

Prevention of Medical Errors

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Objectives

- Meet biannual CME requirement 64B15-13.001, F.A.C.
 - Discuss medication and surgical errors
 - Misdiagnoses
 - System Failures
 - Creating Safety
 - Root Cause Analysis
 - Error Reduction and Prevention
 - Patient Safety
 - Most Common Errors as defined by the FL-BOOM

Why Bother?

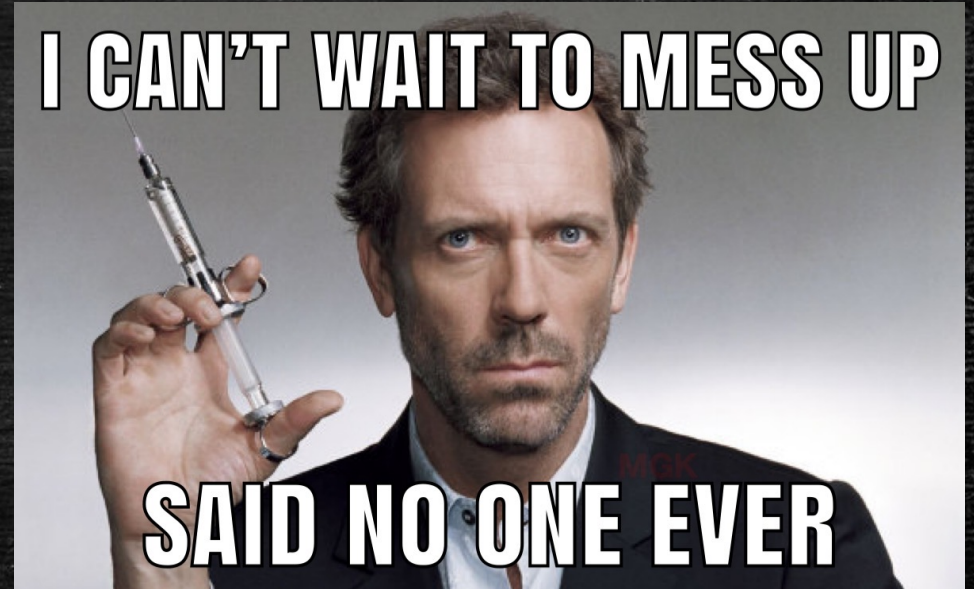
- Medical errors still represent a leading cause of death
- Medical errors lead to suboptimal outcomes, and open the field for liability
- The state can make you take this class...no one can make you listen or learn, but you should want to for your patients!

Classifying Medical Errors

- Drug errors vs. adverse events
- Misdiagnosis vs. delays in care
- Misadventures

