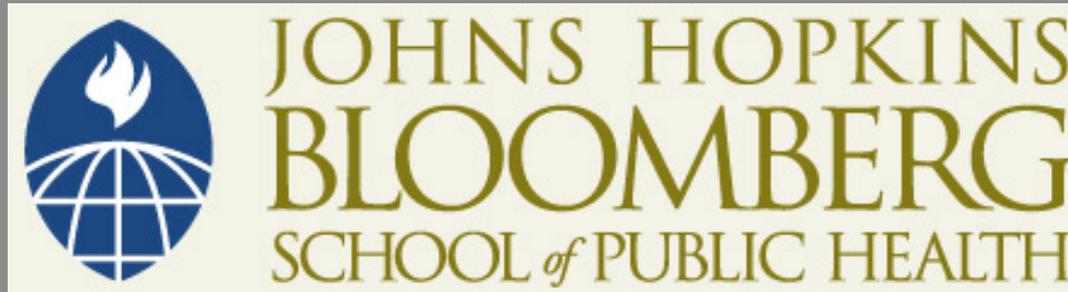


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*Practical Tools to Improve
Patient Safety: Comprehensive Unit-
Based Safety Program (CUSP)*

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Comprehensive Unit-Based Safety Program (CUSP)

1. Safety culture assessment
2. Science of safety training
3. Staff identify safety hazards
4. Senior executive partnership
5.
 - a. Learn from safety defects
 - b. Tools to improve
6. Safety culture reassessment

- Assemble a safety team, including . . .
 - Project leader/unit champion (e.g., RN or MD leader)
 - Nurse manager
 - Physician champion
 - Other integral members of unit (e.g., pharmacist, RT)
 - Senior executive (e.g., CEO, dean, president)
- Complete safety team contact list (form)
- Read each step of CUSP before implementation

Science of Safety Training: Step 2

- Purpose: explain patient safety problem, introduce investigation of system defects, highlight how they can make a difference
- Process:
 - Complete SAQ first
 - Watch Josie King and *Science of Safety* videos
 - Large group training more efficient
 - Track staff trained with attendance sheet (form)
 - Distribute staff safety assessment form (step 3) at end of training

Staff Identify Defects: Step 3

- Purpose: tap into expertise and knowledge of frontline providers; empower and engage in safety
- Process:
 - Staff safety assessment survey (form—2 ques.)
 - Collate and group responses into common defects (e.g., communication, patient falls)
 - Other sources of defects; incident reports, liability claims, M & M conferences
- Results set agenda for step 4
- Step is iterative

Senior Executive Partnership: Step 4

- Purpose: connect senior management with frontline providers; advocate for unit and remove barriers for implementing improvements
- Process:
 - Preplan: project leader finds out number of units implementing CUSP, number of senior executives available—enough for each unit?
 - Unit safety team meet and orient executive

Senior Executive Partnership: Step 4

- Set up monthly safety rounds with executive (6 mos.)
- Brief frontline providers about purpose of safety rounds
- Safety rounds: discuss safety issues (step 3)—executive, safety team and unit staff
- Document safety issues discussed (form)
- Identify and manage improvement projects (form)

Learning from Defects: Step 5a

- Purpose: investigate why system(s) failed and implement improvement efforts
- Process:
 - Identify safety defect
 - Use *How to Investigate Defect* tool
 - Investigate at least one defect per month
 - Complete case summary form
 - Share case summary (optional)

What Is a Defect?

- Anything you do not want to have happen again

Sources of Defects

- Adverse event reporting systems
- Sentinel events
- Claims data
- Infection rates
- Complications
- Where is the next patient going to be harmed?

Key Aspects of Learning from Defects

- Describe what happened
- Identify why it happened
- Define what you will do to reduce the chance it will recur
 - Person, issue follow-up

“Rather than being the main instigators of an accident, operators tend to be the inheritors of **system** defects. . . . Their part is that of adding the final garnish to a **lethal brew** that has been long in the cooking.”

— James Reason, *Human Error* (1990)

Safety tips:

- Label devices that work together to complete a procedure
- Rule: stock together devices needed to complete a task

CASE IN POINT: An African American male ≥ 65 years of age was admitted to a cardiac surgical ICU in the early morning hours. The patient was status-post cardiac surgery and on dialysis at the time of the incident. Within 2 hours of admission to the ICU it was clear that the patient needed a transvenous pacing wire. The wire was threaded using an IJ Cordis sheath, which is a stocked item in the ICU and standard for PA cath, but not the right size for a transvenous pacing wire. The sheath that matched the pacing wire was not stocked in this ICU since transvenous pacing wires are used infrequently. The wire was threaded and placed in the ventricle and staff soon realized that the sheath did not properly seal over the wire, thus introducing risk of an air embolus. Since the wire was pacing the patient at 100%, there was no possibility for removal at that time. To reduce the patient’s risk of embolus, the bedside nurse and resident sealed the sheath using gauze and tape.

