Prevention of Medical Errors
Florida Osteopathic Medical Association
September 16, 2018

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What You Don’t Know About Your Doctor Could Hurt You

Botched surgeries, substance abuse, sexual misconduct—doctors on probation can still practice medicine, and they don’t have to tell you. How to make a safe choice.
Florida Board Of Osteopathic Medicine
Five Most Misdiagnosed Conditions:

1. Inappropriate prescribing of controlled substances;
2. Failure to monitor the safety of prescribed medications;
3. Retained foreign objects in surgery and wrong site/patient surgery;
4. Surgical complications/errors and pre-operative evaluations, including obtaining informed consent; and
5. Failure to timely diagnose sepsis.
Objectives

Review and Discuss Based on FBOM

• Medical Errors – Overview.

• Root Cause Analysis.

• Florida Board of Osteopathic Medicine Most Common Misdiagnosed Conditions.

• What Physicians can do to Improve Prevention of Medical Errors.
KILLER CARE
HOW MEDICAL ERROR BECAME AMERICA'S THIRD LARGEST CAUSE OF DEATH, AND WHAT CAN BE DONE ABOUT IT

Book by James B. Lieber, 2015
• **Debate after the IOM report about the accuracy of its estimates.**

• **At any level significant medical errors are an issue.**

• **Progress on patient safety is frustratingly slow.**

November 29, 1999
No Agreed Upon Definition of Medical Error
Agreement on Consequences of Medical Errors

• Serious public health problem.

• Threat to patient safety.

• Challenge to physician and healthcare workers emotional and financial liability.

• Requires accurate measurements of incidence, clear and consistent definitions, essential prerequisites for effective action.

• Few studies - defined or measured “medical error” directly.
What is Medical Error?

*Medical error*: an act of omission or commission in planning or execution that contributes or could contribute to an unintended result.
“Medical errors can occur in almost any healthcare setting including hospitals, clinics, surgery centers, medical offices, nursing homes, pharmacies, and patients’ homes.”

https://archive.ahrq.gov/research/findings/final-reports/pscongrpt/psint2.html
ECRI Institute’s Top 10 Patient Safety Concerns for 2018

1) Diagnostic errors
2) Opioid safety across the continuum of care
3) Internal care coordination
4) Workarounds
5) Incorporating health IT into patient safety programs
6) Management of behavioral health needs in acute care settings
7) All-hazards emergency preparedness
8) Device cleaning, disinfection, and sterilization
9) Patient engagement and health literacy
10) Leadership engagement in patient safety

www.ecri.org
Nuclear Energy and Healthcare?

Other high risk industries have learned getting culture right is an important part of the puzzle.

• Shared common issues – both occur in high-risk environments – place great priority on work place safety.

• BUT - concept of “Zero Harm” often an unwavering standard in other high risk environments is elusive in healthcare – to date.

• Ok to have ideas – but you must execute to be successful.

• Leaders (physician), nurses, staff want the best and highest standards for patients –.
Leading Causes of Death

**CDC 2016**

1. Heart disease
2. Cancer
3. Chronic lower respiratory diseases
4. Accidents (unintentional injuries)
5. Stroke (cerebrovascular diseases)
6. Alzheimer’s disease
7. Diabetes
8. Influenza and pneumonia
9. Nephritis, nephrotic syndrome, and nephrosis
10. Intentional self-harm (suicide)

**WHO 2016**

1. Ischemic Heart Disease
2. Stroke
3. COPD
4. Lower Resp. Disease
5. Alzheimer and other Dementia
6. Tracheal Bronchus Lung Cancer
7. Diabetes
8. Road Injury
9. Diarrheal Disease
10. Tuberculosis

CDC July 6, 2016
Medical Errors Are No. 3 Cause Of U.S Deaths behind Heart Disease and Cancer?

- Debate on accuracy
- Difficult to tract
- CDC coding on death certificate?
- Difficulty with transparency?

November 29, 1999
MJ, May, 2016
John Hopkins
“The third-leading cause of death in US most doctors don't want you to know about”

- Medical errors are the third-leading cause of death after heart disease and cancer.
- Johns Hopkins study claims more than 250,000 people in the U.S. die every year from medical errors.
- Other reports claim the numbers to be as high as 440,000.
- Advocates - are fighting back, pushing for greater legislation for patient safety.