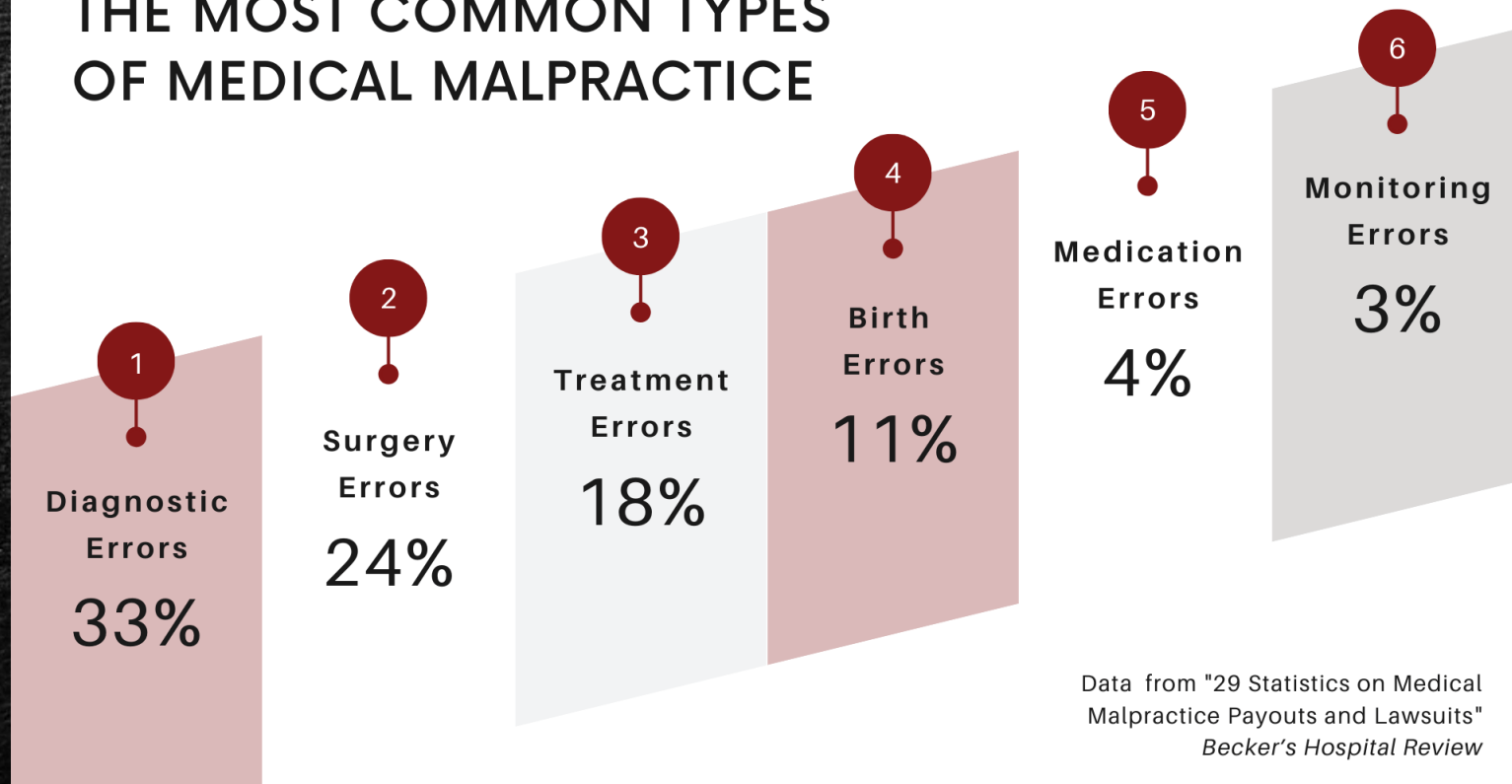
- Direct causes
- Indirect causes

- Injuries vs. Deaths



How the Lawyers See Us

THE MOST COMMON TYPES OF MEDICAL MALPRACTICE



5 Common Errors (BOOM)

- Inappropriate prescribing of controlled substances
- Failure to monitor the safety of prescribed medications
- Wrong site / Wrong patient surgery
- Failure to accurately diagnose neurologic and brain related conditions
- Failure to accurately diagnose cancer related conditions

5 Common Errors (BOM) 64B8-13.005(1)(c)

- Wrong site / Wrong procedure surgery
- Misdiagnosis of
 - Cancer related conditions
 - Gastroenterology related conditions
 - Cardiology related conditions
 - Neurologic related conditions
 - Missed spinal cord compressions



Inappropriate Prescribing

- Covered in the two hour Controlled Substances course
- Reminders
 - Check EFORSCE
 - Maintain a high index of suspicion
 - Pay attention to functional status
 - Documentation

Medication Safety Monitoring

- All drugs have side effects and adverse effects
- At every visit – consider deprescribing (risk / benefit)
 - Any falls or other issues
 - Polypharmacy concerns
- Consider common complications
 - Anticoags – check CBC
 - Amiodarone – LFTs, PFTs
 - QT prolongation - EKG

Wrong Site / Wrong Patient Procedures

- These are NEVER events
- Foreign objects -
 - If the count doesn't match get a C-arm BEFORE you close
 - When you take anything out (PICC line, scope, etc.) inspect to be sure it is intact
 - Don't let go of the guidewire
- For ANY lateralized procedure
 - Confirm with patient before
 - Ensure the correct side is on the consent
 - Verify during a procedural time out

What's in a name?



- Donald L. Trump
 - Johns Hopkins Alum
 - Oncologist, now retired

Patient Identification

- Two identifiers
- Many EMRs include photos
- Wristbands
- Be aware of "NAME ALERTS"

- NEVER:
 - Refer by diagnosis
 - Refer by room number or location



Accurate Diagnosis

- Differential is wide
 - Musculoskeletal
 - Neuropathic
 - Cardiovascular
 - Oncologic
- Detailed history AND physical
- Appropriate imaging when appropriate
- Remember: even addicts get sick

