Just Culture, Human Factors and Medication Safety

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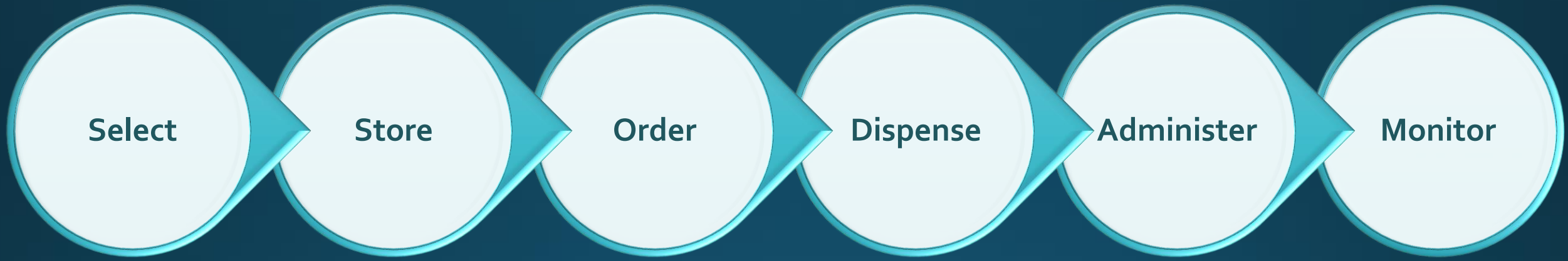
What is a medication error?

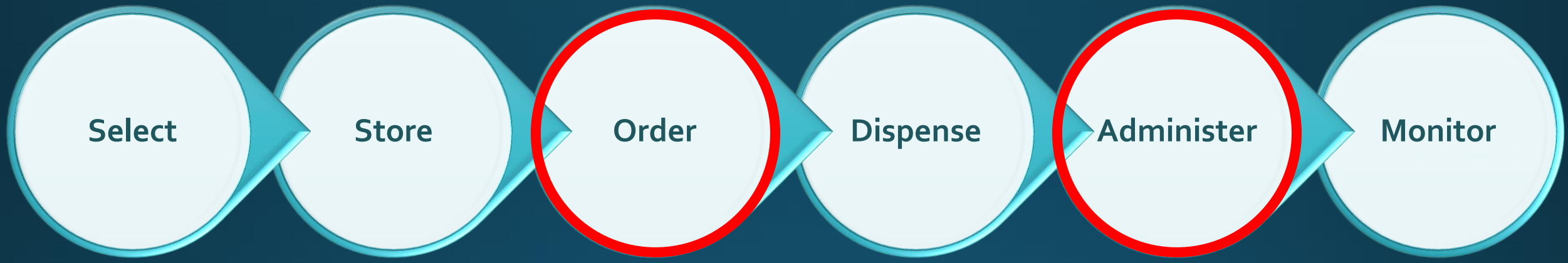
"Any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing; order communication; product labeling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use."

- National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP)

