

# An Introduction to Patient Safety Principles for Rural Healthcare Providers and Governing Boards

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Presentation available at  
<http://www.unmc.edu/rural/patient-safety/patient-safety-principles/default.htm>

# Chapter 1

## We Can't Hide from Medical Error

- Harm from medical errors is relatively rare, which can result in a false sense of security in small rural hospitals that treat a low volume of patients.
- Harm will occur in all organizations as long as imperfect human beings care for others in complex systems.

# We Can't Hide From the Problem of Medical Error

“Fatal Drug mix-up Exposes Hospital Flaws”

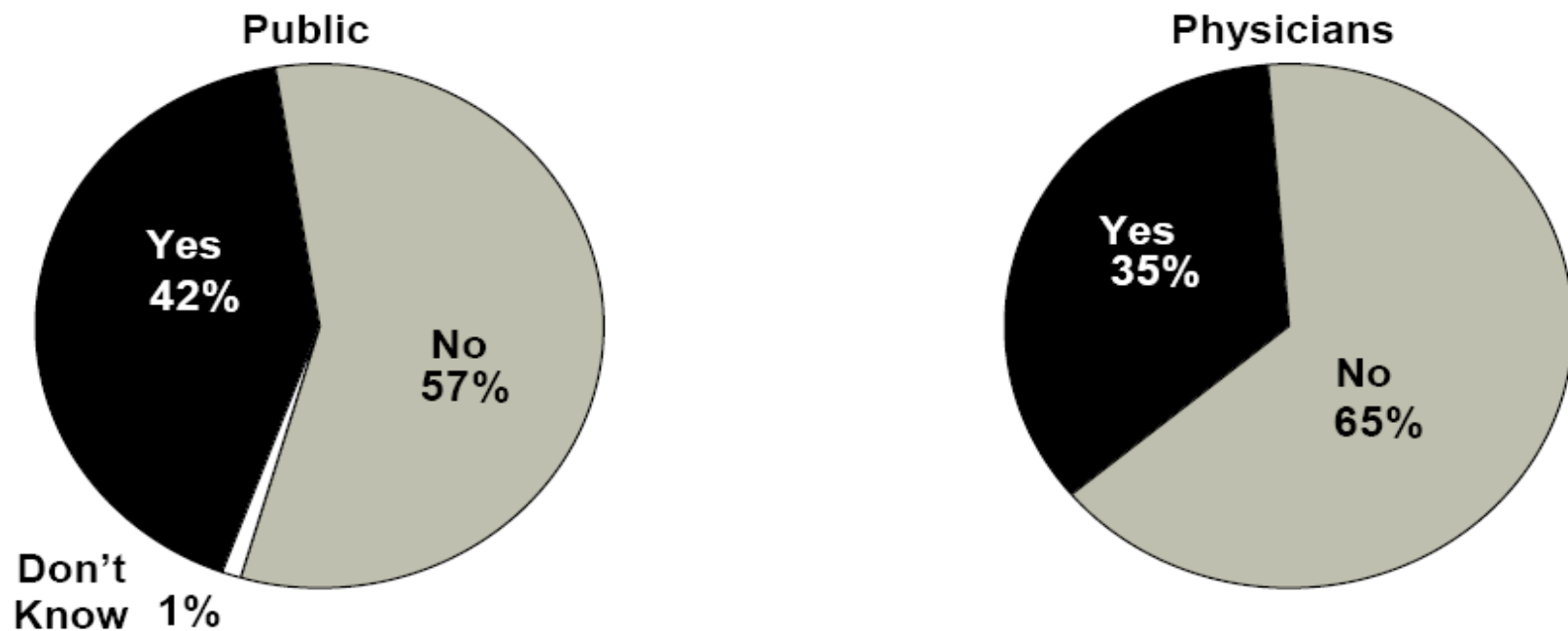


Chart 1

## Personal Experience with Medical Errors

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The percentage who said they have been personally involved in a situation where a preventable medical error was made in their own medical care or that of a family member?\*



\* Earlier in the survey the public and physicians were read the following to ensure all respondents were using a common definition of Medical Errors: Sometimes when people are ill and receive medical care, mistakes are made that result in serious harm, such as death, disability, or additional or prolonged treatment. These are called medical errors. Some of these errors are preventable, while others may not be.

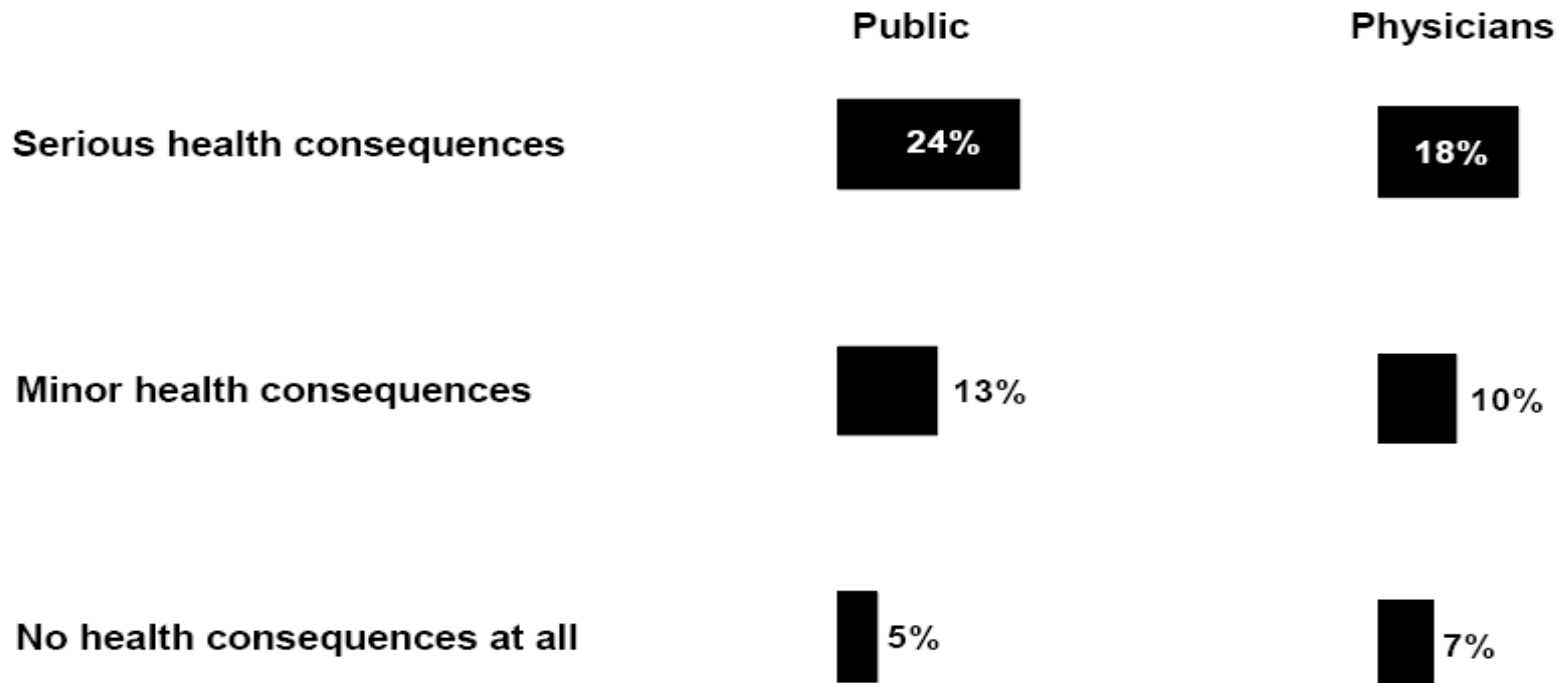
Source: Harvard School of Public Health / Kaiser Family Foundation *Medical Errors: Practicing Physician and Public Views*, Published in *The New England Journal of Medicine* December 12, 2002 (surveys conducted April-July 2002)