History

- CC
- HPI – Onset, Palliating/Precipitating, Quality, Radiation, Associated Symptoms, Timing
- Meds / Allergies
- PMHx / PSHx / Fam Hx / Soc Hx
- SDOH
- ROS
- Secondary History
 - Based on differential
 - Use to clarify and expand or focus and exclude
 - Should result in a differential diagnosis: VINDICATE

VINDICATE

- Vascular
- Infectious
- Neoplastic
- Drugs / Degenerative
- Idiopathic / Iatrogenic
- Congenital
- Autoimmune
- Traumatic
- Endocrine / Environmental

Physical Exam

- Comprehensive or focused
 - Driven by history and differential
 - Consider enhancing knowledge / skills if you are less comfortable
 - Goal is to have a working diagnosis and reasonable alternatives to drive the plan
- *The Four Minute Neurologic Exam, Stephen Goldberg, MD*
 - *Cope's Early Diagnosis of the Acute Abdomen*
 - *Bedside Cardiology, Jules Constant*
 - *Bates' Guide to Physical Examination*

The Differential Diagnosis



- Likelihood and Lethality
- Fishing vs. Hunting
- Index of Suspicion
- Explain the abnormal, and reassess as needed

Pearls of Wisdom

- If cancer is on the list, it is cancer until proven otherwise
- If cancer is not on the list, make sure you know why
- Being a diagnostician is about paying attention to the details, excluding things that will kill your patients, and learning from your labs / imaging / pathology results
- Communicate and follow up are key to driving the care
 - Communicating with consultants
 - Communicating with patients

Ordering labs / imaging / consults

- Labs / Imaging
 - How will this change my differential diagnosis?
 - How will this change my management?

IF A TEST WILL NOT CHANGE YOUR DIAGNOSIS OR MANAGEMENT DON'T ORDER IT

- Consults
 - Confirm / Assist diagnosis and management of complex condition
 - Perform a procedure
 - Answer a question
 - Catch the Hail Mary

Follow Up

- Significant source of error risk
 - Patient discharged prior to result; lost to follow up
 - Lab / Imaging results misdirected, never reviewed
 - Patient never does the test, and an opportunity to diagnose early is lost
- Construct or utilize logs for out of office testing and consults
 - Ticklers remind to prevent “lost to follow up scenarios”
 - Personal outreach for abnormal results

Patient Portals and Results

- Meaningful use requires patient access now
- Patients are sometimes able to see results before you see them
- YOU ARE STILL RESPONSIBLE FOR COMMUNICATING THE INTERPRETATION TO YOUR PATIENT
- This can affect workflows – makes sure to communicate this to your patients up front

Staff Communication

- Test Results and Critical Test Results
 - Follow up logs
 - Critical flags and reporting
- Logging phone calls / Documenting all patient conversations
- Use EMR functions
- Closed Loop Communication / Speaker - Listener Technique

Learning from History

- We learn from each other
- Peer review
- Some things to consider in YOUR practice

Alarm Safety

- Alarm fatigue is real

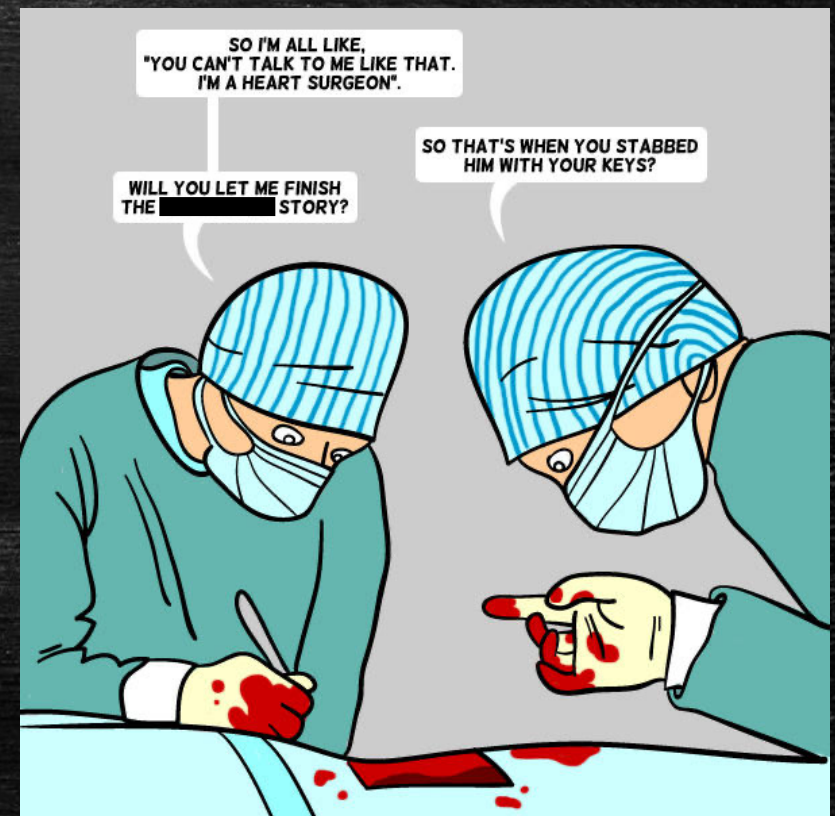
"A Death in the ICU"