Medication Use Process



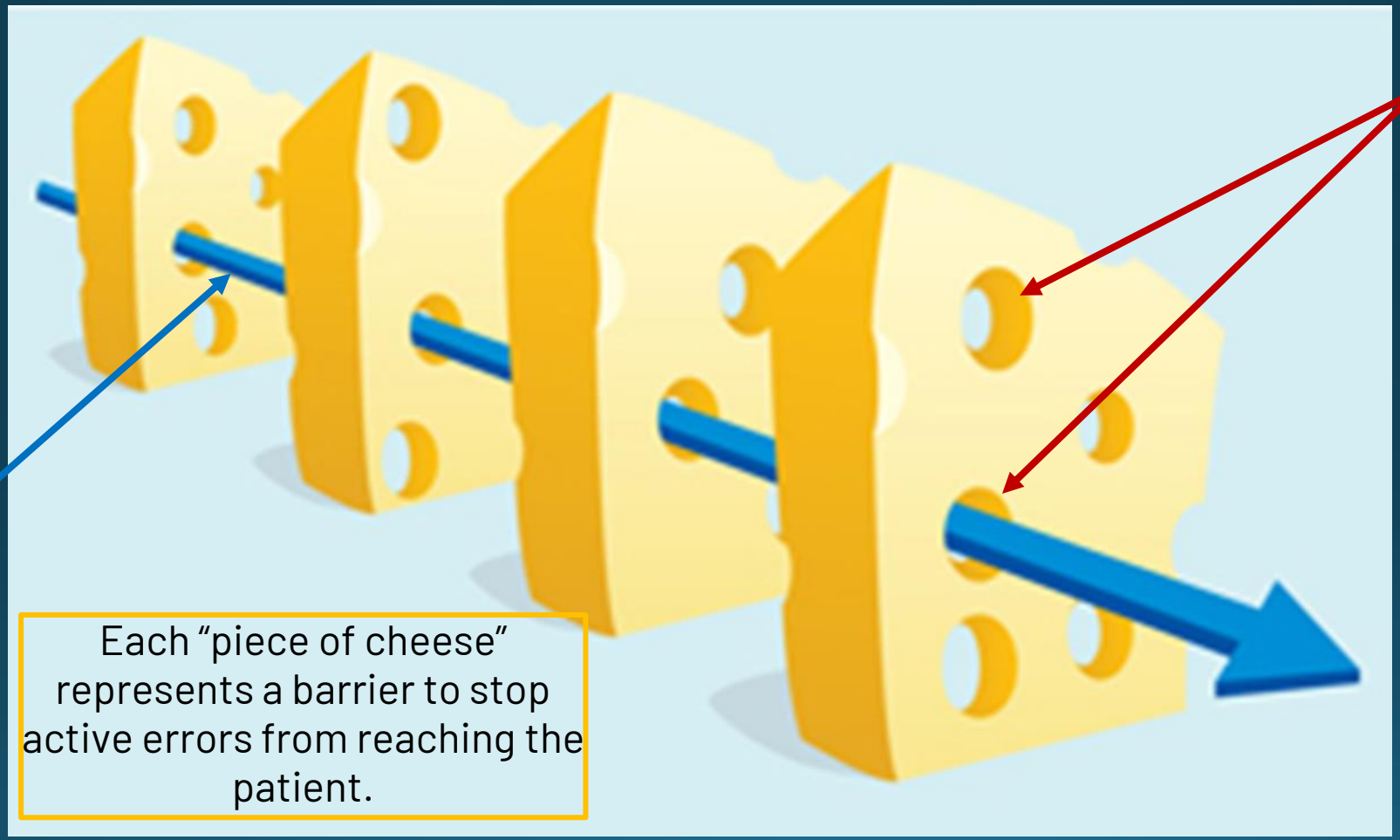
Medication Use Process



Causes of Medication Errors

Active Errors:

- → Human factors
- → Involve frontline personnel
- → Occur at the point of contact between a human and some aspect of the larger system



Each "piece of cheese" represents a barrier to stop active errors from reaching the patient.

Latent Errors:

- System factors
- "Accidents waiting to happen"
- Failures in the organization or design that allow the inevitable active errors to occur

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

Active Errors

Human Error

Not a behavioral choice

Mental slip, lapse or mistake

Behavioral Choices

At-Risk Behavior

- Increased risk where risk is not recognized or is mistakenly believed to be justified

Reckless Behavior

- Conscious disregard of substantial and unjustifiable risk

Human Error

- **Confirmation Bias**
  - Selectively search for information that confirms our belief, and reject information that does not

