Patient Safety Review
M3- VIC

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Objectives

- Provide overview of the material from IHI modules PS 101- 105
- Review material that will be testable on your exam
- Provide information about the structure of the M3 QIPS VIC exam
- Demonstrate examples of USMLE style exam questions

Overview

- PS 101 Introduction to Patient Safety
  - What is Patient Safety?
  - Understanding healthcare as a complex system
- PS 102 Error and Harm
  - How complex systems fail → Swiss cheese model
  - What is an Error vs a Harm?→ Defining Error and Harm Events
  - What is a Culture of Safety and Just Culture?
- PS 103 Humans and Safety
  - How do humans make errors? → automatic and controlled thinking, internal and external factors
  - How do we minimize errors made by human? → Human Factor Engineering, limits of technology
- PS 104 Teamwork and Communication
  - Techniques for effective communication → CUUS, SBAR, closed loop communication, teach back
  - Steps in transitions of care
- PS 105 Responding to an Adverse Event
  - Steps after and adverse event
  - Structure of an apology
  - Second victims of adverse events

Introduction to Patient Safety

Patient safety:

- The prevention of **errors** and **adverse events (harms)** to patients associated with health care.
  - Moved away from term **“medical error”** which overemphasized the role of individual in causing harm
    - Some — but not all — harm to patients is the result of human error
    - Not all errors result in harms
- No matter how well-intentioned, well-trained, and hard-working, **health professionals are human and make mistakes.**
  - We have to study and design for this
- Look **beyond individual provider to the system** in which they work
  - Have to learn to work in a complex systems and a teamwork

Introduction to Patient Safety

Adverse Events Are Common

- About 1 in 10 patients experiences an adverse event during hospitalization.
- Roughly 1 in 2 surgeries has a medication error and/or an adverse drug event.
- More than 700,000 outpatients are treated in the emergency department every year for an adverse event caused by a medication.
- More than 12 million patients each year experience a diagnostic error in outpatient care.
- About one-third of Medicare beneficiaries in skilled nursing facilities experience an adverse event.

Introduction to Patient Safety

Health Care is a Complex System

- Technology is rapidly evolving…
  - more than 10,00 types of medical devices available today
- There is not always a clear right answer…
  - more than 120 different systems to rate the strength of scientific evidence
- There is rarely enough time…
  - 40% of physicians see more than 20 patients a day
- Patients require complex, coordinated care…
  - one teaching hospital reported 4000 handoffs daily, total of 1.6 million per year
- Hierarchical nature of healthcare can breed disrespect/ abusive behavior…

Introduction to Patient Safety

Systems Approach to error means addressing:

- Accounting for typical error:
  - Putting mechanisms in place to mitigate unsafe acts that may inevitably occur
- Complex processes:
  - Redesigning workflow and adding defenses to avert errors
- Teams:
  - Focusing largely on the conditions under which individual providers and care teams work
- Behavior/motivations:
  - Minimizing the conditions that lend themselves to violations (deviations from protocols)