What to do when you make a mistake

- You are required to disclose – don't delay but set up an appropriate time and place.
- The disclosure is an admission of error – so go ahead and apologize / empathize; your patients expect it and so would you.
- Do your best to explain why it happened, what the patient can expect both short and long term.
- Do your best to demonstrate what you will do to prevent this from occurring again.
- Empathy and compassion are critical.

What Not to Do When You Make a Mistake

- Take no responsibility / Blame others
- Show no remorse
- Avoid contact
- Avoid follow up



The Case of the 'Crazy' Old Lady

- A recently widowed 71-year-old female was hospitalized for uncontrolled hypertension and acute kidney injury.
- Past medical history: CAD s/p CABG, HFpEF, HTN, and T2DM.
- During the hospitalization, she received temporary hemodialysis, her anti-hypertensive medications were adjusted, and she clinically improved.
- At discharge, her prescription medications included amlodipine (*Norvasc*) 10 mg twice daily (with two refills), metoprolol 50 mg twice daily, doxazosin 2 mg daily, and torsemide 30 mg daily.

The Case of the 'Crazy' Old Lady

- Over the next 3 months, she experienced worsening fatigue, slow movements, lethargy, personality changes, and a 'stoic' facial expression, as noted in her medical records.
- Her blood pressure was not optimally controlled.
- During this time period, she was re-hospitalized for chest pain and underwent angioplasty. During her admission, she encountered multiple specialists and ancillary staff.
- As an outpatient, she was seen by her family physician twice. After several weeks, she was eventually diagnosed with anxiety and depression for which she was prescribed citalopram and alprazolam.

The Case of the 'Crazy' Old Lady

- 3rd ED presentation occurred after a fall with light-headedness and poor ambulation. (+) shuffling gait, blank facies, and bradykinesia. Laboratory work was notable for an elevated creatinine. CT of the head and brain without contrast revealed no acute abnormalities.
- Admission medication reconciliation (MED REC) revealed that she was taking metoprolol, doxazosin, alprazolam, citalopram, and **thiothixene (Navane) 10 mg twice daily**.
- Upon review of her pill bottles, it was found that her outpatient pharmacy accidentally dispensed *Navane* (an antipsychotic) instead of *Norvasc*, and she dutifully took this medication for 3 months.
- The written prescription was deemed legible. A diagnosis of thiothixene-related drug-induced Parkinsonism was made. Thiothixene was discontinued and her clinical status improved.

Medication Reconciliation

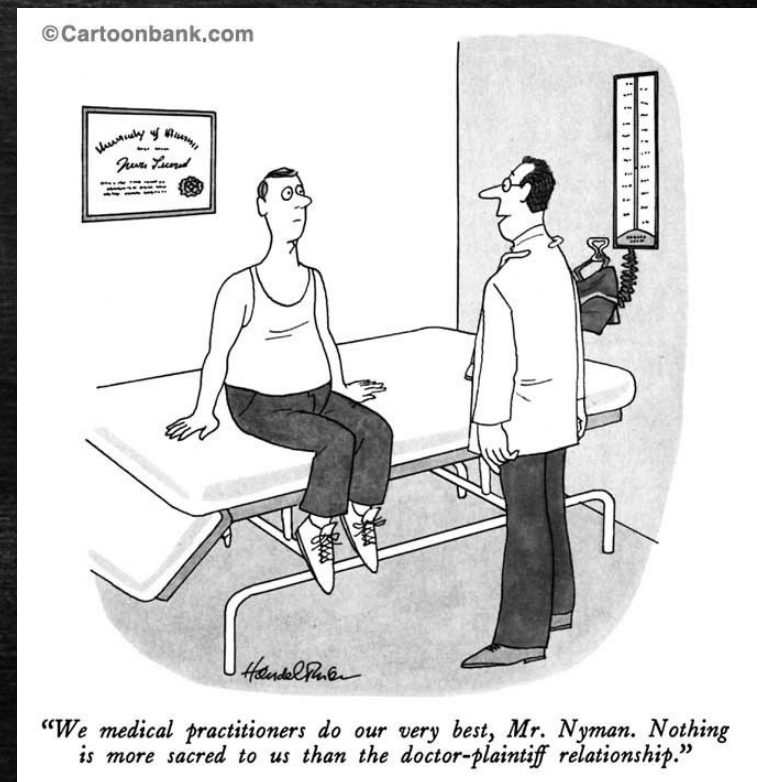
- Should occur at any TRANSITION OF CARE.
 - Emergency Room visit
 - Hospital unit to hospital unit transfer
 - Hospital to hospital transfer
 - Hospital to Post Acute Care transfer
 - Hospital discharge
 - Facility discharge
 - Outpatient visit
 - Pre Procedure
 - Post Procedure
 - Etc
- Bring in bottles or pictures of bottles
- Bring in paperwork from most recent discharge
- Pharmacy report
- Provide a discharge medication list