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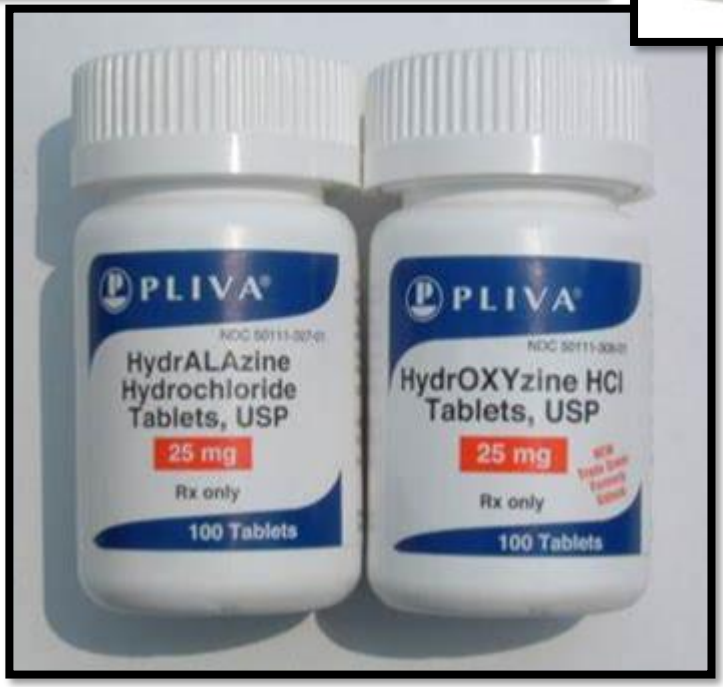
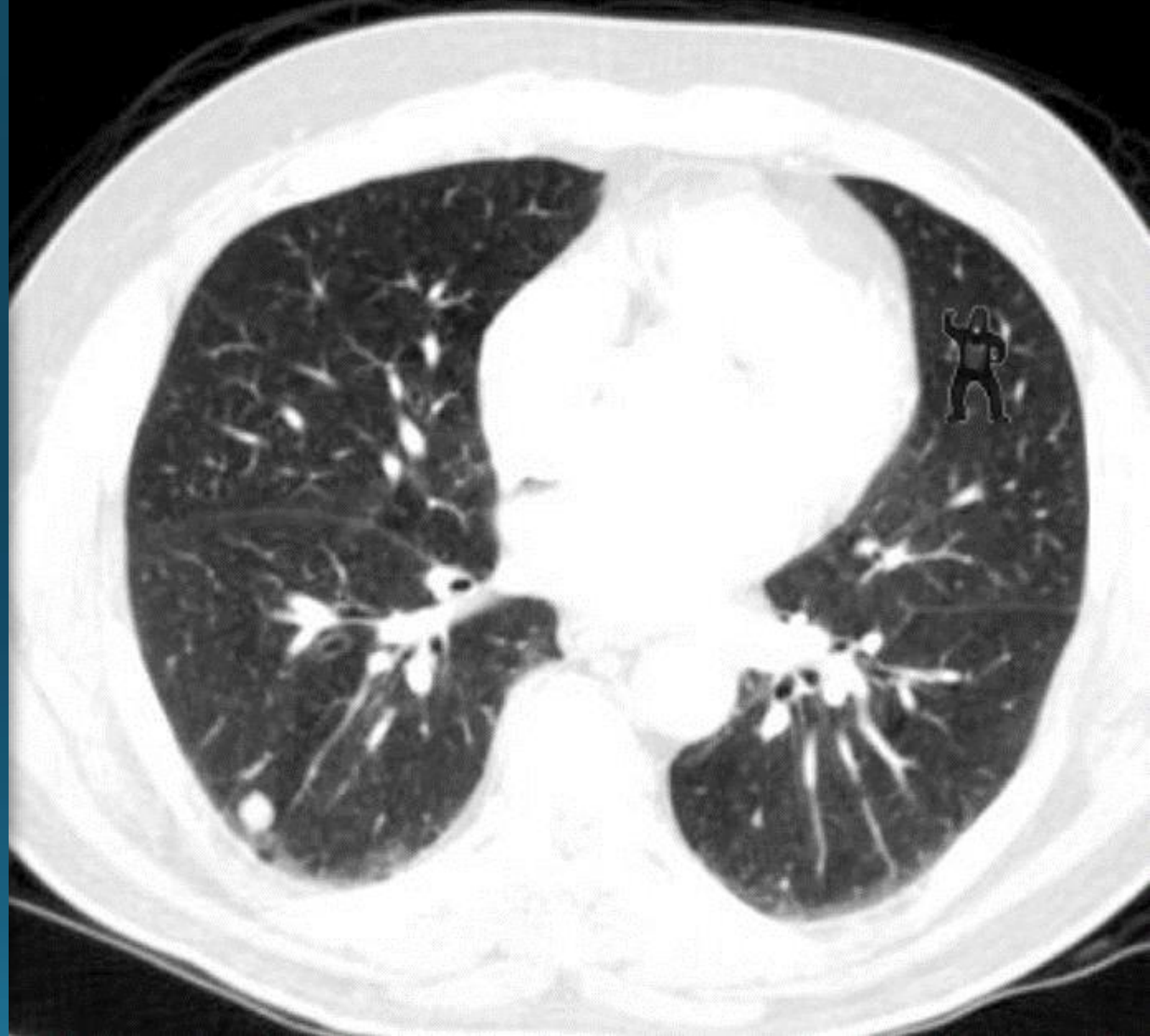