Chart 2

## Health Consequences of Medical Errors

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Among the general public and physicians, the percentage who experienced a medical error that resulted in...



Source: Harvard School of Public Health / Kaiser Family Foundation *Medical Errors: Practicing Physician and Public Views*, Published in *The New England Journal of Medicine* December 12, 2002 (surveys conducted April-July 2002)

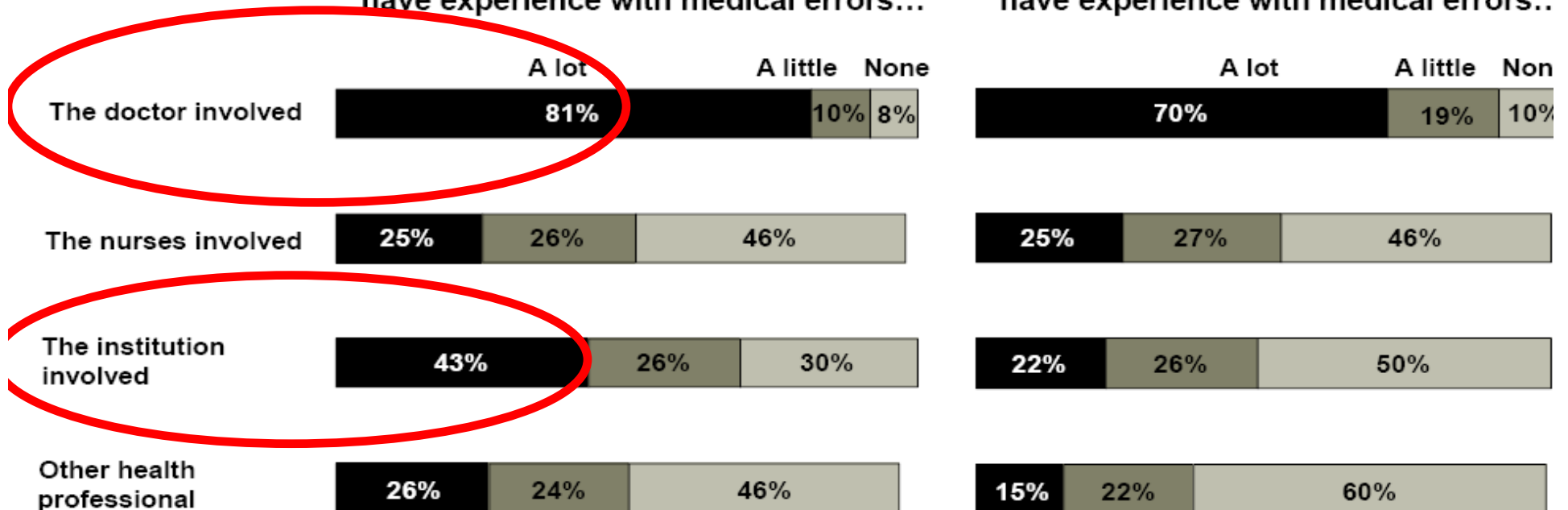
Chart 4

## Level of Responsibility for Medical Errors Among Health Care Professionals and Institutions

Among those who have had experiences with medical errors, how much responsibility do they place on each of the following...

Among the 42% of the public who have experience with medical errors...

Among the 35% of physicians who have experience with medical errors..



Note: Don't know responses not shown.

Source: Harvard School of Public Health / Kaiser Family Foundation *Medical Errors: Practicing Physician and Public Views*, Published in *The New England Journal of Medicine* December 12, 2002 (surveys conducted April-July 2002)

# Rural hospital boards and providers need to understand principles of patient safety because...

- Harm from medical error is not rare
- Patients will hold you responsible
- If we continue to punish people for making mistakes...they will not tell us about risks inherent in our processes
- Providing safe, high quality care is the right thing to do for your community

# Why Do Errors Happen?

- There are limits to human performance
  - Sensory
  - Cognitive
  - Overestimate abilities, underestimate limits
  - Tendency for behavior to migrate
- Healthcare processes have poor reliability
- Healthcare managers and providers lack teamwork and communication strategies

# Chapter 2

## To Err is Human

- Human attention is a resource limited by our physiology and the environment.
- Human factors applies knowledge about human strengths and limitations in the design of systems that consist of people, equipment, and environments to ensure their effectiveness, safety, and ease of use.

