Patient Safety
Case Conference Guide

What Happened?

Why Did It Happen?

How To Prevent It?

Evaluating Effectiveness

Resources & Online Education

VA National Center for Patient Safety
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Use this Guide to:

— **Prepare for the conference**
— **Guide the discussion**
— **Find more resources**

Key Concepts

○ If you're not sure it's safe, it's not safe.

○ Consider what would have to be in place for this to happen to you.

○ It is not about decreasing individual accountability; it is about effective, fair accountability.

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Key Concepts (continued)

Ironic Hurdles in the Way of Systems Thinking
20 years of test taking . . . practice, practice, practice
. . . pay more attention . . . striving for perfection.

Learned Intuition —
Can not recall ever <u>not</u> knowing how to do something . . . or can not imagine how someone else does not know how to do something.

Photo by Sarah Morrison

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What Happened?

Linear Thinking

Sloppy, inattentive, or careless individuals

cause

Bad Event(s) leading to

or — or

Mortality — Lucky Rescue

or

Morbidity

Systems Thinking

Contributing Factor

Contributing Factor

Contributing Factor

Contributing Factor

Contributing Factor

Contributing Factor

Contributing Factor

Intermediate Cause

System Vulnerability

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What Happened? (continued)

Consider: __People   __Tools   __Interactions

Ask:

1. What process was expected?
[policy — official]

A → B → C

2. What actually happened?
[interview those involved]

A → R → X → C

3. What usually happens?
[observation of actual
workplace and people]

A → B → R → X → C

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Why Did It Happen?

Information Systems [computers, paper tools and communication tools]

○ Was the patient correctly identified?
○ Did existing documentation provide a clear picture?
   -Assessment and consultations
   -Orders
   -Progress notes
○ Was information from various patient assessments shared among the treatment team in a timely basis?
○ Did management establish adequate methods to provide information to employees who needed it in a manner than was easy to use/access and timely?
○ Did adequate communication across organizational boundaries occur?
○ Was training provided prior to start of the work process?
○ Was the level of automation appropriate?

Why Did It Happen? (continued)

Architecture [Room, work area layout]

- ○ Was the work area designed to support the function it was being used for?
- ○ Has the purpose of the room changed since its original design?
- ○ Did demand for space force use of sub-optimal work area?
- ○ Was the workspace adequate for the number of care providers needed for the patient's care?
- ○ Did the work area meet current codes, specifications and regulations?

Policies, procedures or processes

- ○ Is there an audit or quality control system for key processes?
- ○ Was there a similar previous event involving a work-around of policy, procedure or process?
- ○ Was required care within the scope of staff expertise and availability?
- ○ Was it within the scope of technical and support service resources?
- ○ Were relevant policies and procedures readily available — and are they actually used on a day-to-day basis?
- ○ Did the culture of the facility encourage or welcome observations, suggestions or "early warnings" from staff about risky situations and risk reduction?

Why Did It Happen? (continued)

Equipment [Devices, accessories, supplies]

- ○ Were equipment displays and controls working properly and easy to interpret correctly?
- ○ Had design issues caused personnel to add signs, sticky notes or other aids to make sure proper operations occurred?
- ○ Did the design of the equipment enable detection of problems and make them obvious to the operator?
- ○ Was the equipment designed so that corrective actions were easily and quickly accomplished in order to minimize harm?
- ○ Was the equipment or device processed or maintained at proper intervals?
- ○ Were emergency provisions and back-up systems available in case of equipment failure?

Why Did It Happen? (continued)

Environment [Noise, clutter, lighting]

- ○ Was the lighting sufficient for visual acuity on the tasks in question?
- ○ Had appropriate safety evaluations and disaster drills been conducted?
- ○ Did noise levels interfere with conversations or alarm detection?
- ○ Did vibration or equipment instability make it harder to properly complete tasks?
- ○ Were air, water or surface temperatures proper for the situation?

— ▪ — ▪ — ▪ — ▪ — ▪ —

Safety Mechanisms [What stopped it from happening — or prevented harm to the patient?]

- ○ Were safety mechanisms involved?
- ○ Were safety mechanisms designed primarily to protect patient, staff or equipment?
- ○ Were safety mechanisms functioning reliably?
- ○ Was fault tolerance part of the system design?
- ○ Are the safety mechanisms that prevent harm after a close call sufficient to prevent harm in the future?
- ○ Is poka yoke built in, i.e., is there built-in mistake-proofing?

Why Did It Happen? (continued)

The Five Rules of Causation

Rule 1. Clearly show the cause and effect relationship (i.e., If you eliminate a root cause/contributing factor, will you prevent future events?).

Rule 2. Use specific and accurate descriptors for what occurred, rather than negative and vague words (i.e., Avoid words such as poorly, inadequately, haphazardly, improperly, carelessness, complacently).

Rule 3. Identify the preceding cause(s), not the human error.

Rule 4. Identify the preceding cause(s) of procedure violations (i.e., policy violation is not a root cause).

Rule 5. Failure to act is only causal when there is a pre-existing duty to act.