Human Error

- **Inattentional Blindness**
  - We see only what our brains tell us to see



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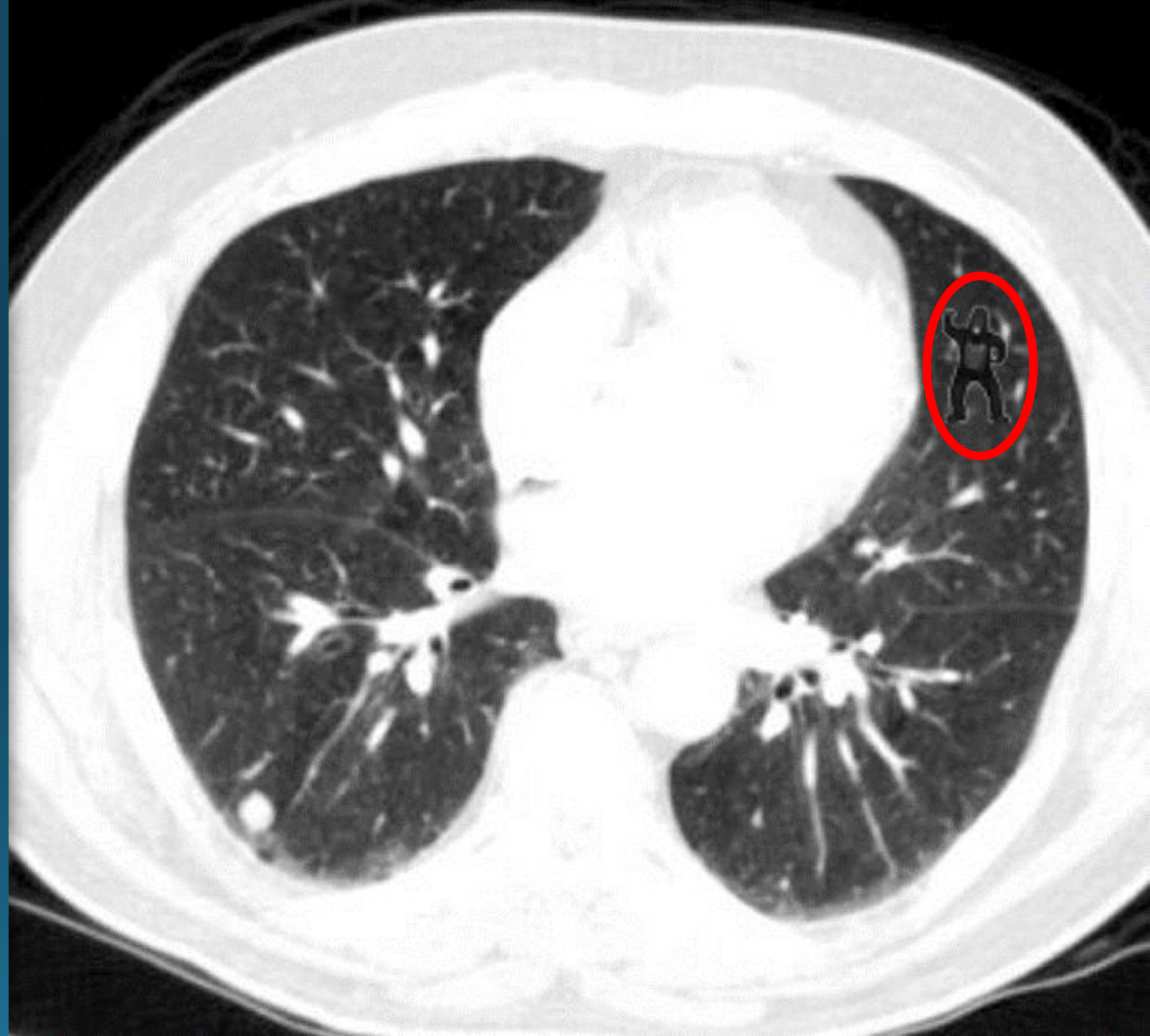

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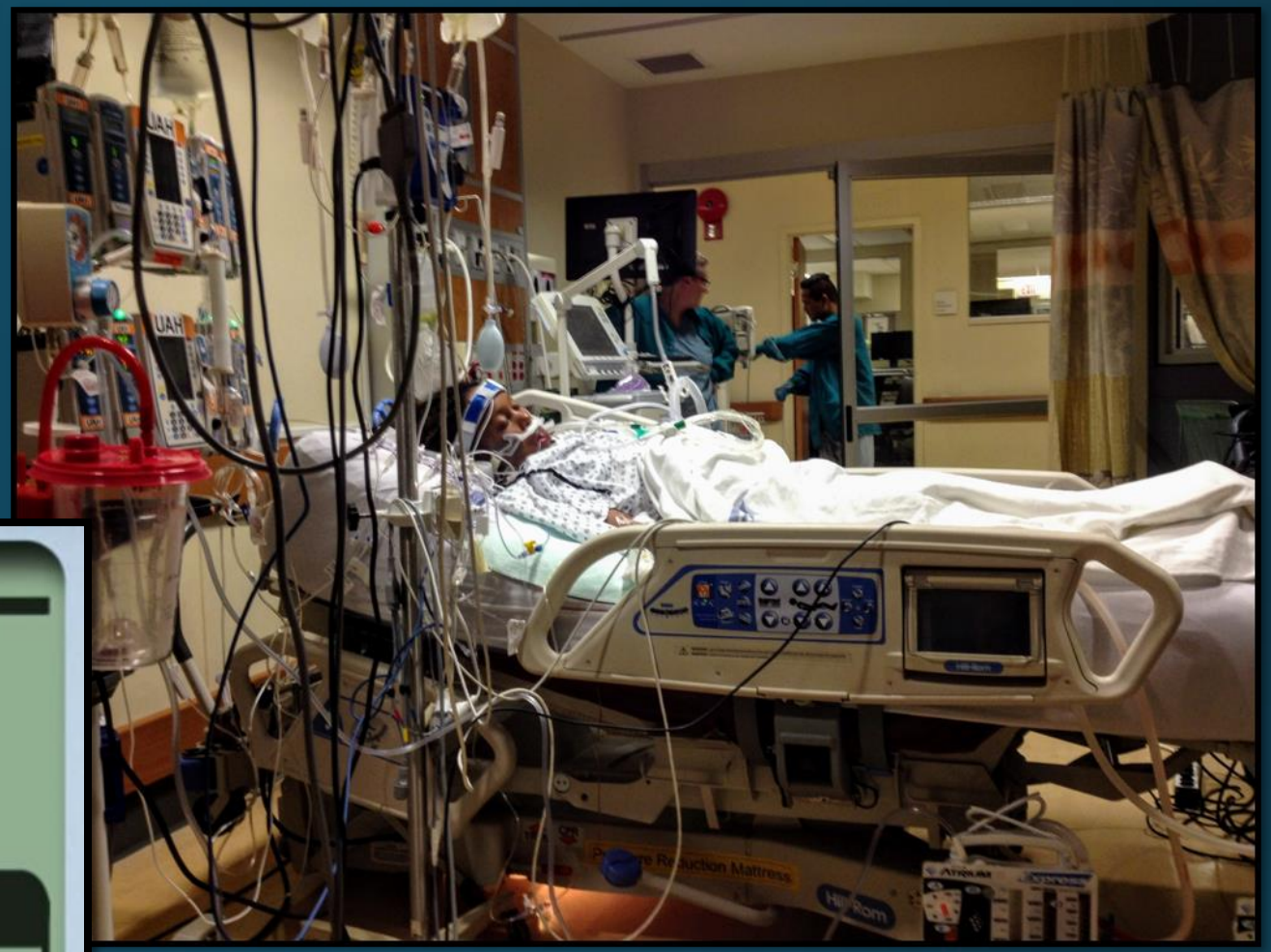
Latent Errors