# What Impacts Our Performance?

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- Fatigue
- Lack of sleep
- Illness
- Drugs or alcohol
- Boredom
- Frustration
- Fear
- Stress
- Shift work
- Reliance on memory
- Reliance on vigilance
- Distractions
- Noise
- Heat
- Clutter
- Motion
- Lighting
- Too many handoffs
- Unnatural workflow
- Procedures or devices designed in an accident prone fashion

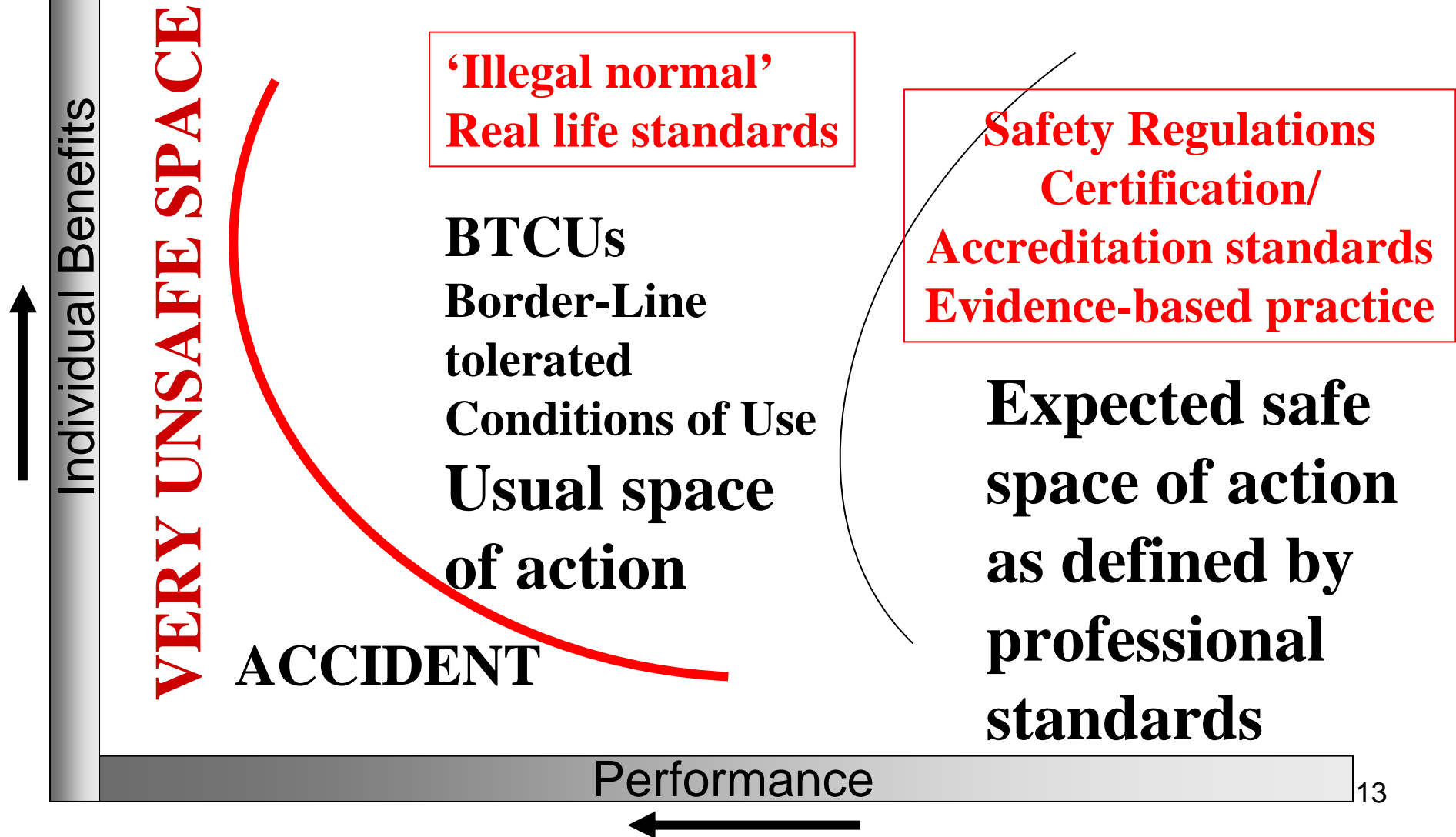
# Demonstration of Human Limits

There are surprising limitations to human attention, perception and awareness. We frequently fail to notice significant changes even when we are looking for them. We fail to notice gradual changes even more frequently; but can readily identify them if we know where to focus. We have selective attention, if we are focused on one thing, we frequently miss something else.

Videos that demonstrate these limitations based upon the research of Daniel J. Simons and colleagues are available for purchase at [www.viscog.com](http://www.viscog.com) .

# Systemic Migration to Boundaries

*Polet et al. (2003). Safety Science.*





### Will your teenager have the right answer?

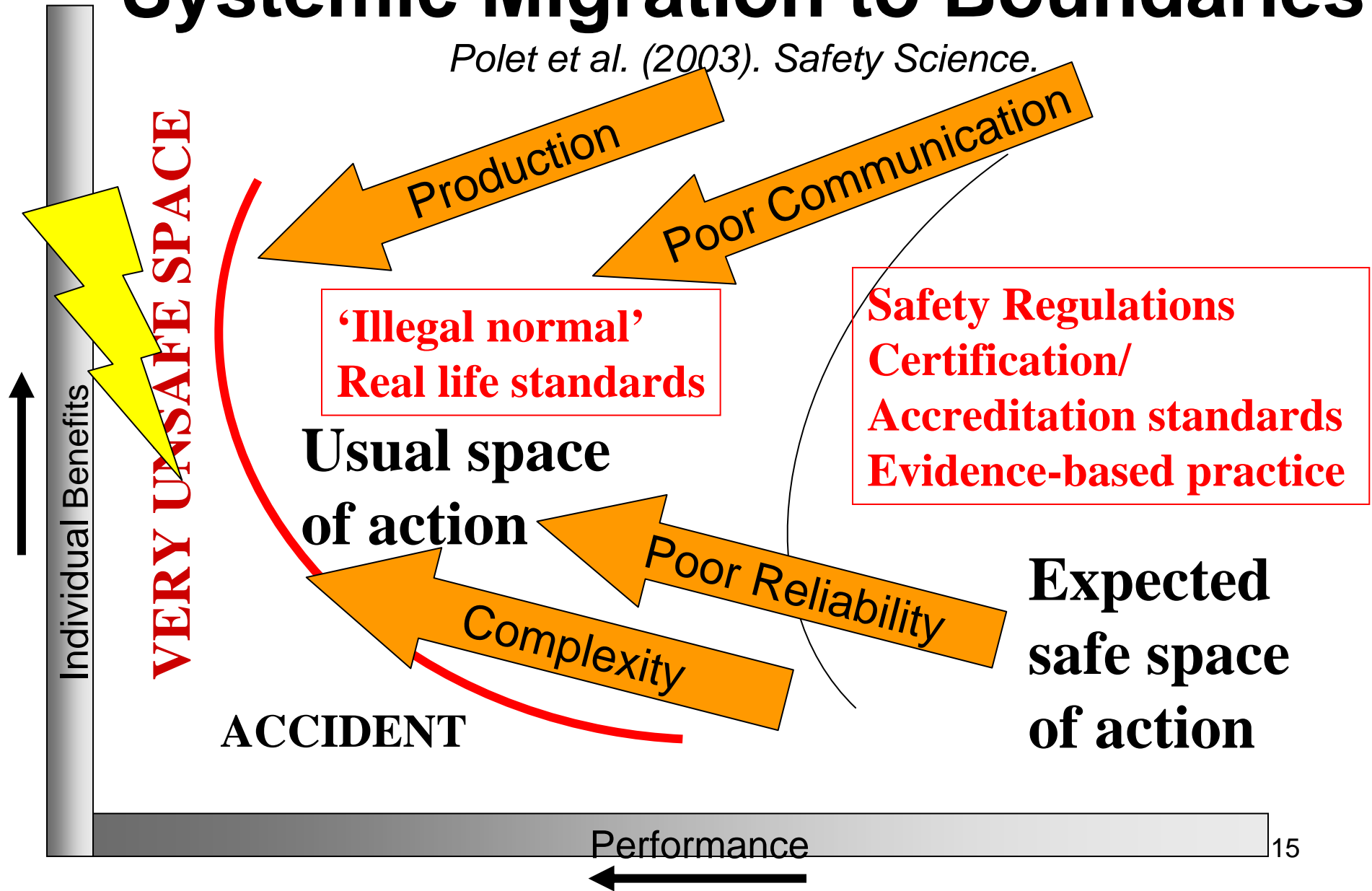
Knowing what to do behind the wheel can help them avoid a serious accident. For answers on how to start a conversation with your teen about safer driving habits, visit [toyotateendriver.com](http://toyotateendriver.com).