SYSTEM FAILURES:

Knowledge, skills, competence. Care providers lacked the knowledge needed to match a transvenous pacing wire with appropriate sized sheath.

Unit environment: availability of device. The appropriate size sheath for a transvenous pacing wire was not a stocked device. Pacing wires and matching sheaths packaged separately... increases complexity.

Medical equipment/device. There was apparently no label or mechanism for warning the staff that the IJ Cordis sheath was too big for the transvenous pacing wire.

OPPORTUNITIES for IMPROVEMENT:

Regular training and education, even if infrequently used, of all devices and equipment.

Infrequently used equipment/devices should still be stocked in the ICU. Devices that must work together to complete a procedure should be packaged together.

Label wires and sheaths noting the appropriate partner for this device.

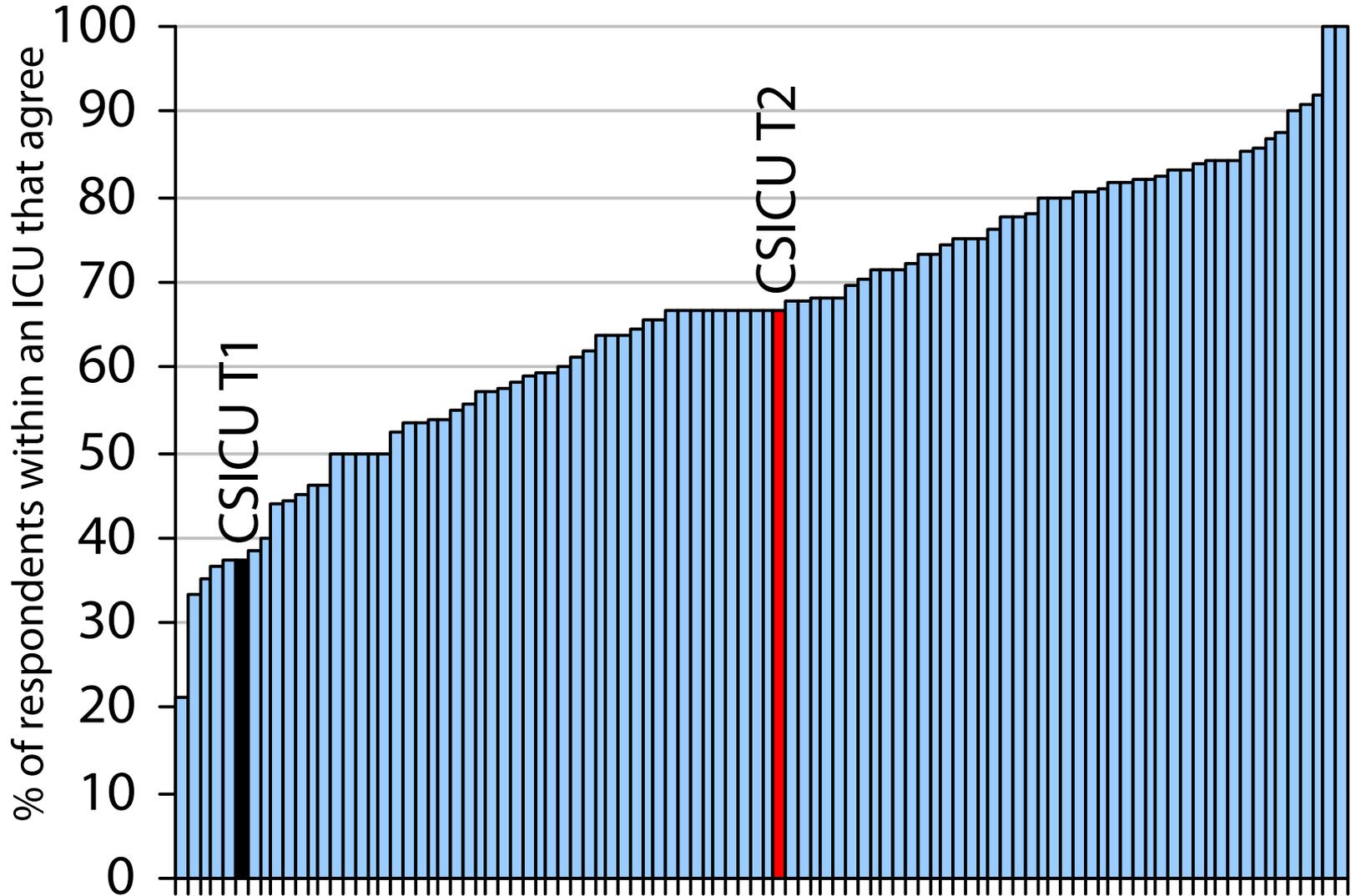
ACTIONS TAKEN TO PREVENT HARM IN THIS CASE

The bedside nurse taped together the correct size catheter and wire that were stored in the supply cabinet. In addition, she contacted central supply and requested that pacing wires and matching sheaths be packaged together.