Introduction to Patient Safety

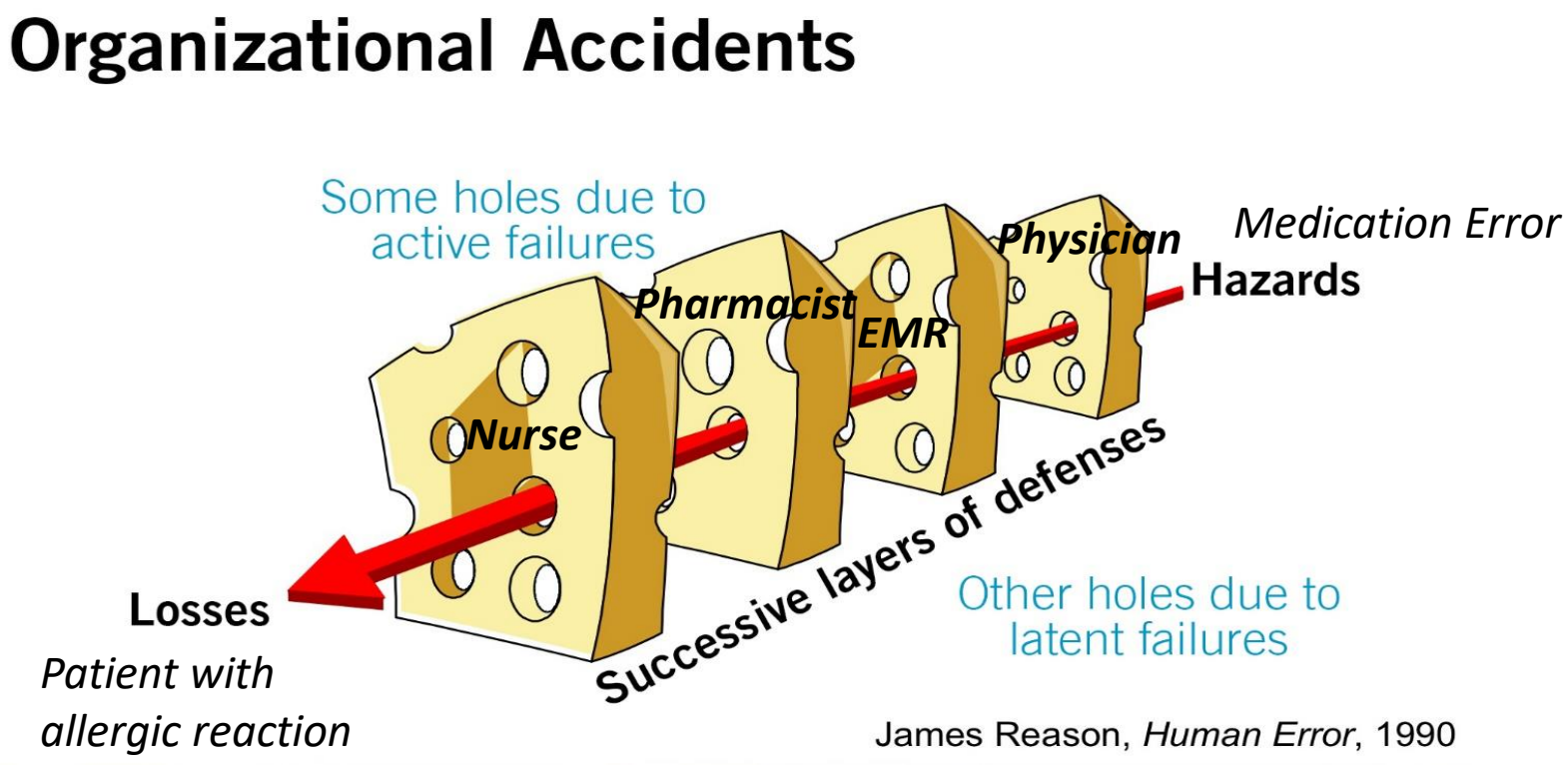
Systems Approach

- Until you fix the system, the same error is just as likely to occur again.

Every system is perfectly designed
to get the results it gets.
– The W. Edwards Deming Institute