**TOYOTA** | *moving forward ▶ safely*

# Systemic Migration to Boundaries

*Polet et al. (2003). Safety Science.*

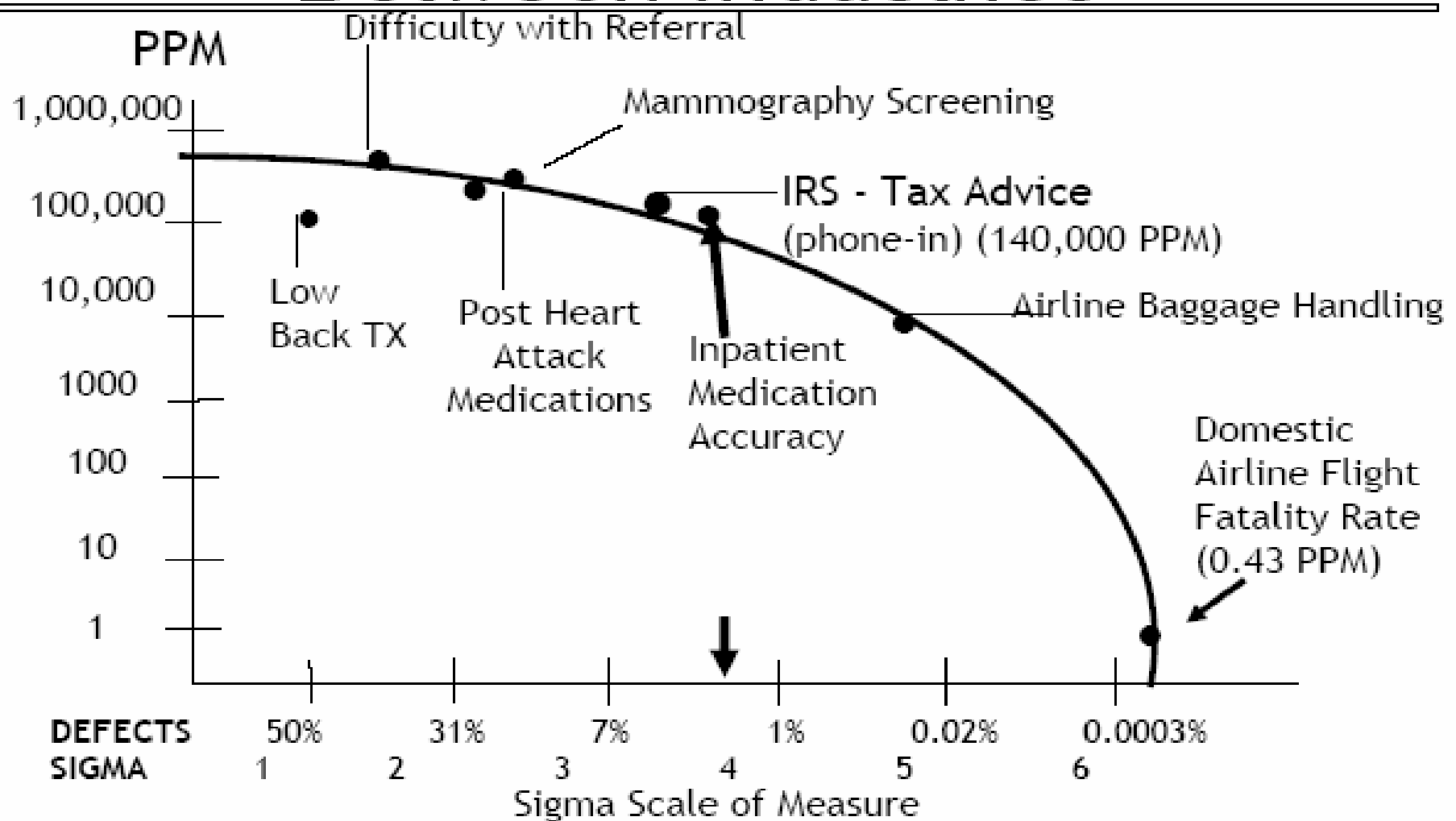


## Chapter 3

# Complexity Does Not Make Us Safer

- Reliability means doing the right thing (evidence-based care), in the right way, at the right time—**every time**.
- Poor reliability in complex, multi-step processes is a major cause of medical error.