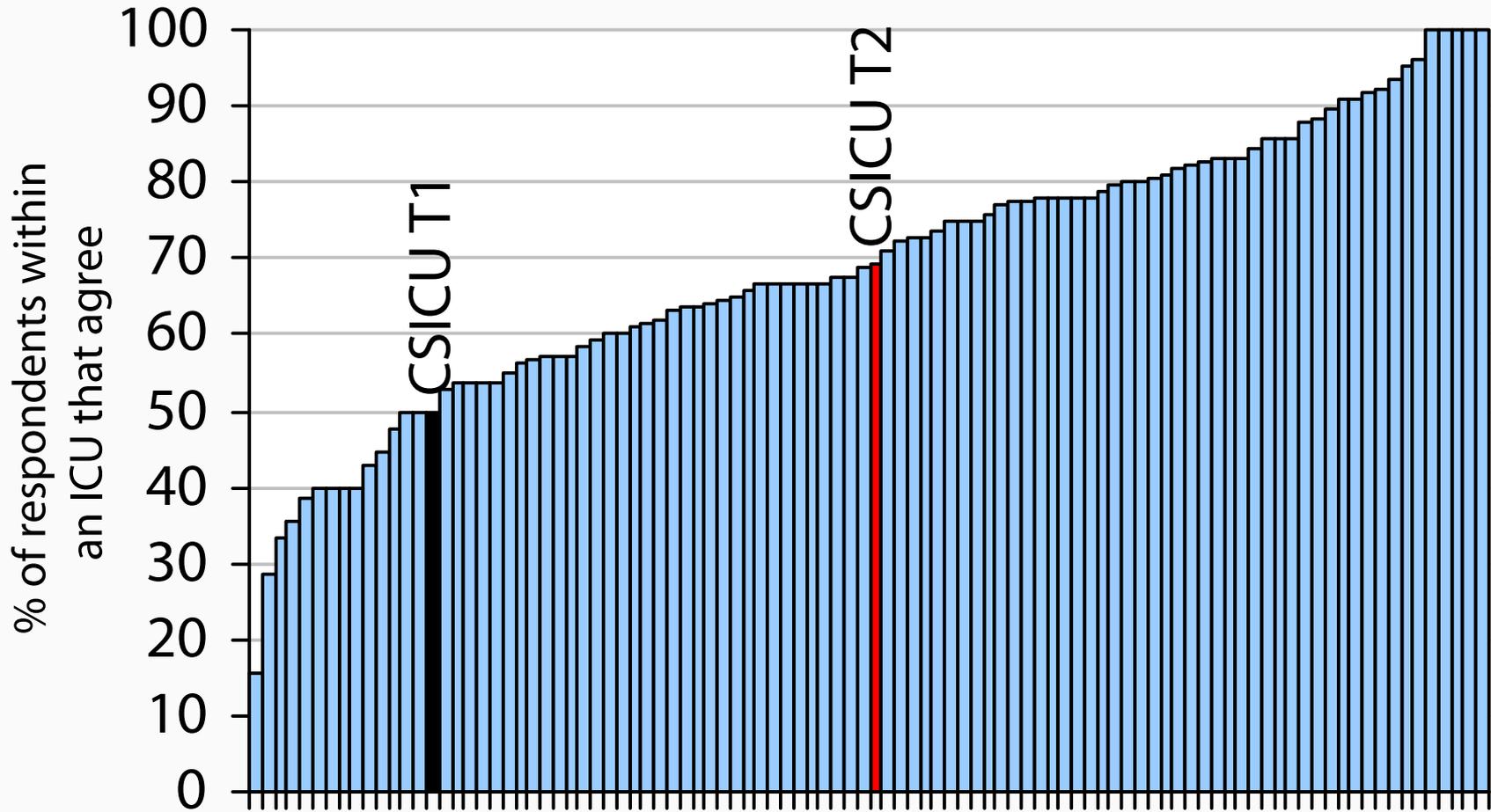
Learning from Defects Mortality/Morbidity Conference

- Select 1 or 2 meaningful cases
- Invite everyone who touches the process, including administrators
- Summarize event
- Identify hazardous systems
- Close the Loop (issue, person, f/u)
- Share what you learn

