevention) Strategies

Most effective



Least effective

Forcing functions and constraints

Automation and computerization

Standardization and protocols

Checklists and double check systems

Rules and policies

Education and information

"Be more careful. Be vigilant."

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CUSP "Learning from Defects" Tool

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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CUSP Tools for Improvement

- "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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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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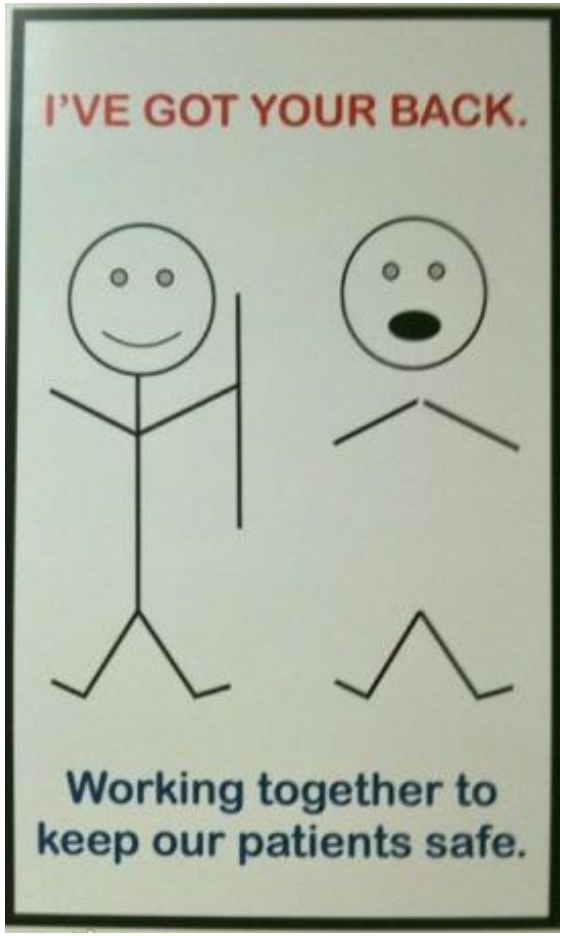
Take-Home Messages

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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