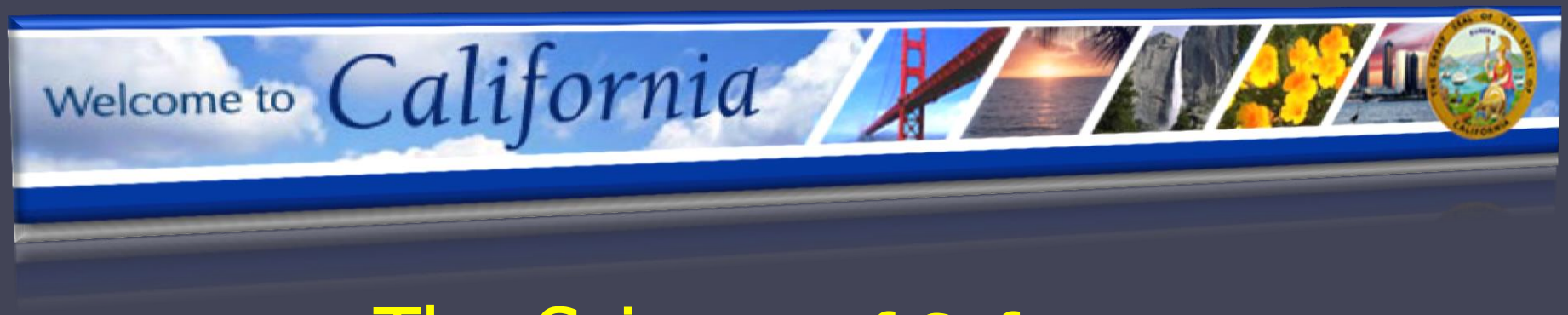

The Science of Safety

Sustaining Safe Care ~ The Penguin Project

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Adapted from "On the CUSP: Stop HAI"

Lessons Learned from the Field ~ Why Science of Safety Is Important

- Every system is perfectly designed to achieve its end results
- Sustainability measures need to be included in the project design from the beginning
- Front line staff must be an integral part of development, implementation and sustainability of the performance improvement project
- Responsibility and accountability for progress success is the work of all unit staff

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Healthcare-associated Infections HAI Elimination

Key Concepts

- Understand systems determine performance
- Appreciate basic concepts related to patient safety
- Apply strategies to both technical and socio-adaptive work
- Utilize strategies to improve system performance
  - Standardize; eliminate steps if possible
  - Create independent checks for key process
  - Learn from Mistakes/Defects/Near Misses

Key Concepts, *continued*

- Recognize that teams make wise decisions with diverse and independent input
- Build Capacity so that staff provide ongoing support and expertise
- Know sustainability is achieved when the innovation loses its separate identity and becomes part of regular activities

Framing for Learning

- Effective implementers frame change as:
  - Motivated by aspiration rather than by a defense against threat
  - A team learning project rather than as individual skill acquisition
  - An organizational challenge rather that a technical challenge
- Facilitate shared urgency, not private fear:
  - The learning frame consists of aspirational goals, an emphasis on collaborative team work, and a distinct blend of mutual respect and humility

Why Do Mistakes Happen?
Process Factors

- Variable input (different patients)
- Inconsistency / variation
- Complexity
- Too many / complicated steps
- Tight time constraints
- Hierarchical culture

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Why Do Mistakes Happen?
People Factors

- Fatigue
- Inattention / distraction
- Unfamiliar situations / new problem
- Using past solutions
- Equipment design flaws
- Communication errors
- Mislabeling / inadequate instructions

Institutes of Medicine (IOM): Basic Concepts of Patient Safety

1. User-Centered Design
   - Understanding how to reduce errors depends on framing likely sources of error and pairing them with effective ways to reduce them
     - Make things visible
     - Incorporate affordances and force functions
       - Affordance: characteristics of equipment or workspace that communicate how it is to be used
         - ❑ Push bar on an outward opening door that says PUSH
         - ❑ Marking the correct site before surgery or procedure

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Basic Concepts of Patient Safety, *continued*

2. Avoid Reliance on Memory
   - Standardize and simplify the structure of task to minimize the demand on working memory, planning or problem solving

   - Simplify key processes – limit the choice of drugs or dose strength available to order

3. Attend to Work Safety
   - Evaluate conditions of work including work hours, staffing ratios and sources of distraction

   - Ex: "Red Zones" to prevent medication errors

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Basic Concepts of Patient Safety, *continued*

4. Avoid Reliance on Vigilance
   - Provide checklists, employ equipment that automates some functions, use flags or alarms as reminders

5. Train Concepts for Teams
   - Whenever possible training programs and hospitals should establish interdisciplinary team training

Basic Concepts of Patient Safety, *continued*

6. Involve Patients in Their Care

- Invite patients and families to become part of the care process
- Safety improves when patients and families know their care condition, treatments and technologies used in their care
- Patients need clear information regarding next steps after discharge

Basic Concepts of Patient Safety, *continued*

7. Anticipate The Unexpected

   - The likelihood of error increases with reorganization, mergers and other organizational changes.

Basic Concepts of Patient Safety, *continued*

8. Design for Recovery
   - Assume that errors will occur and design and plan for recovery by duplicating critical functions and making it easy to reverse operations
   - Use simulation training to practice recovery strategies

9. Improve Access to Accurate, Timely Information
   - Information for patient care decisions should be available at the point of patient care

Principles of Safe Design

- Standardize
  - Eliminate steps if possible
- Create independent checks
- Learn when things go wrong
  - What happened?
  - Why?
  - What did you do to reduce risk?
  - How do you know it worked?

"Teams Make Wise Decisions When There is Diverse and Independent Input"

Appreciate the wisdom of crowds

- Remember health care is a team effort
- Strive to create an environment where frontline providers can speak up if they have concerns and are heard when they express concerns
- Get as many viewpoints as possible

Summary of Science of Safety

1. Accept that we will make mistakes
2. Focus on systems rather than blame
3. Speak up if you have concerns, listen when others do
4. Create clear goals, ask questions early
5. Standardize, create independent checks, and learn from mistakes

Questions?

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