- Keyboard shortcuts
- Medication search drop-downs
- Poorly designed equipment/warnings



The Error

A patient scheduled for a positron emission tomography (PET) scan was experiencing anxiety. The provider entered an order for midazolam.

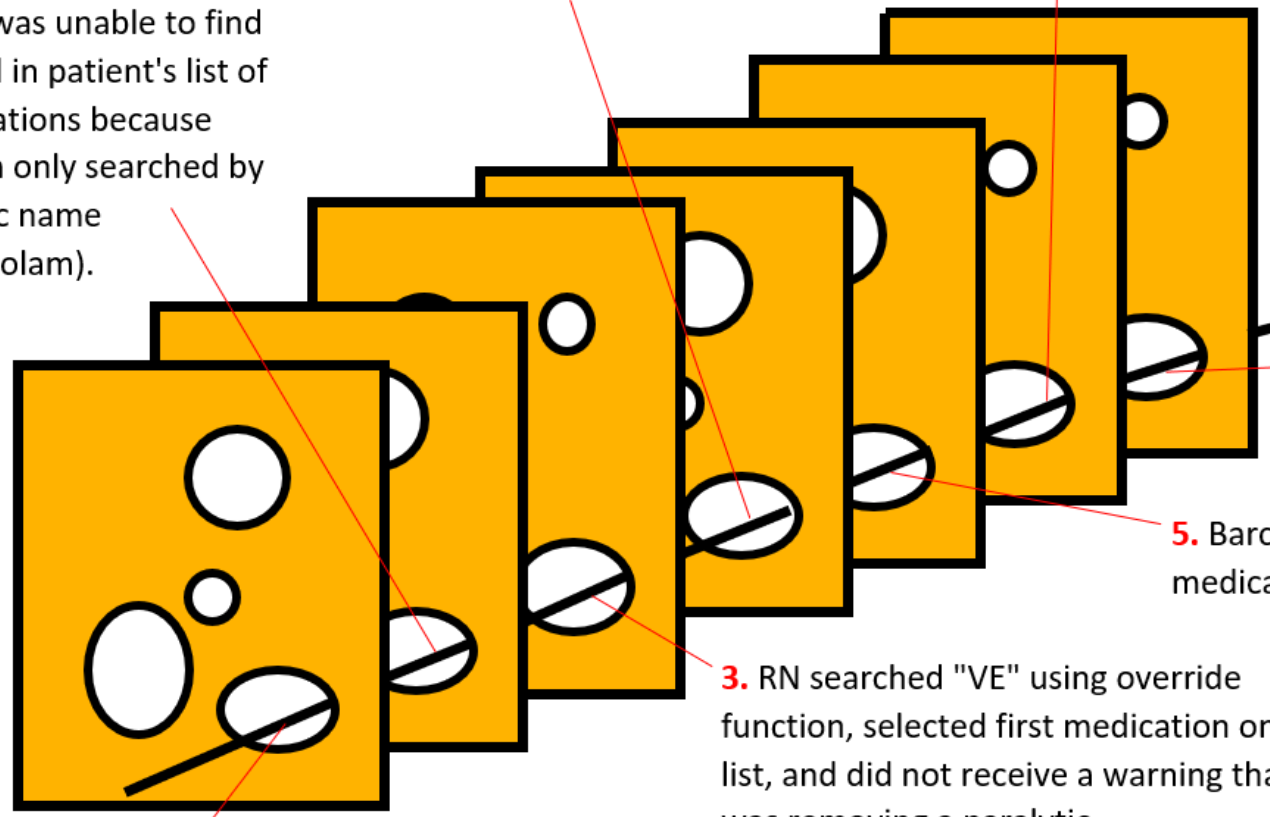
The patient's primary nurse was busy, so a float nurse was asked to administer the medication.

The nurse attempted to remove the medication from the automated dispensing cabinet (ADC) but was unable to find the medication on the patient's profile.