# Comparative Reliability Between Industries



IHI Patient Safety Officer Development Program

# Preventing Errors...The Role of Complexity

*Nolan T. (2000). BMJ.*

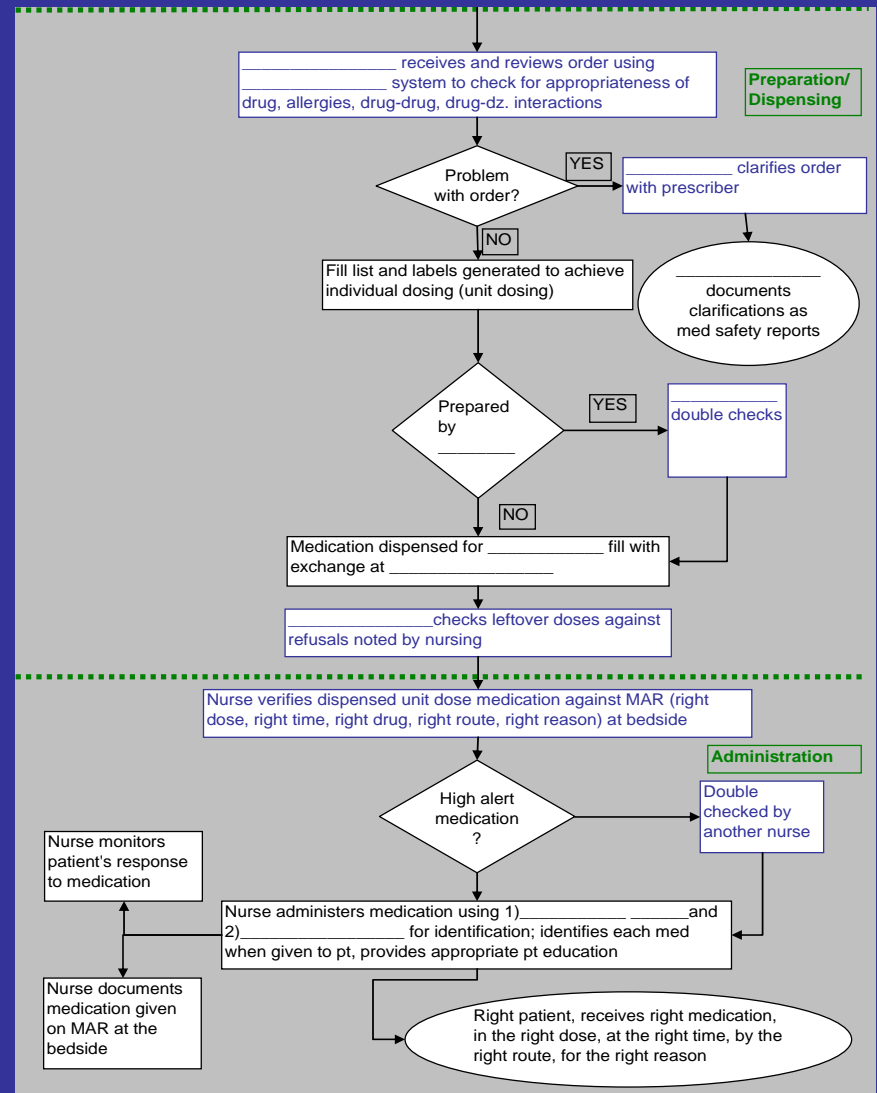
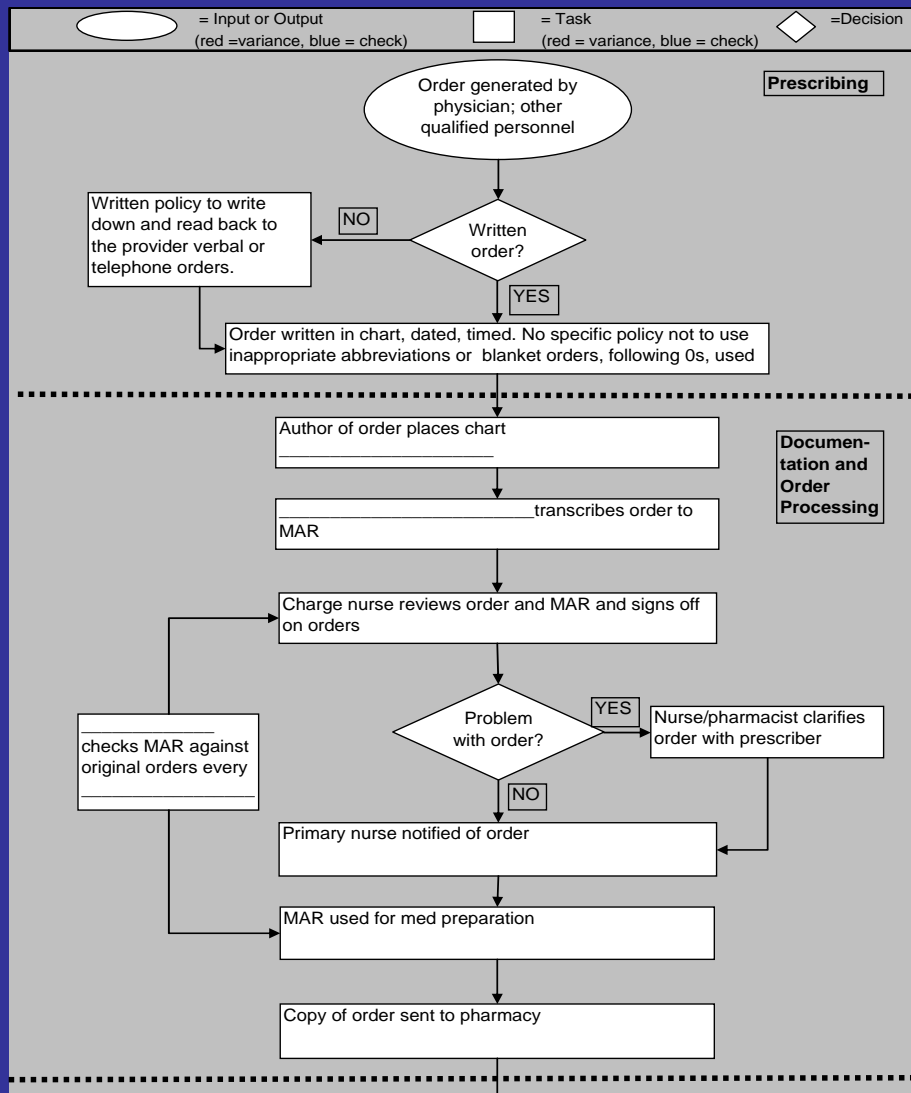
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Probability of Performing Perfectly

Probability of Success, Each Element

No. Elements	0.95	0.990	0.999	0.9999
1	0.95	0.990	0.999	0.9999
25	0.28	0.78	0.98	0.998
50	0.08	0.61	0.95	0.995
100	0.006	0.37	0.90	0.99