Ray Sipherd, special to CNBC.com
Published 9:31 AM ET Thu, 22 Feb 2018  Updated 9:39 AM ET Wed, 28 Feb 2018
Public Trust

Physicians serve the public trust
Patients and families TRUST us
“to do no harm”
“we don not go to physician to make us sick”
Declines in Hospital-Acquired Conditions

National efforts to reduce hospital-acquired conditions such as adverse drug events and injuries from falls helped prevent 8,000 deaths and saved $2.9 billion between 2014 and 2016.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Drug Events</td>
<td>-15%</td>
</tr>
<tr>
<td>CAUTI*</td>
<td>4%</td>
</tr>
<tr>
<td>Clostridium difficile Infections</td>
<td>-31%</td>
</tr>
<tr>
<td>Falls</td>
<td>-11%</td>
</tr>
<tr>
<td>Obstetric Adverse Events</td>
<td>-9%</td>
</tr>
<tr>
<td>Pressure Ulcers</td>
<td>-5%</td>
</tr>
<tr>
<td>Surgical Site Infections</td>
<td>0%</td>
</tr>
<tr>
<td>Ventilator-Associated Pneumonias</td>
<td>-32%</td>
</tr>
<tr>
<td>(Post-op) Venous Thromboembolisms</td>
<td>-21%</td>
</tr>
<tr>
<td>All Other HACs</td>
<td>-16%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>-8%</strong></td>
</tr>
</tbody>
</table>

*CAUTI - Catheter-Associated Urinary Tract Infections
+CLABSI - Central Line-Associated Bloodstream Infections

https://www.ahrq.gov/research/data/index.html
Swiss Cheese Model or Cumulative Act Effect

Model of accident causation illustrates that, although many layers of defense lie between hazards and accidents, there are flaws in each layer that, if aligned, can allow the accident to occur.

Swiss cheese model by James Reason published in 2000 (1). Depicted here is a more fully labelled black and white version published in 2001 (5). On the survey questionnaire, all labels and comments were hidden.
Wide Spectrum of Medical Errors

• Surgical Sponge RN stops procedure

• What is the “white stuff”? 

• Incorrect Toe amputated

• Swallowed Denture – Exploratory Laparotomy 

• Jaw Pain interpreted as dental – teeth extracted – Patient MI and died.

• Death following Ketorolac

• Physician incorrectly given diagnosis of metastatic cancer – devastating emotionally.
Wide Spectrum of Medical Errors

- Asthma in six month expectant woman.
- Arterial stick – Reflex Sympathetic Dystrophy
- Spine surgery performed with “clean” not “sterile” tools.
- EMR and Missed Pulmonary Nodule.
- Pneumonia vs. Mitral Regurgitation?
Most Common Causes of Medical Errors

• Communication Problems – verbal/written
• Inadequate Information Flow – transfer of care
• Human Error – policies, appropriate? followed?
• Patient-Related Issues – ID? Consent?
• Organizational Transfer of Knowledge – Training?
• Staffing Patterns and Workflow – FTEs?
• Technical Failures – EMR, Equipment
• Inadequate Policies – Reviewed?, Revised?
General Types Medical Errors (IOM)

Diagnostic

Treatment

Performance

Communications

Systems

Medication
Diagnostic Medical Errors

• Misunderstanding of Diagnostic Errors Held by Patients

• Misunderstanding of Diagnostic Errors Held by Physicians

• Misunderstanding of Diagnostic Errors Within Healthcare Systems
Diagnostic Errors

• Wrong, delayed or missed.

• Cognitive and system errors.

• Failure to employ indicated tests.

• Use of outmoded tests.

• Failure to act on results of monitoring or testing.
  “We will call you if there is a concern – no need to call us”
Diagnostic Error Accountability

Characteristics

• Harmful
• Under-recognized
• Under-studied
• Not integrated into quality assurance measures or activities.
• Occurs 5-15% of the time.

Limitations

• Autopsy data
• Lost to follow-up
• Healthcare self-reports of diagnostic error
• Patient self-reports of experiencing diagnostic error
• Databases of reported error,
• Peer reviewed journal studies.
Diagnostic Errors
As Cause of Death?

Many error unknown: decline in autopsy, patient goes elsewhere.