Error and Harm

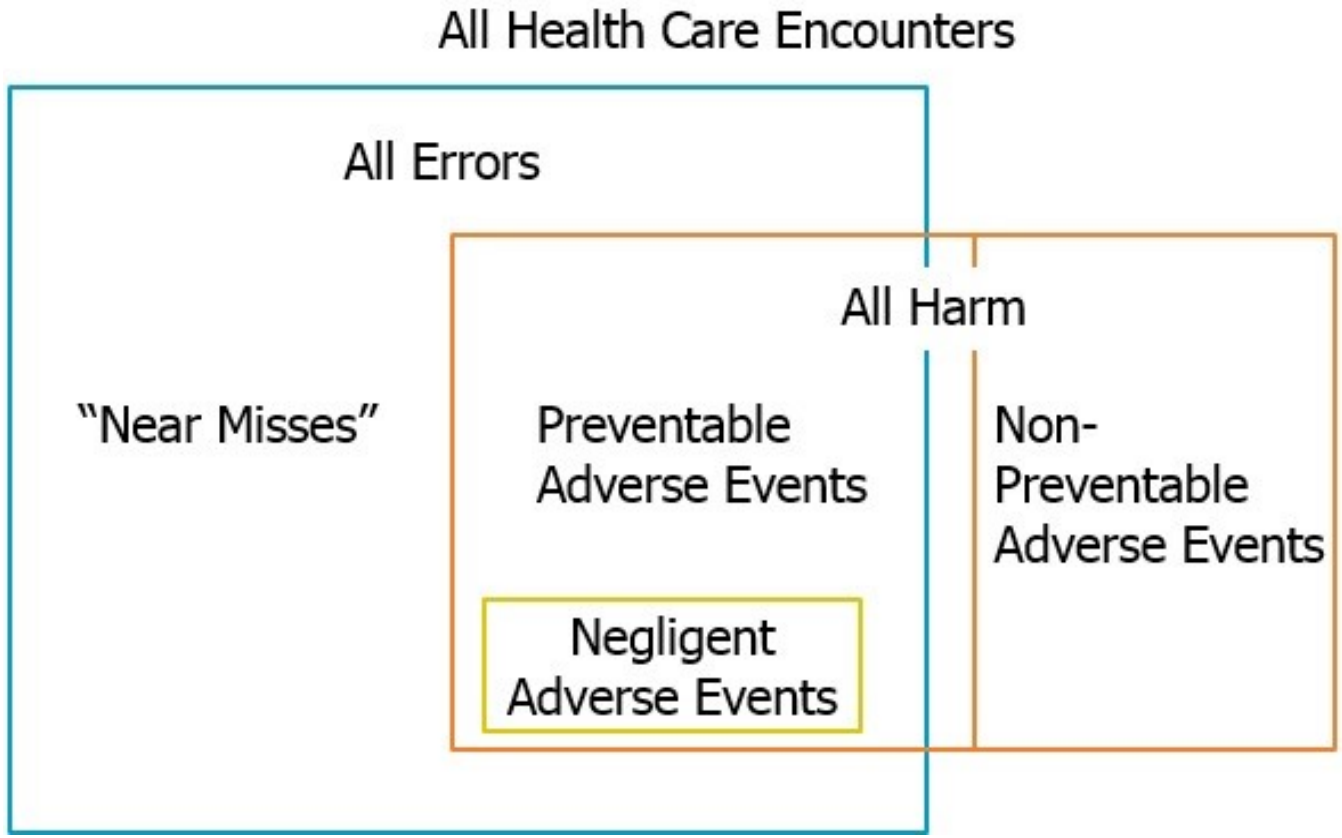
- How does a complex system fail? → Swiss Cheese Model



Error and Harm

What is a Harm vs and Error?

- **Harm:** is unintended physical injury resulting from or contributed to by medical care that requires additional monitoring, treatment, or hospitalization, or that results in death.
- **Error:** is a mistake that has the potential to cause harm.



Error and Harm

Harm does NOT include:

- Errors of omission:
  - Most definitions of harm have focused on errors of commission (something was done)
    - For example, a patient suffered a stroke after receiving too much of an anticoagulant.
  - But what if the stroke was after providers failed to do something?
    - For example, follow up with important test results
- Psychological harm:
  - What about all those experiences that don't require additional medical care, but injure a patients psychologically?
    - Is it harmful when a provider rudely wakes a patient up in the night for no medical reason, when her privacy is violated?
  - It's difficult to define and measure, but every provider has the power to alleviate a patient's emotional suffering by showing empathy.
- Financial harm:
  - In the United States, medical bills are the leading cause of personal bankruptcy.

Error and Harm

Types of Error

- Human error
  - inadvertently doing something other than what you should have done
- At risk behavior
  - making intentional behavior choices that increase risk
- Reckless behavior
  - consciously disregarding a visible, significant risk.
  - For example, drunk driving

Error and Harm

In a system, how do we combat error and harm? →Culture of Safety

- In a **culture of safety**, providers discuss errors and harm openly, without fear of being unfairly punished, and with confidence that reporting safety issues will lead to improvement
- **Culture of safety** consists of: psychological safety, accountability (just culture), negotiation (agreement on matters of importance), and teamwork

Error and Harm

Accountability in a Just Culture

- Just culture is a concept related to systems thinking which emphasizes that mistakes are generally a product of faulty organizational cultures, rather than solely brought about by the person or persons directly involved.
- Accountability is holding individuals responsible for acting in a safe and respectful manner.
  - Blameworthy events: events that are the result of criminal acts or acts defined by the organization as being intentionally or deliberately unsafe i.e. **reckless behavior.**
    - For example: patient abuse, alcohol or substance abuse on the part of the provider

Humans and Safety

To Err is Human…How do humans make errors?