Using the override function, the nurse inadvertently removed vecuronium and administered it to the patient.

Approximately 30 minutes later, the patient was found pulseless and breathless.

The patient was intubated but died after life support was withdrawn the next day.



4. RN was distracted by the information that the medication needed to be reconstituted and did not read the medication name or the printed WARNING.

6. Policy did not specify required assessment and monitoring for sedation medications.

2. RN was unable to find Versed in patient's list of medications because system only searched by generic name (midazolam).

Patient death

7. Radiology technician observed patient via camera in the holding area.

5. Barcode scanning to confirm medication not available in radiology.

3. RN searched "VE" using override function, selected first medication on the list, and did not receive a warning that she was removing a paralytic.

1. Primary RN unavailable, so "float" RN who was orienting a new nurse was asked to administer Versed.

High-Reliability Organization (HRO)

An organization that is involved in a complex and high-risk environment that delivers exceptionally safe and consistently high-quality service over time.

Sensitivity to Operations

Leaders/staff are constantly aware of systems and processes.

Reluctance to Simplify

Reliance on simplistic explanations for why things work or do not work is risky.

Preoccupation with Failure

Near misses are viewed as evidence that the systems should be improved to reduce potential harm.

Deference to Expertise

Leaders and managers value the experience and insight of the staff who know the processes best.

Commitment to Resilience

When system failures do occur, employees at all levels are prepared to respond and recover, setting the stage for further improvement.

Culture of Safety

Extent to which individuals and groups will:

- Commit to personal responsibility
- Act to preserve and enhance safety, and communicate safety concerns
- Strive to learn, adapt, and modify behavior based on lessons learned
- Be rewarded in a manner consistent with these values

Elements of a Culture of Safety

- Strategic emphasis on safety
- Learning organization
- Teamwork
- High value on critical thinking skills
- Mindfulness
- Systems that defy error
- Outward, proactive, vigilant
- Effective measurement of safety
- ***Just Culture***

Journey to a Culture of Safety

Blame-and-Train/Punitive Culture

Blame-free/Non-punitive Culture

Just Culture

"The single greatest impediment to patient safety is that we punish people for making mistakes."

- Dr. Lucian Leape

HEALTH

Vanderbilt nurse: Safeguards were 'overridden' in medication error, prosecutors say

Brett Kelman Nashville Tennessean

Published 5:00 p.m. CT Feb. 6, 2019 | **Updated 12:35 p.m. CT April 10, 2019**

Vanderbilt Nurse Arrested and Criminally Charged after Fatal Medication Error

PUBLISHED ON FEBRUARY 10, 2019 BY FRIEDA PATON, M.CUR, RN

Ex-Vanderbilt nurse Radonda Vaught loses nursing license for fatal drug error

Brett Kelman, Nashville Tennessean · 7/23/2021

Like Comments 1

RaDonda Vaught, a former Vanderbilt nurse criminally indicted for accidentally killing a patient with a medication error in 2017, was stripped of her license by the Tennessee Board of Nursing on Friday at a contentious and at times tearful medical discipline hearing.

DIG DEEPER

Nurse medication error

- → RaDonda Vaught made at least 10 mistakes in fatal Vanderbilt medication error, prosecutors say
- → Vanderbilt ex-nurse indicted on reckless homicide charge after deadly medication swap
- → Vanderbilt death: Victim would forgive nurse who mixed up meds, son says
- → Vanderbilt death: Who is nurse Radonda Vaught? This is what we know.
- → Vanderbilt nurse: Safeguards were 'overridden' in medication error, prosecutors say

CRIME ›

Former Tennessee nurse RaDonda Vaught found guilty in woman's death after accidentally injecting her with wrong drug