Why Did It Happen? (continued)

Sample Cause and Effect Diagram:
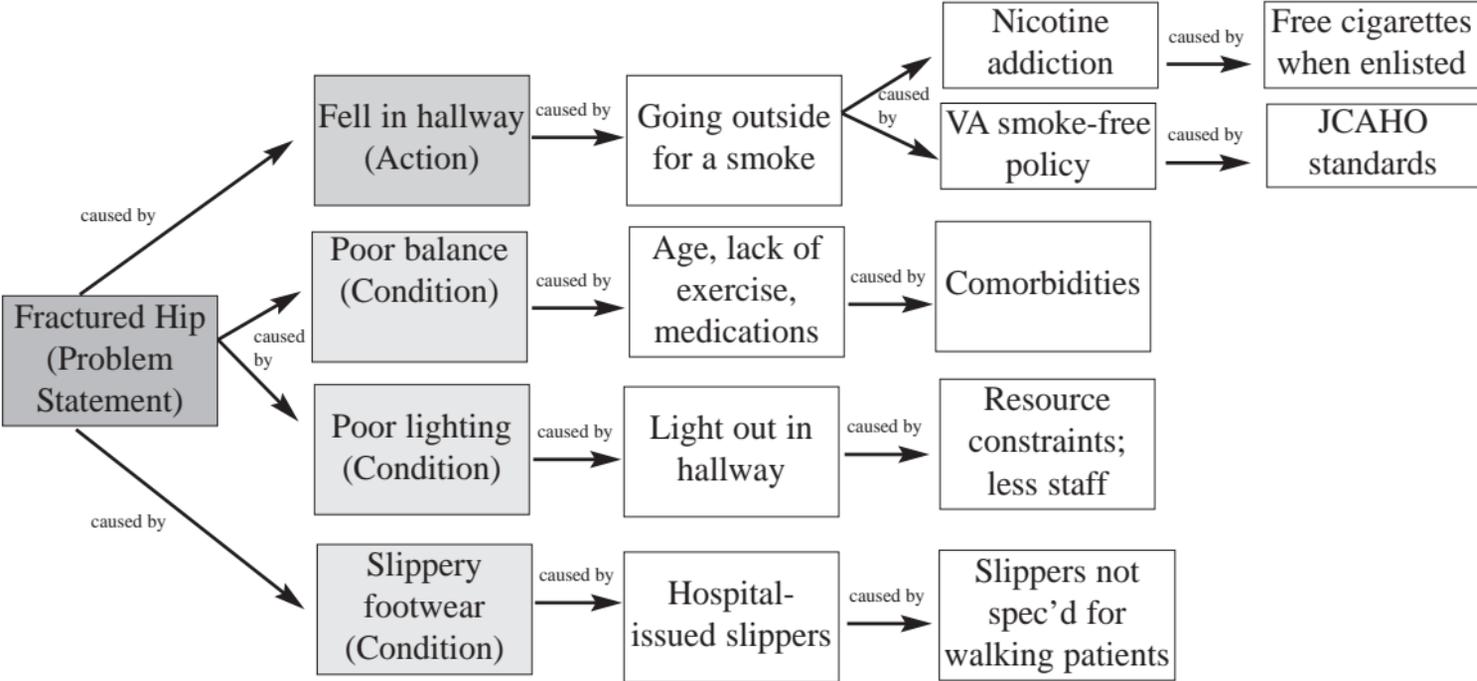
Root cause/contributing factor statements can be taken from the cause and effect diagram.

How To Prevent It?

Stronger Actions

- Architectural/physical plant changes
- New device with usability testing before purchasing
- Engineering control or interlock (forcing function)
- Simplify the process and remove unnecessary steps
- Standardize on equipment or process or caremaps
- Tangible involvement and action by leadership in support of patient safety

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How To Prevent It? (continued)

Intermediate Actions

- ■ Increase in staffing/decrease in workload
- ■ Software enhancements/modifications
- ■ Eliminate/reduce distractions
- ■ Checklist/cognitive aid
- ■ Eliminate look- and sound-alikes
- ■ Read back
- ■ Enhanced documentation/ communication
- ■ Redundancy

What intervention will treat (fix) the identified vulnerability in the system and prevent a recurrence and/or protect the patient from harm?

Provide access to *knowledge in the world* instead of requiring memorization.

How To Prevent It? (continued)

Weaker Actions

- Double checks
- Warnings and labels
- New procedure/memorandum/policy
- Training
- Additional study/analysis

The most effective actions *re-design* processes, devices, software, and workspaces — rather than relying on memory and vigilance.

Do not focus on changing people!

Focusing on people is like trying to manage symptoms rather than treating the cause.