- Controlled thinking: consciously solve problem or make decision
  - Errors of planning
  - Cognitive errors- improper testing, unnecessary treatments, and missed diagnosis
    - overestimated probability
    - Failure to consider all relevant possibilities
- Automatic thinking: effortless though
  - skilled-based errors
  - Heuristics- simplified thought process based on patterns and past experiences

Humans and Safety

Heuristics:

DO---AMINE?

Humans and Safety

To Err is Human…How do humans make errors?

Factors that contribute to error

Internal errors “endogenous” causes:

- related to the individual, which include both psychological and physiological state: limited memory capacity, fatigue, stress, hunger, illness, language limitations, hazardous attitudes

External causes “exogenous” causes”:

- noise, heat, light, long work schedules, inadequate training, poorly designed rules or procedures, interruptions, distractions, language barriers

Humans and Safety

How do we minimize errors made by human?

- Human Factors Science- an established science that uses disciplines such as anatomy, physiology, physics, and biomechanics to understand how people perform under different circumstances.
- Human Factors Engineering-the design of the equipment and process you use every day that will play a large role in your ability to perform safe, high-quality care
  - e.g. Ignoring a critical alarm because of exposure to too many false alarms
  - E.g. Forgetting orders you gave in the middle of the night

Humans and Safety

Human Factors Engineering

- Simplification
  - Helps to eliminate work arounds
- Standardization
  - e.g. checklists
- Force functions (make it impossible to do a task in correctly, like a constraint)
  - e.g. all gas containers have different nozzles, nasal canula can only fit oxygen nozzle
- Use Redundance
  - e.g. pharmacy double checking orders
- Use Technology
  - ****Limitations of technology: can use technology, but has its own challenges such as alert fatigue**

Teamwork and Communication

Where are we most vulnerable for errors? → Communication

Poor communication- according to the Joint Commission, communication failure between care providers or between care providers and patients and families is consistently the main underlying cause of serious adverse events:

- Wrong treatments are ordered or administered
- Appropriate treatments are not considered
- New information is not adequately responded to
- Critical information is lost or forgotten

Teamwork and Communication

How to improve communication and teamwork?

- When members of the team don't work together, communicate effectively, and value on another's input and expertise, the outcome are not as good, no matter how talented and dedicated.
- Train providers/teams on:
  - effective communication techniques
    - Critical language, briefing and debriefing, SBAR, closed loop communication
  - transitions of care
    - Med rec, standardization, closing the loop

Teamwork and Communication

Effective Communication Techniques

Briefing and debriefing

- Briefing:
  - taking a minute or two to discuss the plan and the expected outcome
- Debriefing:
  - a concise exchange that occurs after such events have completed
  - answer what did we do well?, what did we learn?, what should we do next time differently?)

Teamwork and Communication

Effective Communication Techniques

SBAR: communications tool, which can help during briefing

- **S**ituation:
  - Dr. Jones, this is Sharon Smith calling from the CCU. I have Mr. Holloway in Room 217, a 55-year-old man who looks pale and sweaty, feels confused and weak, and is complaining of chest pressure.
- **B**ackground:
  - He has a history of HTN.
- **A**ssessment:
  - I think he's got an active bleed and we can't rule out an MI, but we don't have a troponin or a recent H&H.
- **R**ecommendation:
  - I'd like to get an EKG and labs, and I need for you to evaluate him right away.

Teamwork and Communication

Effective Communication Techniques

Closed Loop Communication

- Repeat Back: helps ensure no critical information is lost during transitions of care during briefing
  - The receiver then repeats back what he or she heard.
  - The sender then acknowledges that the repeat back was correct or makes a correction.
  - The process continues until participants verify a shared understanding.
- Teach Back: especially useful for communicating with patients
  - “Could you repeat back to me what you understood so I know if I was clear?”

Teamwork and Communication

Where are we vulnerable for errors? → Transitions of care

Every encounter needs…

- Medication reconciliation
  - Verification: Collecting the list of the patient's medications and dosing information.
  - Clarification: Confirming that the list makes sense.
  - Reconciliation: Documenting any changes
- Closing the loop
  - Every encounter (lab test, hospitalization, specialty clinic) needs to be closed with the PCP acknowledging or discussing with the patient
- Standardization of transitions of care

Responding to an Adverse Event

Steps after an adverse event

1. Provide care
2. Communicate
3. Report
4. Document

Responding to an Adverse Event

Communicate

- You do not need all of the facts to communicate openly without accepting blame prematurely.
- Express compassion
  - making it clear that you intend to learn and share more about what happened as soon as possible
  - making it clear who will be available to help the patient and family
- Its an ethical requirement to deal openly and truthfully.
- Concerns about liability should not affect honestly.