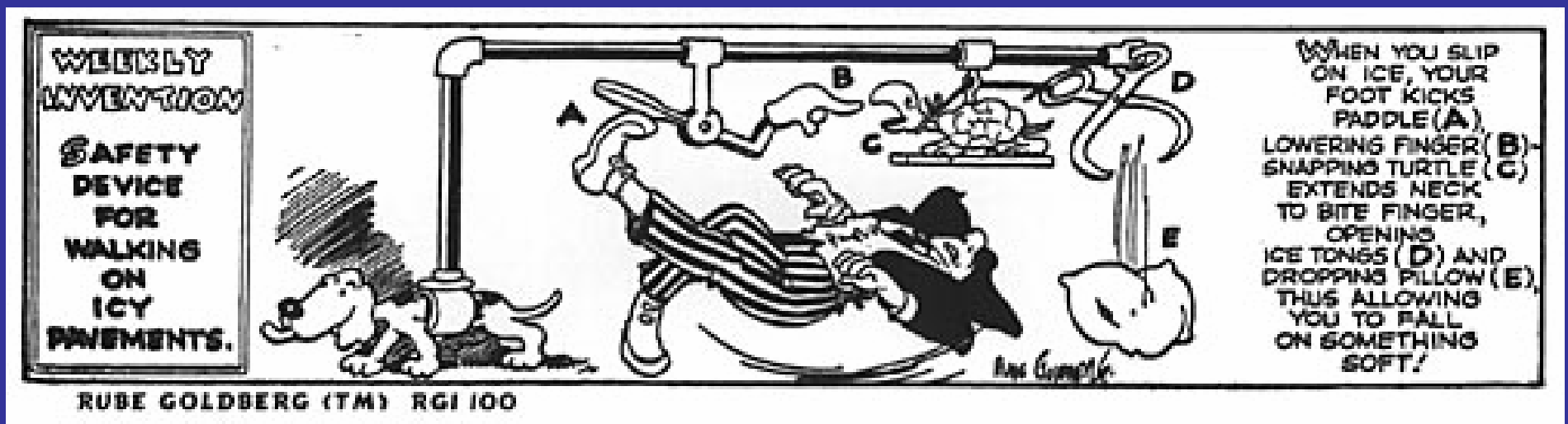
# Sample Map of Medication Use



*“Every system is perfectly designed to achieve the results it gets.” –*

*Donald Berwick, MD*

*President and CEO Institute for Healthcare Improvement*



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# Three-level Design of Safe and Reliable Systems of Care: Prevent-Identify-Mitigate\*

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Prevent → Design the system to prevent failure

Identify → Design procedures and relationships to make failures visible when they do occur so that they may be intercepted before causing harm

Mitigate → Design procedures and build capabilities for mitigating the harm caused by failures when they are not detected and intercepted

\*Earl Weiner U of Miami  
Espinosa/Nolan BMJ March 2000

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# Error Reduction Strategies

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- Avoid reliance on memory
- Simplify
- Standardize
- Use constraints/forcing functions
- Use protocols and checklists
- Improve information access
- Reduce handoffs
- Increase feedback
- Decrease look-alikes
- Automate carefully
- Take advantage of habits and patterns

# Chapter 4

## We Can Not Punish People for Telling Us What is Wrong

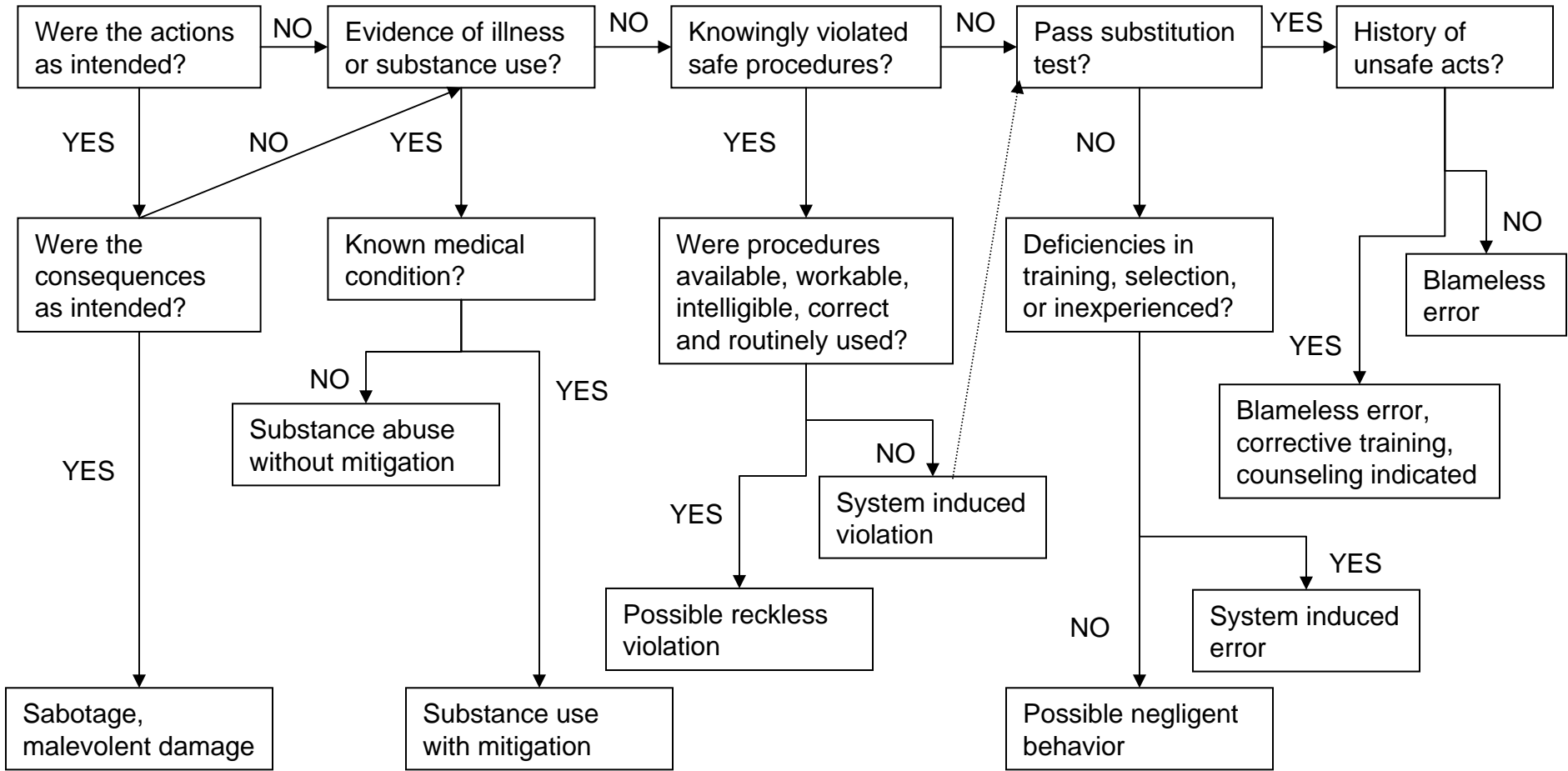
- In a fair and just culture, discipline occurs based on the intent of the behavior.
- Front-line managers should determine whether safety procedures are workable and routinely used.