MARCH 29, 2022 / 7:57 AM / AP

Journey to a Culture of Safety

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Just Culture

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Just Culture

Just Culture

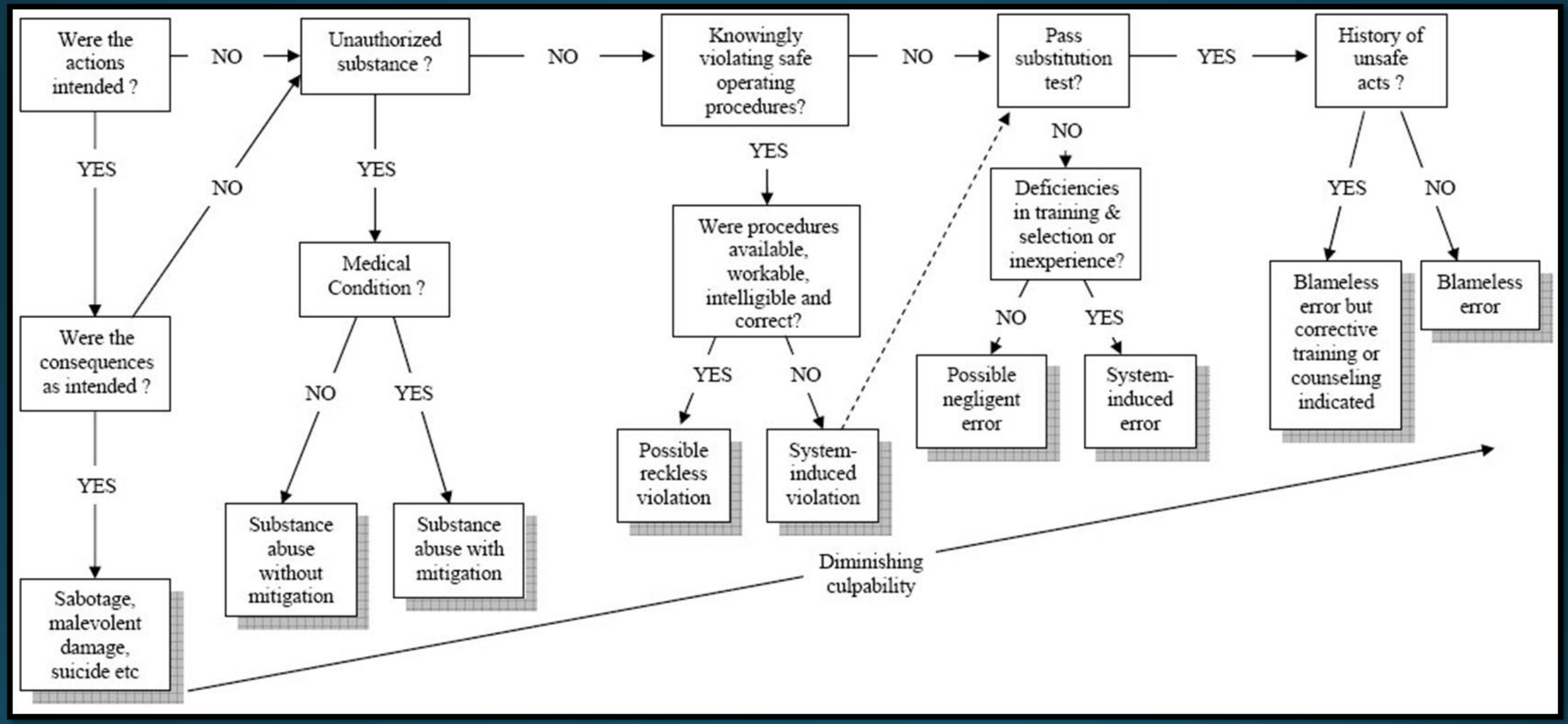
Open and honest reporting environment

Well-established system of accountability

Focus on system design and management of behavioral choices

Philip BG. Just Culture: A Foundation for Balanced Accountability and Patient Safety. *The Ochsner Journal*. 2013:400-406.

Well-Established System of Accountability



James Reason's Culpability Decision Tree; Source: coloradofirecamp.com

Management of Behavioral Choices

Human Error

- Console/comfort

At-Risk Behavior

- Promote resiliency
- Change perceptions of risk through coaching
- Reduce barriers that prevent compliance
- Add barriers to prevent non-compliance