Responding to an Adverse Event

Report

- Who do you report to?
  - Your supervisor, electronic reporting system, risk management.
- What do you report?
  - You should report **serious adverse events**, but also should report **near misses** when patient isn't actually harmed

Responding to an Adverse Event

Why apologize?

- Patients taking legal action want greater honesty and appreciation of the severity of the trauma they have suffered and assurance that lessons have been learnt from their experiences
- Apology is important for: restoration of self-respect and dignity, feeling cared for, restoration of power, suffering in the offender, validation that the offense occurred, designation of fault, assurance

Responding to an Adverse Event

Structure of an Apology

- Acknowledgement
  - This should include the identity of the participant(s), appropriate details of the event, and validation that the behavior was unacceptable.
- Explanation
  - The speaker must provide an honest reason for what happened and accept responsibility, making it clear the patient did not do anything wrong. Sometimes saying “there is just no excuse for what happened” can be the most honest and dignified explanation.
- Expression of remorse, shame and humility
  - In this context, remorse is a deep sense of regret. Shame is the emotion associated with failing to live up to one’s standards. Humility is acknowledging your own limitations and flaws as a human being.
- Reparation
  - How will providers make amends for the wrong? Reparation can range from an early scheduling of the next appointment to a financial settlement. Patients want to know that they will be cared for and also that the problem will not happen again.

Responding to an Adverse Event

Caregivers are victims too

- Second victims
  - intense emotions are normal, some have long-term effects that can be devastating. Upset, guilty, self-critical, depression, scared, shame
- Suffer effects
  - lost job satisfaction, inability to sleep, loss of self-worth, distance from professional colleagues, increased anxiety about future error

Responding to an Adverse Event

Caregivers are victims too

Fundament attribution of error:

- We have a tendency to blame the person not the system
  - Personality: “He’s arrogant”; “he's careless.”
  - A motive: “They wanted to get out of work as soon as possible.”
  - An enduring trait: “She’s always in a hurry.”
- We must actively work towards just culture

Responding to an Adverse Event

Caregivers are victims too

How can we support our colleagues?

- Early identification of suffering
- Ongoing emotional support from peers
- Gossip control
- The opportunity to be part of improvement efforts related to the event.

Exam Format

- Test will be 16 questions.
- The test will be multiple choice
- There will be a mix of short question stems and longer, case-based (USMLE style) question stems.
- You will be tested on both specific concepts/ skills and on general understanding of/nuance between concepts.
- There will be at least one (but may be more than 1) test question from each required IHI module (QI 101-105 and PS 101-105).
- The material tested will be at least referenced or covered within this review, though IHI modules should be your main source of material for studying.
- Not all the material covered in this review will be tested.

Test Example 1 – part 1

An 82 year- old woman is hospitalized in a busy tertiary care hospital due to fever and shortness of breath. The patient had a history of chronic obstructive pulmonary disease. She is diagnosed with pneumonia and started on empiric antibiotic therapy overnight by the admitting physician. After several days of treatment, the patient's condition deteriorates, and she is transferred to the intensive care unit. Sputum cultures were obtained on admission, but the results were not checked by the daytime team, resulting in delay in initiating more specific antibiotic treatment. Which of the following interventions would be most effective to prevent this type of medical error?

Test Example 1 – part 2

A. Decrease the required patient caseload for physicians
B. Increase frequency of team meetings to discuss critically ill patients
C. Obtain infectious disease consultation
D. Require more detailed sign-out notes
E. Use standardized patient handoffs

Test Example 2

Which of the following is the most accurate statement concerning patient safety and adverse medical events?

A. Patient safety is primarily the responsibility of the chief medical officer at a hospital.

B. Adverse events always result in harm and are always a preventable systems error.

C. The patient's characteristics play the largest role in medical error.

D. Medical errors can be eliminated if families play a larger role in patient care.

E. Adverse events always result in harm and sometimes are preventable, but not always.