# The Role of Just Culture in Discipline

*Marx D. (2001). Patient Safety and the “Just Culture”: A Primer for Health Care Executives.*

- Outcome-based discipline—the more severe the outcome, the more blameworthy the actor—regardless of intent
- Rule-based discipline—did an individual violate a rule? Did they intentionally violate the rule? Is the rule routinely followed?
- Risk-based discipline—if an individual intends to take a risk, disciplinary action is appropriate

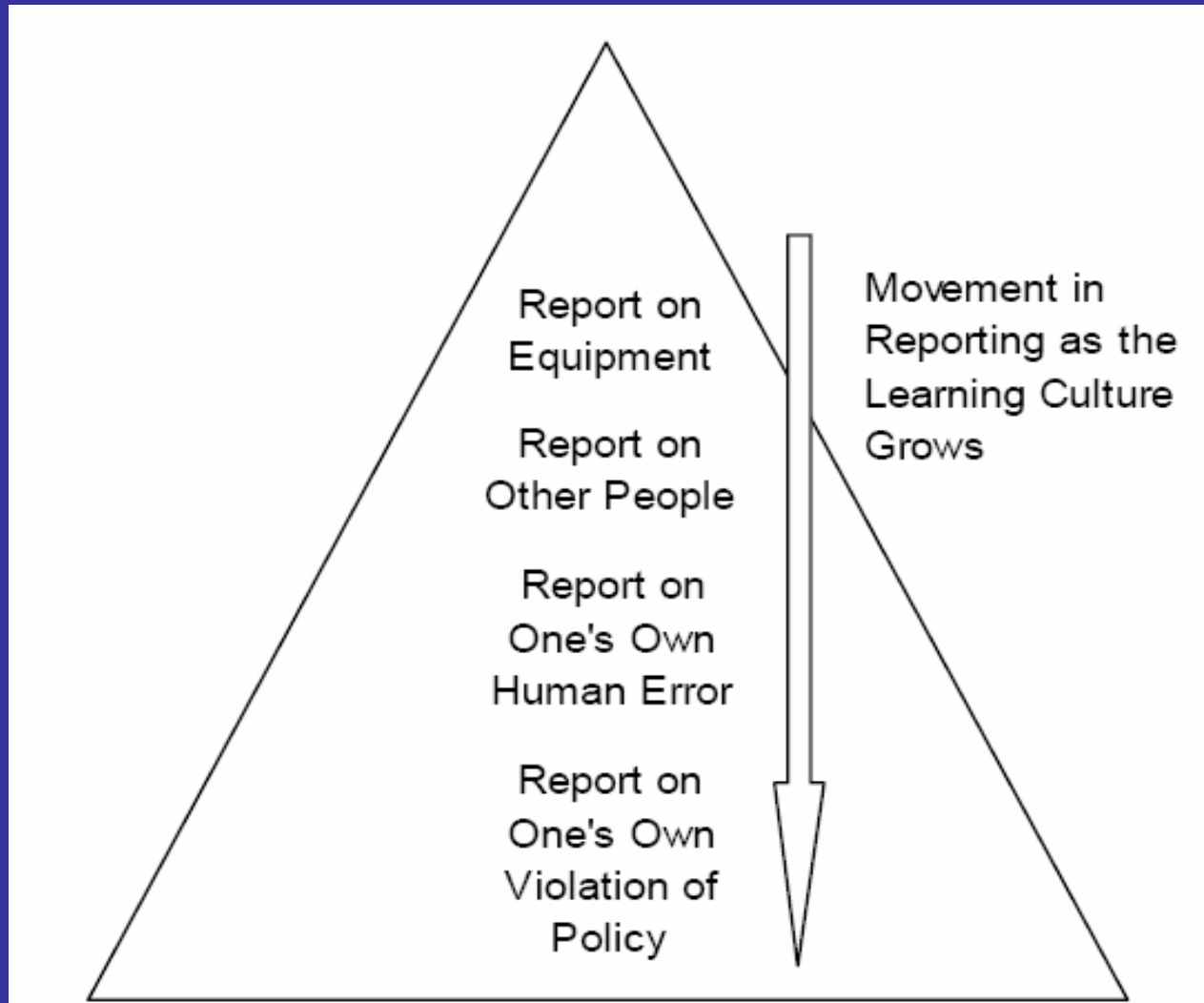
# UNSAFE ACTS ALGORITHM



*Adapted from James Reason. (1997). Managing the Risks of Organizational Accidents.*

# Evolution in Reporting Culture

*Marx D. (2001). Patient Safety and the "Just Culture": A Primer for Health Care Executives.*



# Think about your disciplinary system...

“If an employee makes a mistake, can he/she safely come forward so that your organization can learn from the event?”

David Marx, JD

## Chapter 5

# Overcoming System Barriers Requires Structured Communication and Teamwork

- Effective communication is brief, clear, timely, and closed (the receiver must verify receiving the information).
- People who work in teams make fewer errors.

# System Barriers to Safe Health Care

*Amalberti et al. (2005). Annals of Internal Medicine*

- Valuing production over patient safety
- Craftsman mindset...allowing provider's to use individual autonomy to prevent standardization with evidence-based care
- Unintended consequences of technology and complex processes
- Allowing professional hierarchies to prevent structured communication of critical information

# Structured Communication

- SBAR for routine communication
  - S - Situation - what is happening at the present time?
  - B - Background - what are the circumstances leading up to the situation?
  - A - Assessment - what do I think the problem is?
  - R - Recommendation - what should we do to correct the problem?

# Structured Communication

- CUSS to communicate concern
  - C – “I’m Concerned” or “I need clarity”
  - U – Uncomfortable
  - S – Stop the line/procedure
  - S – Patient Safety is at risk!

# Structured Communication

VIDEO CLIP

[www.usuhs.mil/cerps/TeamSTEPPS.html](http://www.usuhs.mil/cerps/TeamSTEPPS.html)

# Chapter 6

## The Role of Senior Leaders

- Leadership is the critical element in a successful patient safety program. Leadership can not be delegated.
- Administrators, boards, and medical staff must work together to ask what happened (not who made an error), establish values, ensure adequate resources, and require adherence to reliable, evidence-based practices.