Harvard Study diagnostic errors - 17% of adverse events (Physician Insurer, PIAA 2010)

Malpractice claims involving death - diagnostic error is the top allegation at 26%

(Leape, Brennan 1991; Physician Insurer, PIAA 2010)
Diagnostic Errors
Hospital More than Clinic?
Frequency in Claims

• #1 cause of claims in ambulatory care

• #2 in hospitals (after improper performance of a procedure)

• Totals fairly close.
Cause of Diagnostic Error

- Six factors on average in IM
- Multi-factorial in all specialties
- “Physician knowledge is least often cited”

- More often due to:
  - Cognitive Systems error
  - Communication error

Most common cause:
- Cognitive and Systems

Graber 2005
Cognitive vs System Errors

Cognitive Error

- Occurs in physician’s processing of information – thinking process:
  - latching on prematurely to a diagnosis
  - and
  - abandoning the search evidence to the contrary

System Error

- Occurs between the inter-related pieces in healthcare systems: physicians
  - others involved in care
    - “dropping the ball” in referral
    - consultation process or in the “hand-off” process.
- Lost or unreported test results, etc.
# Diagnostic Errors Common in all Specialties

<table>
<thead>
<tr>
<th>#1 Cause of Claims Primary Care Specialties</th>
<th>#2 Cause of Claims in Surgical Specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Internal Medicine</td>
<td>• OB-GYN</td>
</tr>
<tr>
<td>• Family Medicine</td>
<td>• General Surgery</td>
</tr>
<tr>
<td>• General Practice</td>
<td>• Orthopedics</td>
</tr>
<tr>
<td>• Pediatrics</td>
<td>• Most of the Surgical Sub-specialties</td>
</tr>
<tr>
<td>• Radiology</td>
<td>(it is most often a close, not a distant second place)</td>
</tr>
<tr>
<td>• Emergency Medicine</td>
<td></td>
</tr>
<tr>
<td>• Most of the Medical Sub-specialties.</td>
<td></td>
</tr>
</tbody>
</table>
Diagnosis Subject to Error?
Diagnosis Subject to Error?

- Not - Rare diseases
- Common - MI, CA, CVA
- Acute MI - adult primary care specialties (PC, EM).
- Stroke diagnostic error – 9% of time
- Breast cancer - dominant diagnostic error.
- FP - MI, breast ca, appendicitis, colorectal ca, lung ca.
- P E, aortic dissection - unknown as autopsy rate declined - these and others are under-detected at an unknown rate.

PIAA Data Sharing Report 1985-2009
Newman-Toker et al 2008
Root Cause Analysis - Sentinel Event
Joint Commission Requirement for Sentinel Event

• Sentinel Event - unexpected occurrence - death or serious physical or psychological injury, or the risk thereof.

• Sentinel Event and Error - not synonymous.

• Sentinel event may not be triggered by an error and an error may occur - not cause a sentinel event.

• Looks beyond immediate result - identifies chain of events/contributing factors that led to adverse event.

Root Cause Analysis
Joint Commission Requirement for Sentinel Event

• Review process relies heavily on the repeated use of the word - “Why?” - to dig deeper in an effort to find the most basic issue or contributing factor.

• Focused framework to analyze errors, identify what, why, and prevention.

• Avoids the tendency of assigning individual blame.

Root Cause Analysis
Must Be Credible and Thorough

Goal is to avoid the culture of blame.

To encourage open examination.

Foster patient safety

www.jointcommission.org
Root Cause Analysis

• Communication
• Lines of authority – clear?
• Highly variable physical settings
• Variable healthcare process
• Time pressured environments
• System deficiencies
• Vulnerable defense barriers
• Human fallibility
Florida Board Of Osteopathic Medicine
Five Most Misdiagnosed Conditions:

1. Inappropriate prescribing of controlled substances.
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4. Surgical complications/errors and pre-operative evaluations, including obtaining informed consent.
5. Failure to timely diagnose sepsis.
Inappropriate Prescribing of Opioids

- Misdiagnosis
- Failure to diagnose addiction.
- Psychiatric conditions.
- Diversion.

Florida Administrative Code 64B15-13.001(3)4(f)
http://fapmmed.net/State_Opioid_Prescribing_Policy.pdf
Florida Opioid Prescribing Policy Documentation!!!

- Assess the patient.
- Adequate rational for opioids?
- Establish treatment goals.
- Abuse – must screen/monitor for addiction potential
- Deviation from “contract” (must have documentation)
- Blind acceptance.
- System failure (testing results).
- Unsupported clinical rational for OPIOIDS.
- Diversion.
Opioid Analgesics

- Opioid painkillers account for more medical-malpractice claims related to drug errors than any other drug class.

- More than 10,000 closed malpractice claims from 2012 through 2016.

- 24% of medication-related claims involved opioids, even though these drugs accounted for only about 5% of prescription drugs dispensed in 2016.

- According to published data from QuintilesIMS, a firm that tracks pharmaceutical activity.

- Next riskiest drug class - anticoagulants, at 14% of medication-related claims.
Opioid Analgesics

• Overdoses are primarily seen.

• Patients alleged they became addicted to painkillers.