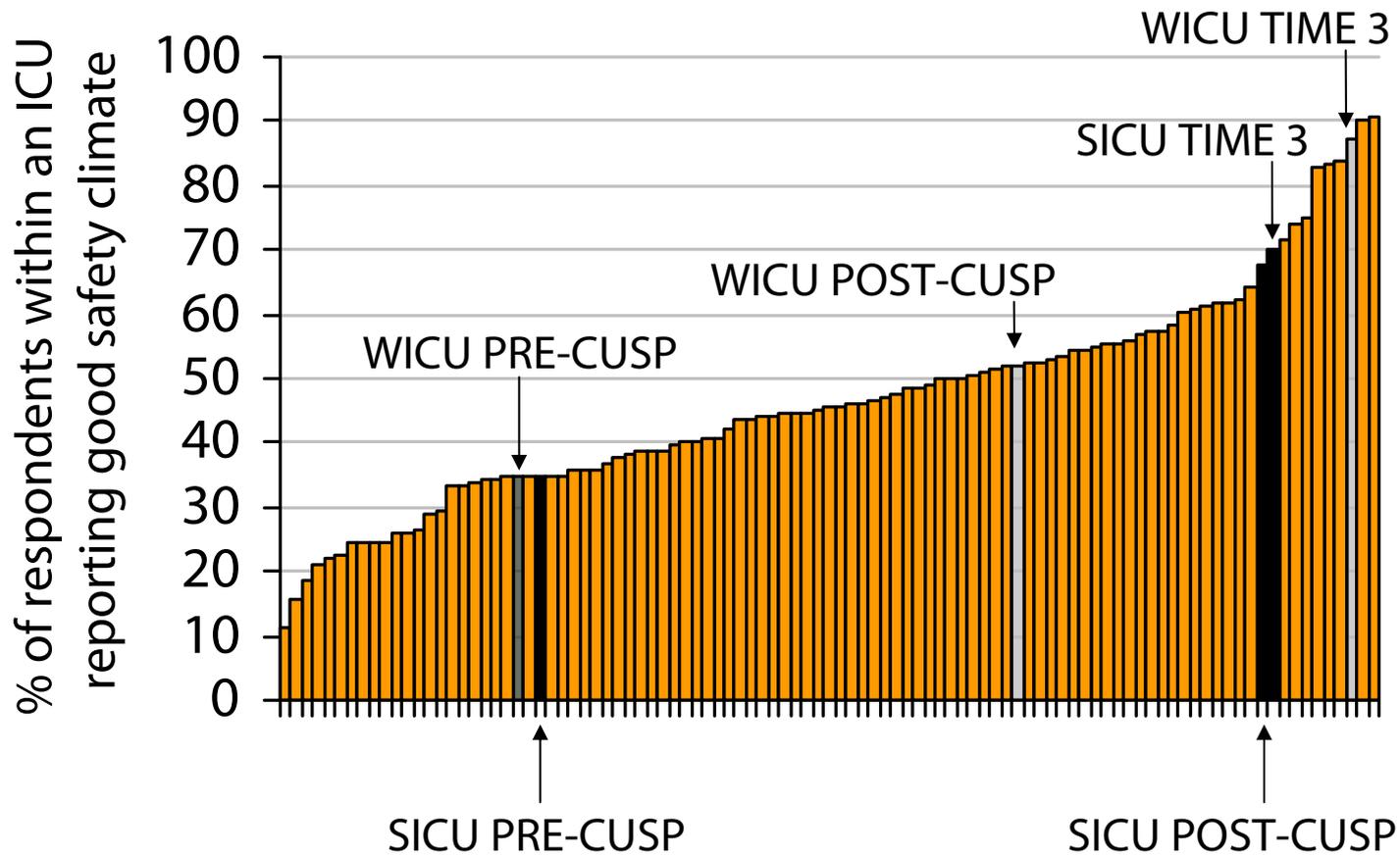
#5 "Errors Are Handled Appropriately in This ICU"



#4 "I Would Feel Safe Being Treated Here As a Patient"