To Tube or Not to Tube

- Parents took their son, who was experiencing recurrent ear pain to his pediatrician, who then referred them to an osteopathic otolaryngologist. The specialist diagnosed the problem quickly and performed the tubal procedure. However, the boy's pain continued. In several follow-up visits, the specialist's team reassured them that the tubes would work in time.
- The boy developed a fever, stiff neck, and severe headaches. A visit to the emergency room showed that he had meningitis, which was caused by a bacterial infection in his ears. Doctors prescribed medication to clear the infection, but the patient still developed cerebral edema. As a result, he now has frequent headaches, fevers, and sometimes seizures.

The Lawyers

- Determined that the examinations done at the ENT office were cursory and not complete.
- They alleged this was preventable if the doctor had taken the time to do a more thorough exam.
- Case settled for \$900,000



AHRQ – Why is Misdiagnosis a Problem

- Lack of systematic approaches to surveillance, reporting, and learning from errors, with nonrandom sample of cases subjected to such review
- Lack of timeliness, with cases often reviewed months or years after the event
- Examinations that rarely dig to the root of problems: not focused on the “Five Whys”
- Postmortems that seldom go beyond the case-at-hand, with minimal linkages to formal quality improvement activities
- Atrophy of the value of even these suboptimal approaches, with autopsy rates in the single digits (in many hospitals, zero), many malpractice experiences sealed by nondisclosure agreements, and shorter hospitalizations limiting opportunities for follow-up to ultimate diagnosis

Follow Up and Misdiagnosis

- Tunnel vision - if something is not getting better, look at the patient again.
- Listen to our patients; examine thoroughly; explain abnormalities; follow up frequently, ask for help when needed.

No Charge, No Tip

- A boy was born in a small medical center and evaluated one day later by a pediatrician. The results of the newborn exam were essentially normal, though the patient was noted to be "a little jaundiced." The pediatrician ordered phototherapy.
- The pediatrician went to the mother's hospital room that morning to discuss the patient's exam. However, the mother was not present, so the pediatrician left the room and returned to the nursery. He was scheduled to perform circumcisions on several infants.

No Charge, No Tip

- According to the notes, circumcision surgery was performed on the patient. However, the procedure was not ordered in the record by the pediatrician until later in the day. The surgical checklist included an item for indicating the presence of a consent form, which was left unchecked. Documentation of the circumcision included items to check, "patient ID" and "consent," which were apparently marked with an "x" by the pediatrician.
- The pediatrician documented that the circumcision was completed without complication. Later that day, the pediatrician reviewed the patient's record and could not find a consent form. However, he found a note that the mother did not want her son circumcised. The pediatrician concluded that he was looking at the wrong chart before and during the circumcision.

No Charge, No Tip

- The pediatrician went to the mother's room to explain that the child had been mistakenly circumcised. The mother explained that it was part of their family's strict wishes that the patient not be circumcised. The physician apologized for the error and did not charge for his pediatric services.
- A lawsuit was filed against the pediatrician, alleging negligence in performing a procedure without consent. Because there were no medical expenses associated with this claim, damages were based on disfigurement from the unwanted circumcision.