How To Prevent It? (continued)
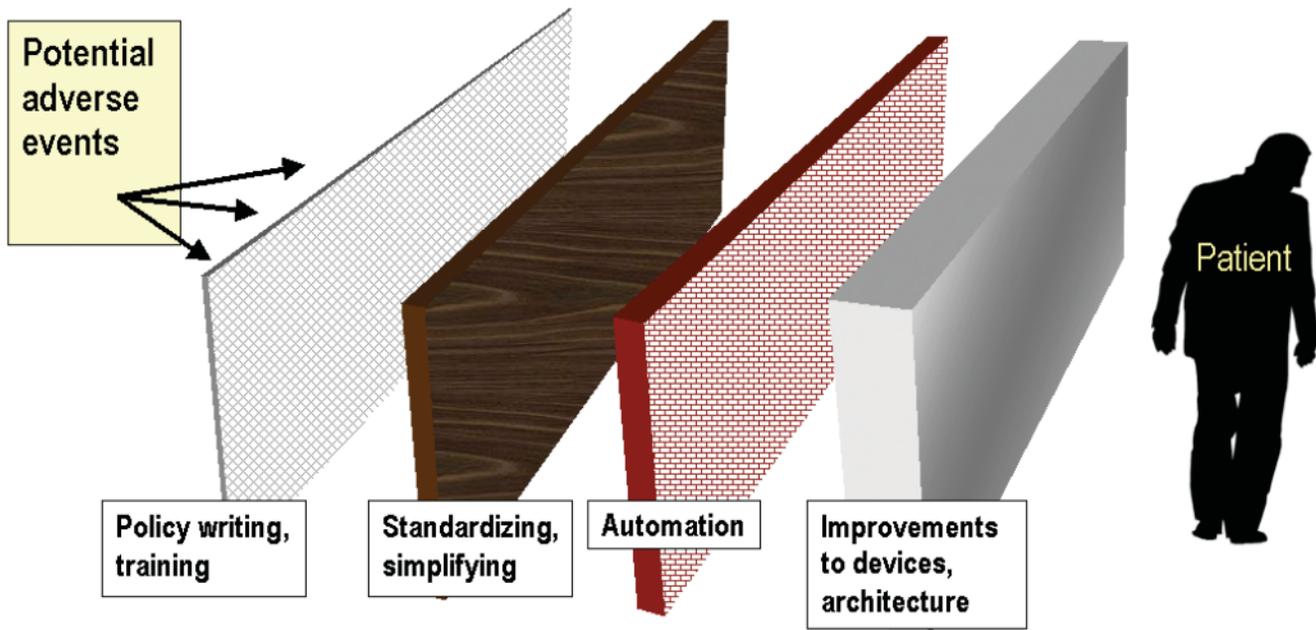
Defense layers are not of similar strength. Note the relative difference in materials (window screen, granite), thickness, longevity and porosity.

Evaluating Effectiveness of Interventions/Actions

Simulation and Pre-testing

- ○ Walk through by expert user and biomedical engineer or other subject expert.
- ○ Test with people who will be using (both expert and novice).
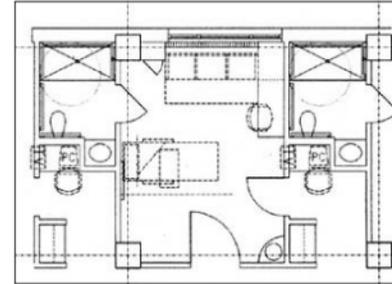
Nursing Economics 2003, Janetti Publ, Inc.

Real World Testing

- ○ Measure effectiveness, not completion.
- ○ Quantify with defined numerator and denominator (if appropriate).
- ○ Define sampling strategy and timeframe for measurement.
- ○ Set a realistic performance threshold.
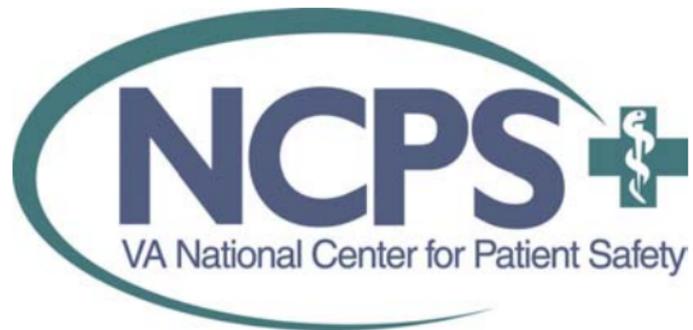
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Resources

❑ Gosbee, John; Introduction to the human factors engineering series. *J Comm J Qual Saf*. 2004 April;30(4):215-9.

❑ Volpp KG. Grande D.; Residents' suggestions for reducing errors in teaching hospitals. *NEJM*. 2003 Feb 27;348(9):851-5.

❑ Bagian JP, Gosbee JW, Lee CZ, Williams L, McKnight SD, Mannos DM.; The Veterans Affairs root cause analysis system in action. *Jt Comm J Qual Improv*. 2002 Oct;28(10):531-545.

❑ Dekker S. *The Field Guide to Human Error Investigations*. Burlington, VT: Ashgate. 2002.

❑ Casey S. *Set Phasers on Stun and Other True Tales of Design, Technology, and Human Error*. Santa Barbara, CA: Aegean Publishing, 1993.

❑ Norman DA. *The Design of Everyday Things*. New York: Basic Books, Inc.; 1988.

❑ *http://www.webmm.ahrq.gov/*

❑ *http://www.hf.faa.gov/webtraining/Intro/Intro1.htm*

❑ *http://www.rmf.harvard.edu/education/corecurriculum/default.asp*