# Role of Senior Leaders

*Institute for Healthcare Improvement. (2006). Leadership Guide to Patient Safety.*

- Who are your senior leaders?
  - CEO and his/her direct reports
  - Clinical leaders...medical staff, pharmacist
  - Board Members
- Leaders establish the value system in your organization
  - Ensure quality and safety are central to strategic plan

# Role of Senior Leaders

*Institute for Healthcare Improvement. (2006). Leadership Guide to Patient Safety.*

- Set strategic goals
- Align resources to achieve those goals
- Remove obstacles for clinicians, staff
- Require adherence to evidence-based practice

# Role of the Board

*Institute for Healthcare Improvement. (2006). Leadership Guide to Patient Safety.*

- Has ultimate responsibility for quality
  - Ensure quality and patient safety are central to strategic plan
- Agenda gives quality and safety equal attention with financial issues
  - Ensure production never trumps safety
  - Understand the rationale behind the quality and safety measures reviewed

# The Role of the Board

*Institute for Healthcare Improvement (2006). Leadership Guide to Patient Safety.*

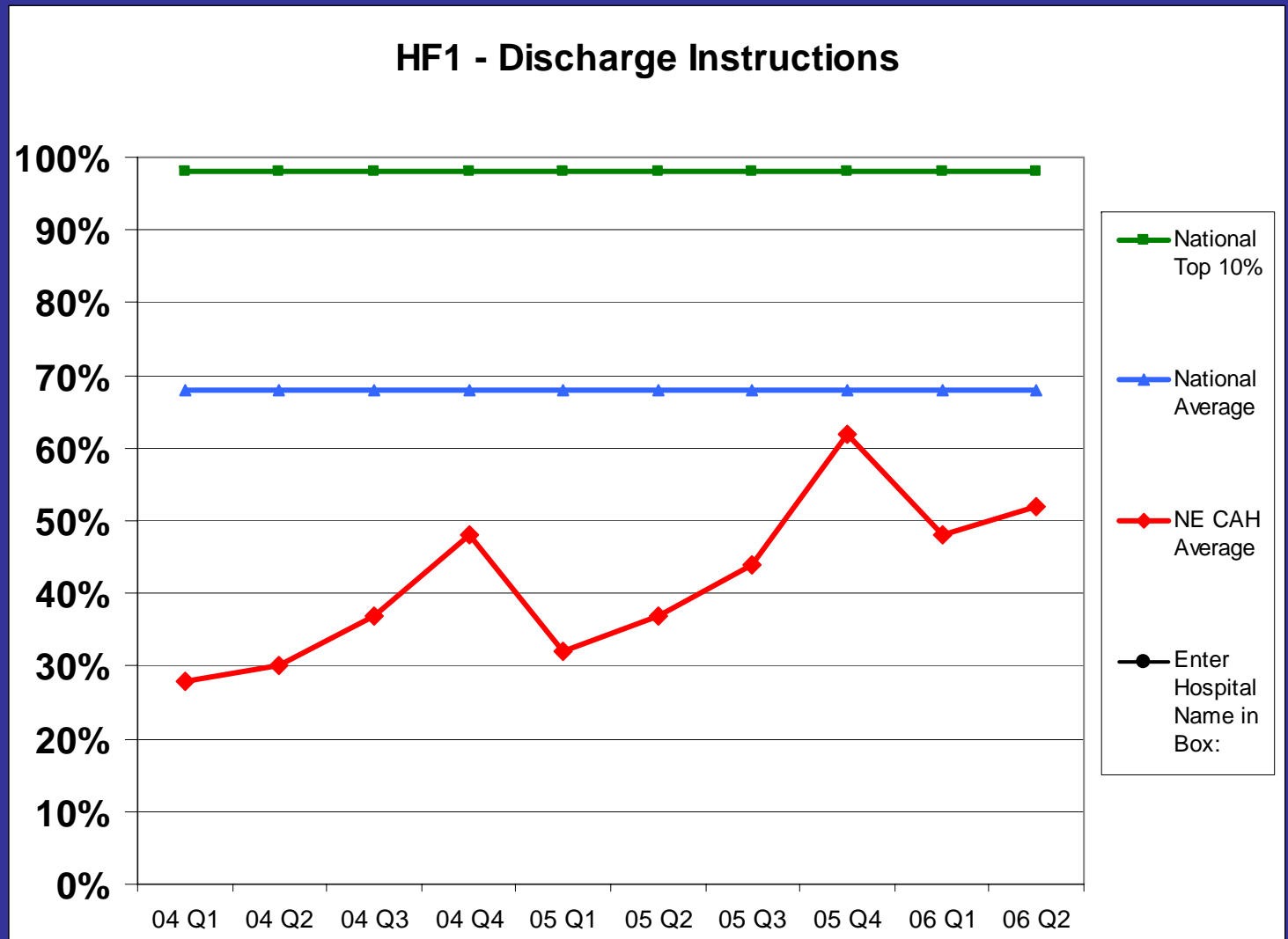
- Understand organization's performance
  - Relative to national and peer benchmarks
  - Are current processes consistent with evidence?
  - How reliable are evidence-based processes?
  - What is the culture for discipline and reporting?
  - Are structured teamwork and communication techniques in use?
- Improve your quality and safety literacy with education at each meeting

# National CAH Safety Benchmarks\*

- 35% had conducted safety culture survey
- 52% had conducted a root cause analysis
- 73% routinely report near misses
- 47% share info. about med errors with board
- 47% routinely disclose harmful errors to patients
- 70% use two identifiers to est. patient identity
- 44% verify an unopened unit dose at the bedside with the MAR

\* Jones, K. J., Cochran, G., & Mueller, K. (2006). Prevalence of safe medication practices in small rural hospitals. Presented at National Rural Health Association, Reno, NV; May 18, 2006.

Proportion  
of HF  
patients  
receiving  
discharge  
instructions



Data provided by CIMRO of Nebraska

# Action Steps

*Institute for Healthcare Improvement. (2006). Leadership Guide to Patient Safety.*

- Identify strategic patient safety priorities
- Engage the key stakeholders
- Communicate and build awareness
- Redesign systems to improve reliability
- Track/measure performance over time
- Support staff and families
- Align system activities and incentives

# Conclusion

“Our systems are too complex to expect merely extraordinary people to perform perfectly 100% of the time. We as leaders have a responsibility to put in place systems to support safe practice.”

James Conway former VP and COO  
Dana-Farber Cancer Institute

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