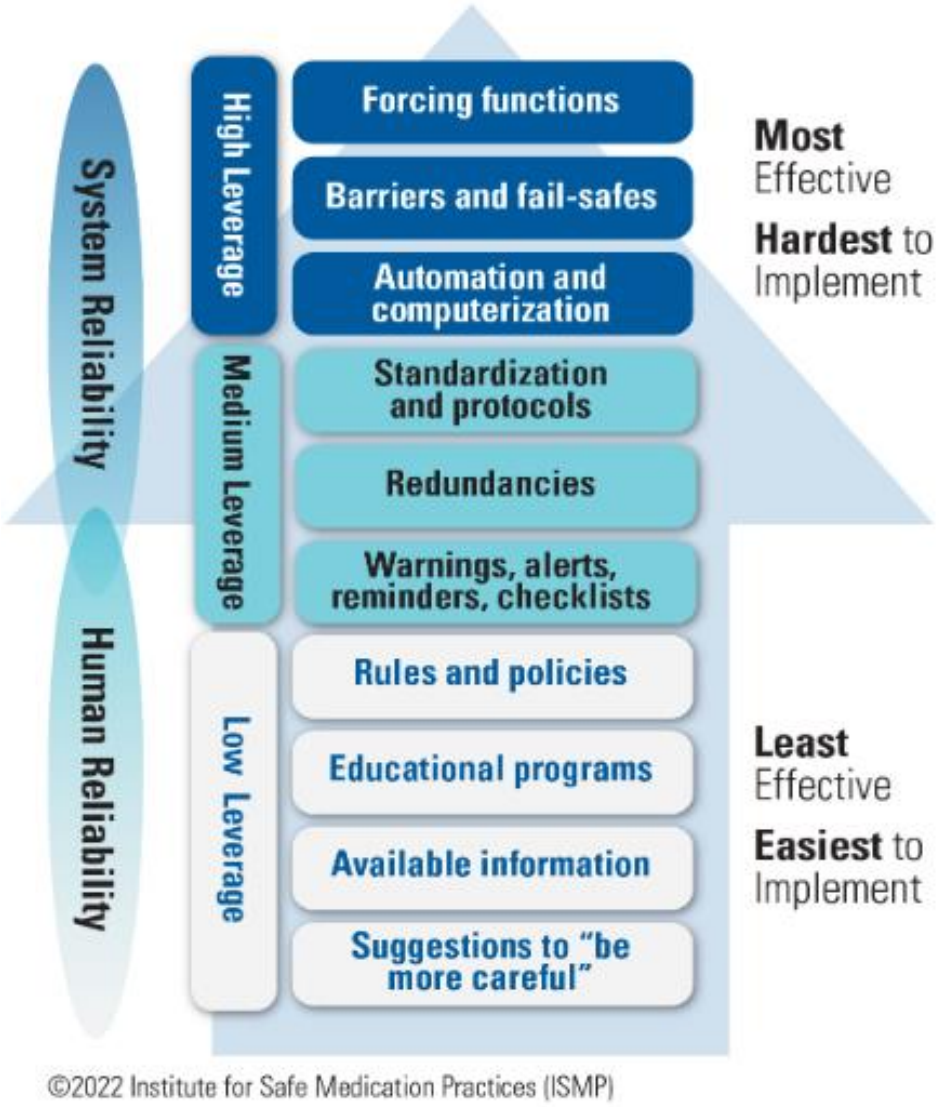
Reckless behavior

- Remedial action
- Disciplinary action

Focus on System Design

Three Principles for Improved Safety

1. Eliminate the chance for errors
2. Make errors visible
3. Minimize the consequences of the error



Another Round of the Blame Game: A Paralyzing Criminal Indictment that Recklessly "Overrides" Just Culture

February 14, 2019

We all recently learned that RaDonda Vaught, a nurse working at Vanderbilt University Medical Center, has been charged with reckless homicide in the death of a patient, Charlene Murphey. To many in the safety community, it is a setback. How could the State of Tennessee be prosecuting a nurse for what the safety community calls a medication error?

Given the dialogue, I thought it important to

TN Board of Nursing's Unjust Decision to Revoke Nurse's License: Travesty on Top of Tragedy!

August 12, 2021

Criminalization of Human Error and a Guilty Verdict: A Travesty of Justice that Threatens Patient Safety

April 7, 2022

Just Culture

Retributive Justice Questions

1. What rule was broken?
2. How bad was the breach?
3. What should the consequences be?

Restorative Justice Questions

1. Who is hurt?
2. What are their needs?
3. Whose obligation is it to meet those needs?

Don't just ask *who* was responsible

Ask *what* was responsible

Caring For Our Own

- Second Victim
  - Health care provider involved in an unanticipated adverse patient event, medical error and/or a patient-related injury who become victimized in the sense that the provider is traumatized by the event
  - Feel personally responsibility for the unexpected patient outcomes
  - Feel they have failed their patients and second-guess their clinical skills and knowledge base

- Psychological Safety

- Peer Support and Rapid Response Teams

Scott SD, et al. Caring for our Own: Deploying a Systemwide Second Victim Rapid Response Team. *Joint Commission on Accreditation of Health Care Organizations*. 2010: 233-240

References & Resources

National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP)
- www.nccmerp.org

Institute for Safe Medication Practices (ISMP)
- www.ismp.org
- *Nurse AdviseERR* (monthly digital newsletter)

Medication Safety Officers Society (MSOS)
- www.medsafetyofficer.org

Agency for Healthcare Research and Quality (AHRQ)
- www.ahrq.gov

Medication Safety Officer's Handbook
- Connie M. Larson and Deb Saine

Medication Errors, 2nd ed.
- Michael Cohen

References & Resources

High-reliability organizations: What they know that we don't (Part I & Part II). ISMP Medication Safety Alert! July 14, 2005, and July 28, 2005.

Our long journey towards a safety-minded Just Culture (Part I & Part II). ISMP Medication Safety Alert! September 7, 2006, and September 21, 2006.

Another Round of the Blame Game: A Paralyzing Criminal Indictment that Recklessly "Overrides" Just Culture. Acute Care ISMP Medication Safety Alert! February 14, 2019.

Marx D. Reckless Homicide at Vanderbilt? Outcome Engenuity. March 14, 2019. www.outcome-eng.com.

The Differences Between Human Error, At-Risk Behavior, and Reckless Behavior are Key to a Just Culture. Acute Care ISMP Medication Safety Alert! June 18, 2020

References & Resources

Jones J, Treiber L, Shabo R, et al. *Just Culture, medication error prevention, and second victim support: A better prescription for preparing nursing students for practice [White paper].* Kennesaw, GA: WellStar School of Nursing, WellStar College of Health and Human Services, Kennesaw State University. 2021

Criminalization of human error and a guilty verdict: A travesty of justice that threatens patient safety. Acute Care ISMP Medication Safety Alert! April 7, 2022.