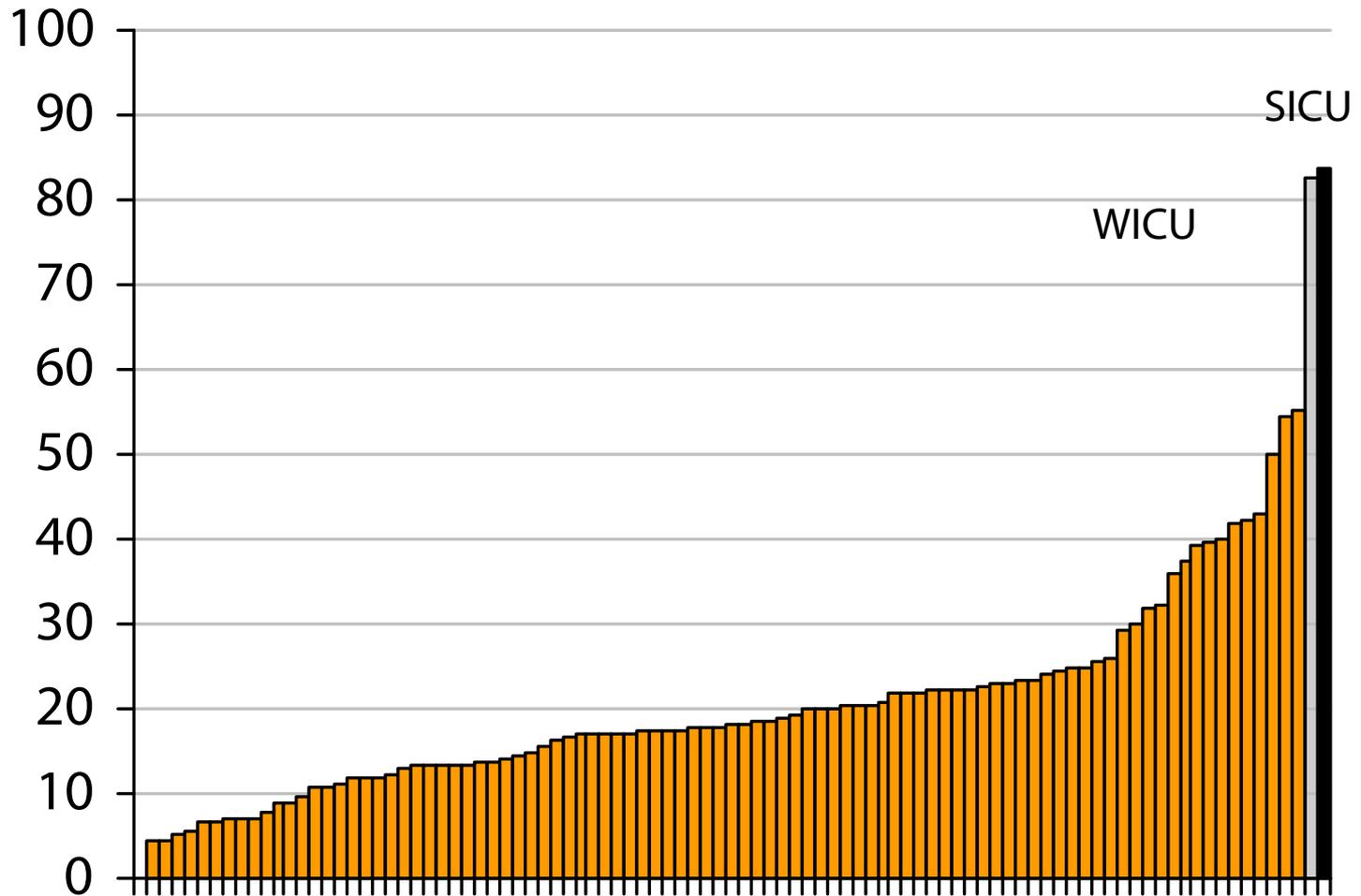


Safety Climate across CUSP/Michigan ICUs

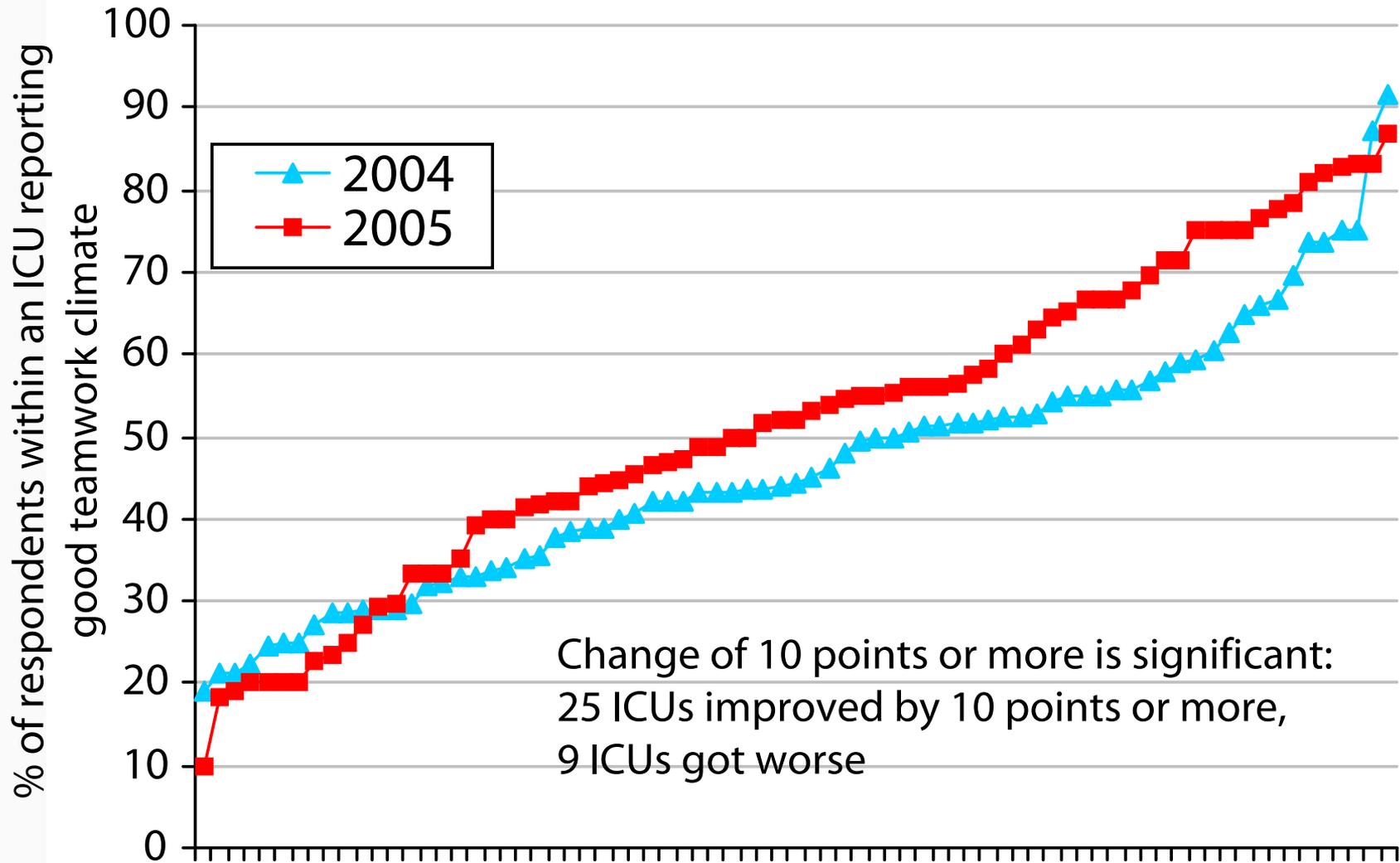