No Charge, No Tip

- Within the patient's chart, the consultants identified several opportunities when the pediatrician could have either obtained informed consent from the parents or noted refusal of circumcision. These opportunities were:
 - When the pediatrician initially went to inquire about circumcision with the mother that morning;
 - When the pre-procedure packet was assembled, and consent was marked as not present; and
 - Before the procedure, when both the consent and patient identity were confirmed erroneously in the circumcision report.

No Charge, No Tip

- This case demonstrated a failure of the physician to follow protocols to ensure that appropriate consent was obtained. While forms and checklists were in place to facilitate this process, they were not properly employed.

Errors Involving Consent

- What is informed consent?
 - See Florida Statutes 766.103(3)(a)2
 - The consent must ensure a reasonable person would have a general understanding of the procedure, the medically acceptable alternative procedures or treatments, and the substantial risks and hazards inherent in the proposed treatment or procedures
- Informed consent is a frequent secondary allegation of many medical malpractice complaints

The 6 W's of Consent

- Who will perform the procedure?
- What procedure is being done?
- Where is the procedure (lateralized)?
- Why should I want this (benefits)?
- What could happen if I do this (risks)?
- What other choices do I have? What if I don't do this (alternatives)?

Other considerations

- Can your patient read? At what grade level?
- Medical versus non-medical language.
- Death is not the bad outcome to focus on for risk – disability is.
- Alternatives can almost always include medical management or watchful waiting – but the risks of the alternatives should be noted as well.
- Your recommendation should be the option with the best risk/benefit profile.

Readability – 14th vs 6th (6.9)

I am aware that there may be other risks or complications not discussed that may occur. I also understand that during the course of the proposed procedure, unforeseen conditions may be revealed requiring the performance of additional procedures, and I authorize such procedures to be performed. I acknowledge that no guarantees or promises have been made to me concerning the results of this procedure or any treatment that may be required as a result of this procedure.

My doctor has told me that other bad things might happen, and we may not have talked about those things. I know that if something that is not expected happens, my doctor may need to do other treatments to help me. I agree to have the doctor give me those other treatments. I know that my doctor cannot promise me or give me a guarantee that this will work. I know that there is a chance I may need more treatments after this one if something happens that was not expected.

Twin Tragedy

- At midnight one evening, Mrs. K presented to the labor and delivery unit at the hospital, as scheduled for a labor induction.
- This was the first pregnancy for the couple. The patient had been seen regularly throughout her pregnancy. The OB was present at check in and then went to sleep in the doctors' lounge. He instructed the nurse and a resident to call if needed.
- Mrs. K was left alone for large stretches through the night. It wasn't until a nursing shift change at 7 a.m. that she started to get close attention from the nurses. By that time, twin B was noted to have fetal monitor patterns in which her heart beat was slowing with the mother's contractions. She had already shown throughout the overnight period a flattening or lack of variability from beat to beat.
- The obstetrician was called after 7am, and decided around 8:15 a.m. to do a Cesarean section. Twin B was still alive at that point. Unfortunately she died some time over the next hour, because at the C-Section which occurred sometime after 9 am, she was dead, with the umbilical cord wrapped tightly around her neck.

What the Lawyers Found

- Despite the abnormal FHT tracings the nurses failed to do any of a number of standard things that can improve the baby's condition, such as turning the mother, giving the mother oxygen, and giving extra fluids.
- The hospital overworked the nurse assigned to Mrs. K's labor, giving her a second patient. Standards require one-on-one nursing during a labor that is as involved as hers was.
- Inspection of the computerized hospital record showed that this nurse, made most of her entries in the record hours after the purported observation time, including a whole series of entries after her shift ended.
- The nurse entries showed regular times of observation, at exactly 15 minutes after the hour, 30 minutes, 45 minutes, etc. The nurse asserted told us that was because she "rounded" on her patients every 15 minutes. It was later discovered that she was also recording the same exact pattern of observations on her other patient, at 15 past the hour, 30, 45, and so on. (The computer entries showed that she was in two places at once. Again, most of these entries were made hours later and back-timed.)

What the Lawyers Found (cont)

- The alarm on the fetal monitor went off 12 times during the night but was answered only one of those times by the nurse. Most of the time, the "snooze button" was hit by a nurse at the nurse's station. The monitor was supposed to be tracking two separate twin babies. The alarm would go off when the signal was lost for one baby. The nurses were supposed to reposition the patient to pick up the signal again. The result was hours went by during the night when nothing was tracked on Twin B's heartbeat.
- The resident doctor, who was the only physician monitoring the labor progress for nearly eight hours, claimed at her deposition that she couldn't read a fetal monitor tracing even though she was in training to become an obstetrician. (In fact, she had completed her full obstetric residency and was preparing for her board certification test at the time of her deposition.)
- The attorney's say "claimed," because it could be that she just wanted to avoid answering tough questions at the deposition about individual segments of Keren's monitor strips. Either way, it wasn't good for high quality, accountable patient care.