Teamwork Climate across CUSP/Michigan ICUs

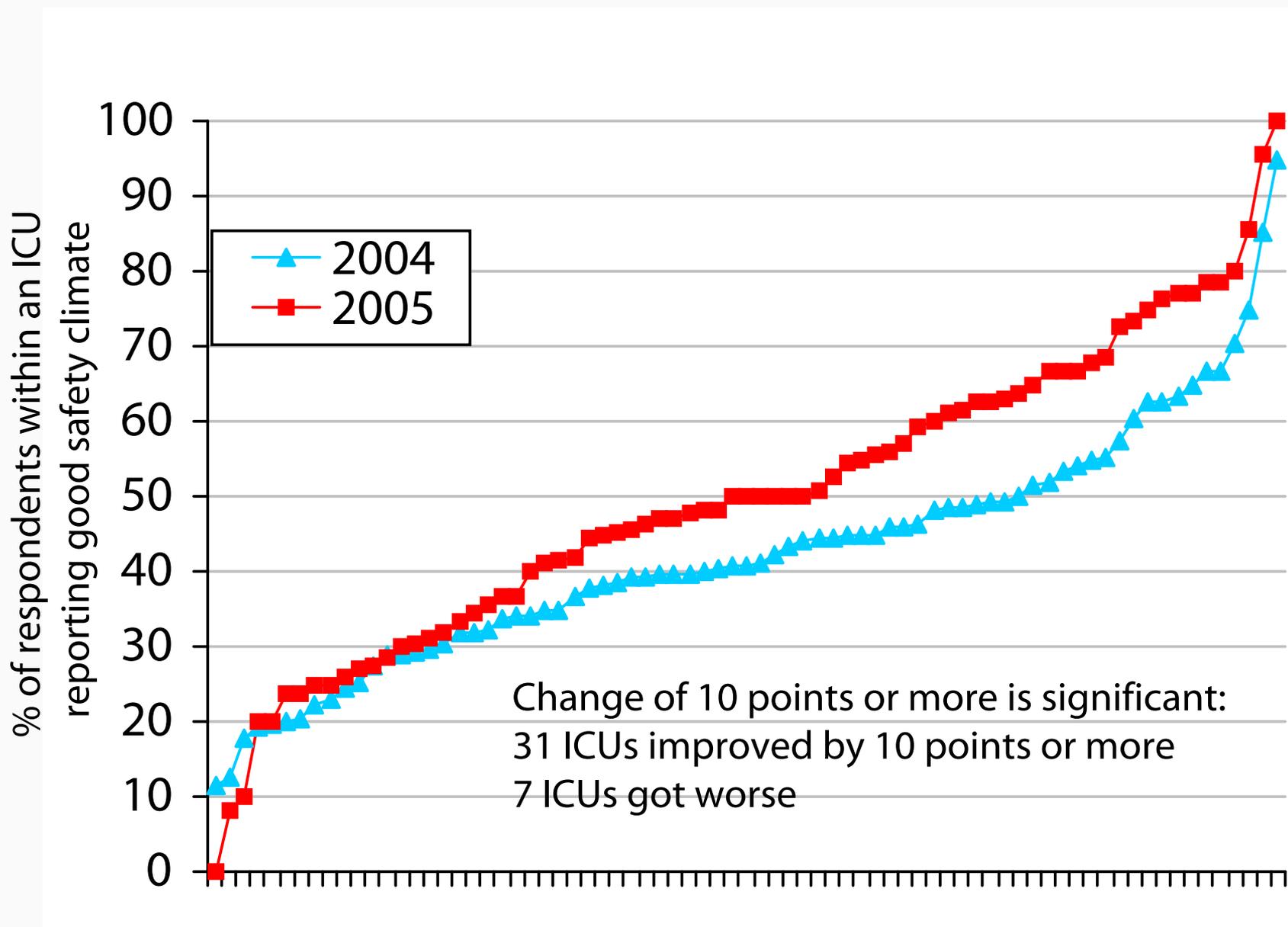
% of respondents within an ICU reporting good teamwork climate