Questions?

- Was this a preventable fetal demise?
- What could have prevented this from happening?
- How can we prevent this from happening in the future?

Root Cause Analysis

- Multidisciplinary
- Looks at an institutional approach rather than a personal approach
 - When the issue is an individual what should the system do to provide appropriate support / opportunity
 - Were current policies and processes followed – it not why not?
- Goal is PREVENTION of a repeated error

Root Cause Analysis

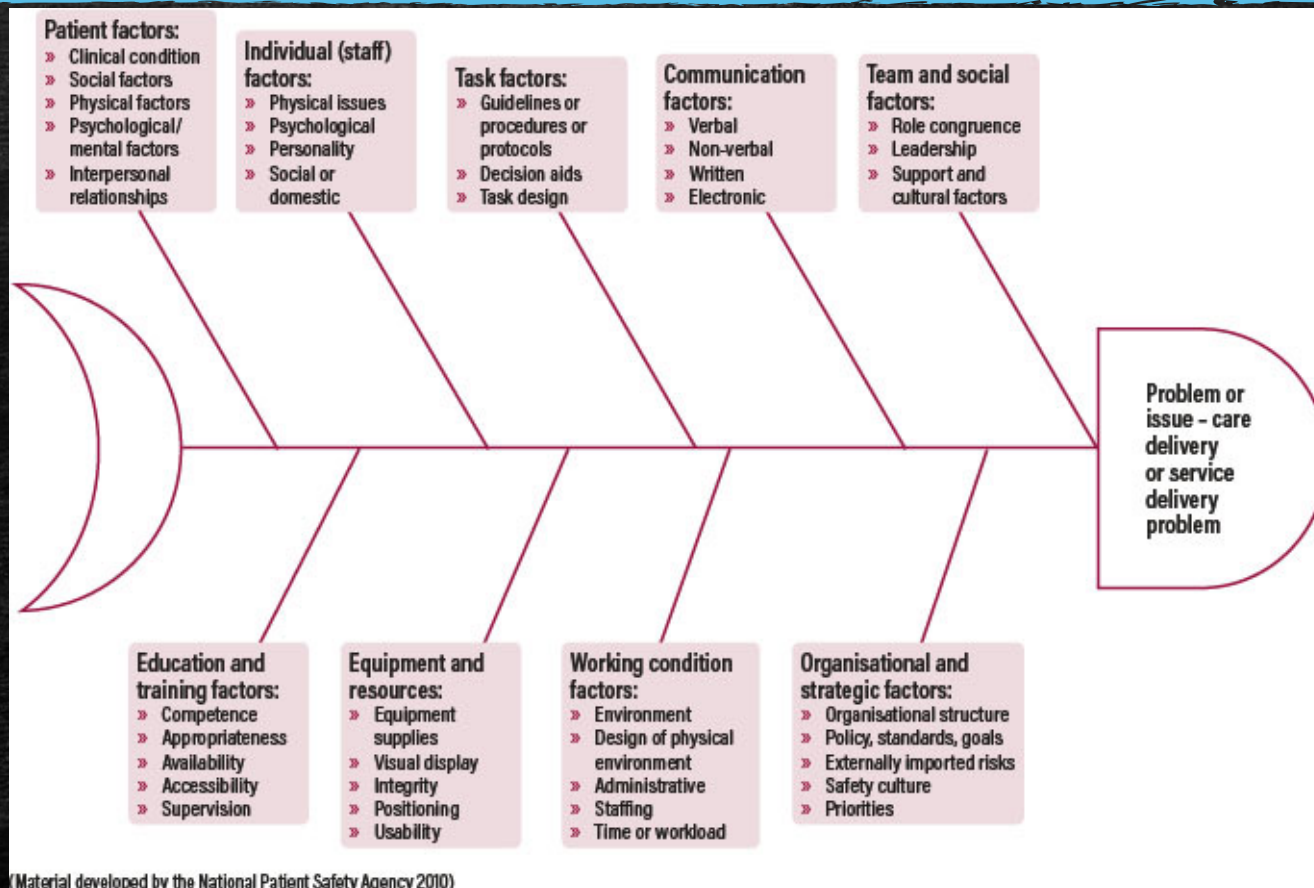
- Continuous process improvement
- Learning from errors, not seeking blame
- Systemic approach, not a personal approach