Teamwork Climate across Michigan ICUs

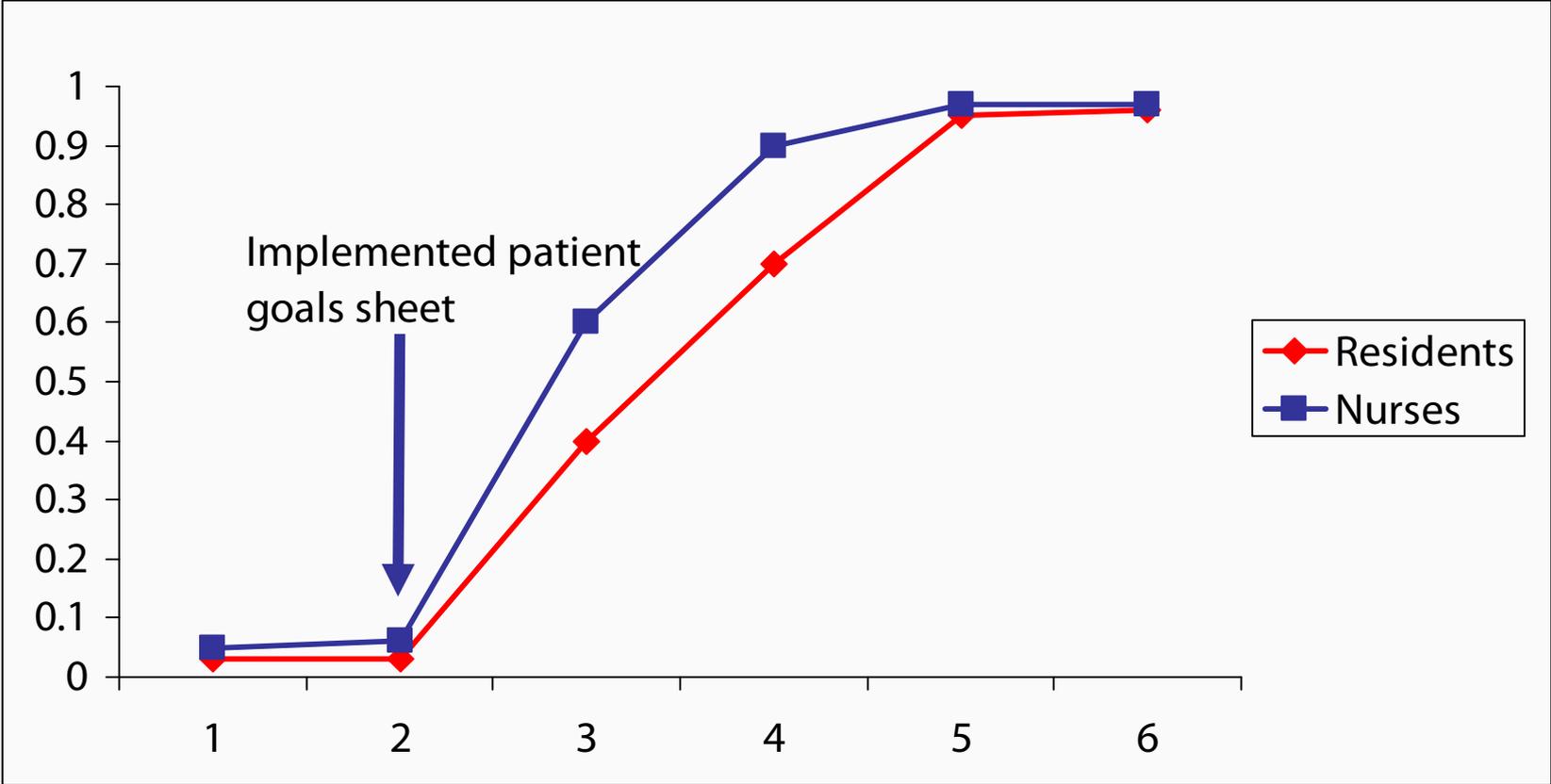


Safety Climate across Michigan ICUs

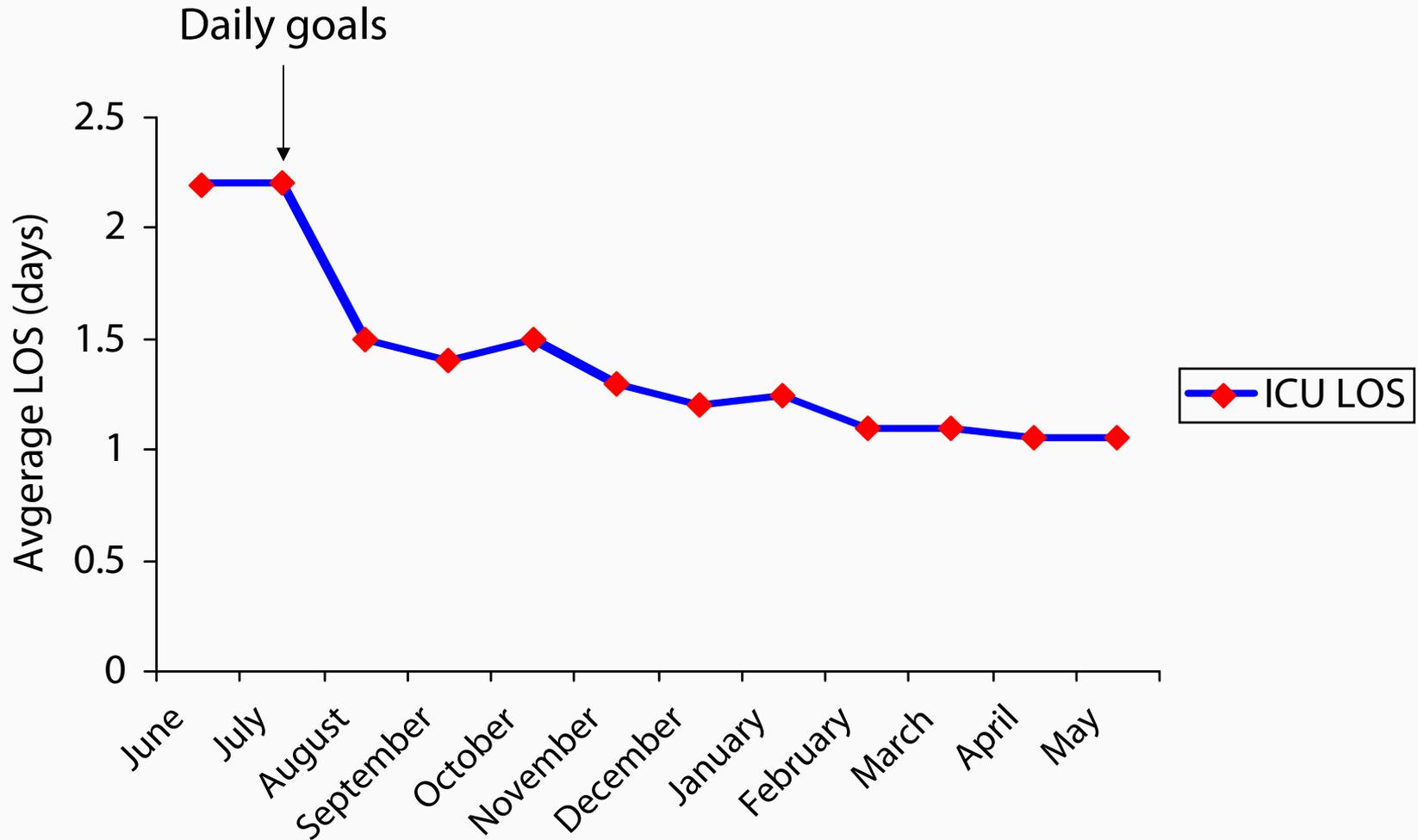


- **Who:** rounding team, bedside nurse
- **What:** discuss
 - What needs to happen for patient to be discharged
 - What work will be done today
 - What the safety risks are
 - Whether tubes, lines, or drains are to be removed
- **When:** during rounds
- **How:** stays with patient's nurse

Percent Understanding Patient Care Goals



Impact on ICU Length of Stay



654 new admissions: 7 million additional revenue

How to Use Goals?

- Be explicit
- Important questions
 - What needs to be done for discharge?
 - Safety risk?
 - Scheduled labs?
- Completed on rounds
- Stays with bedside nurse
- Modify to fit your hospital

Morning Briefing

- **Who:** charge nurse, attending, resident
- **What:** discuss
 - What happened over night
 - Who is coming and going
 - What I am worried about during the day
- **When:** pre-rounds each morning
- **How:** evening charge nurse completes

Summary

- Safety is a property of system
- We need lenses to see the system
- CUSP is a structured approach to learn from mistakes and improve safety culture
- Tools to learn from mistakes and improve culture
 - How to investigate a defect
 - Daily goals
 - A.M. briefing

Task List

- Create team
- Educate staff on science of safety by reviewing a defect
- Ask staff how next patient will be harmed
- Obtain executive to adopt ICU
- Create interdisciplinary forum to learn from defects
- Pilot test daily goals and A.M. briefing