5 Why Analysis

- Continue to ask why
- By 5 times a root cause for that issue can be identified
- Multiple issues can contribute to each error
- Fishbones help to drive the complete root cause
- Fishbones help to drive the complete root cause

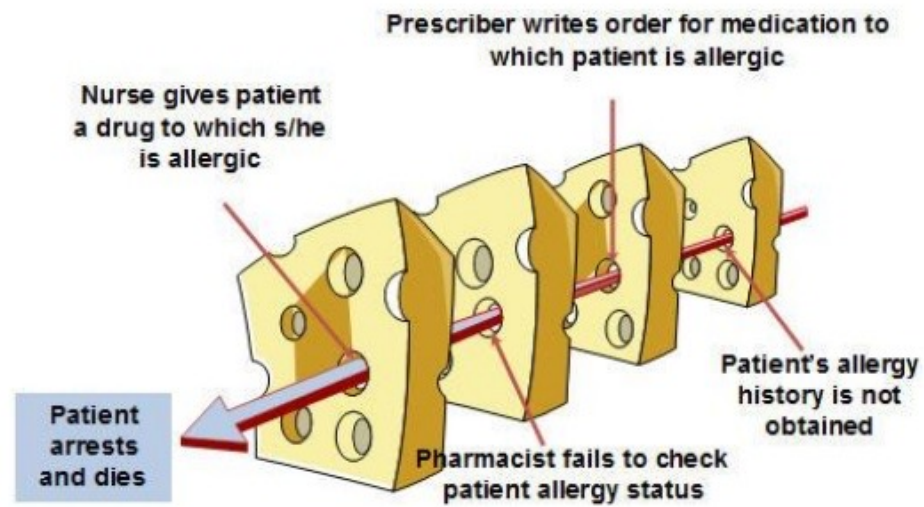


Root Cause Analysis Fishbone



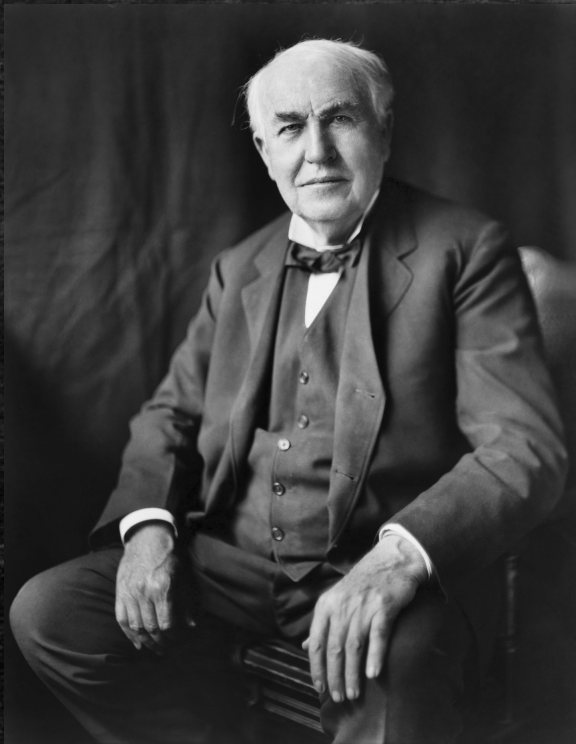
Swiss Cheese Model of Errors

THE SWISS CHEESE MODEL



It compares different levels on which mistakes occur with slices of cheese.

Best Practices – Continuous Process Improvement



- “Thomas Edison” model of best practices
- Don’t invent the wheel
- Seek to make things go from “good” to “great”
- New process = new improvement opportunities

Electronic Health Records

- Source of new and exciting errors
 - Alert fatigue
 - Cross charting
 - Drowning in information
 - Reliance on reports
 - Reliance on electronic communication
- Other concerns
 - Security issues and liability
 - Poorer documentation
 - Less time with patients

Resources

- <https://www.ahrq.gov/questions/resources/20-tips.html>
- <https://www.jointcommission.org/resources/patient-safety-topics/patient-safety/>
- <https://acmq.org/>
- <https://www.ncqa.org/>

Questions?



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