• More than a third of the opioid-related claims - the mistake occurred during the follow-up phase of prescribing.

• "Physicians continued to renew prescriptions without monitoring patients to see if they were getting better or not.

• "If patients are still in pain, that's a red flag-helpful to keep prescribing the same opioid if - not improving."

• In 15% of the opioid-related claims, the physician allegedly "behaved in an inappropriate way".

• This charge usually --physician caving into the requests of persuasive, pill-seeking patients against his or her better judgement.

Robert Hanscom
Coverys
Here's your doctor's prescription — good luck!
Researchers find that the number of mistakes is rising; errors mean increasing illness, hospitalization or worse.

Every two minutes someone call a US poison control center:

- Serious medication error doubled between 2000 and 2012.
- 20.6% medication errors – beta blockers, calcium channel blockers.
- Opioids and acetaminophen 12%.
- Hormone Rx (insulin) 11% serious errors.
Adverse Drug Events (ADEs)

- Account for more than 3.5 million physician office visits/year.
- 1 million emergency department visits each year.
- Believed preventable medication errors impact more than 7 million patients/yr.
- Cost almost $21 billion annually across all care settings.
- About 30% of hospitalized patients have at least one discrepancy on discharge medication reconciliation. Relationship.

Polypharmacy
National Health & Nutrition Examination Survey

• 13,869 aged 65 or older – 1988-2010.

• Rx verified by medication containers.

• No. of meds increased from two to five.

• No. of medication > five – tripled (12.8 to 39.0).

• Increase in # of medication in patient with:
  increase in BMI
  Higher income – poverty ratio
  Former smoker
This report says medical errors such as indecipherable prescriptions cause the deaths of 98 patients a year, or is that 98,000? It's hard to read this. In any case, we're supposed to report them, or is that repeat them?
Medication Errors

- 7,000 + fatalities secondary medication errors.
- Look-alike/sound-alike drug list.
- Hand written RX – legibility
- Abbreviations - NO
- Cross checking drug interactions – EMR/Hand Held
- Multiple pharmacies
- Allergies
- Communication/patient knowledge of their medication
- Pharmacist error in dispensing.
- EMR - errors
The young physician starts life with 20 drugs for each disease, and the old physician ends life with one drug for 20 diseases.
Prevention of Medication Errors

• Verbal – repeat order, spell where necessary.

• Legibility.

• Brief notation as to purpose.

• Written in metric – spell “units”.

• Oral liquids – metric weight or volume (mg., mL – with concentration or total dose in mg.).

• Consider patient wt./age when appropriate. (on Rx)

• Rx - orders include drug name\(^1\), exact metric weight or concentration, and dosage form.

• 0.4 mg instead of .4 mg.

• Trailing zero should never be used after a decimal (express as 4 mg, not 4.0 mg).

• Avoid abbreviations including drug names (e.g., MOM, HCTZ).

• Avoid Latin directions for use.

• Any attempt at standardization of abbreviations would not address the problems of illegibility and misuse.

National Coordinating Council for Medication Error Reporting and Prevention nccmerp.org/recommendations-enhance-accuracy-prescription-writing
Retained Foreign Objects

Wrong Site/Patient Surgery
Retained Foreign Bodies

Unintended Retention Foreign Objects (URFOs)

• After invasive procedure

• Can Cause Death

• Survivors – emotional/physical harm

• Liability – estimated $200,000.00/incident
Most Common URFOs

• Soft goods, such as sponges and towels.

• Small miscellaneous items, including un-retrieved device components or fragments (such as broken parts of instruments), stapler components.

• Parts of laparoscopic trocars, guidewires, catheters, and pieces of drains.

• Needles and other sharps . (All Children's Needle)

• Instruments, most commonly malleable retractors.
US Department of Health and Human Services Retained Objects

• Involves up to 1 in 5000 persons.

• 2008 study published in Annals of Surgery found that mistakes in tool and sponge counts happened in 12.5% of surgeries.

• Nursing and surgical groups recommend that each member of the surgical team play an equal role in assuring accuracy of the counts.

• Recently, manufacturers have made sponges with threads visible on x-rays, radiofrequency identification systems, and bar coding to alert staff about missing sponges.
URFOs

Root Cause Analysis 2005 - 2012

• 772 URFOs reported to Joint Commission’s Sentinel Event data base.

• Sixteen deaths

• 95% of incidents required additional care and/or extended hospital stays.

• Operating rooms, Cath labs, Endo lab, ambulatory surgery centers, interventional radiology
Most Common Root Causes Reported to Joint Commission

• Absence of policies and procedures.

• Problems with hierarchy and intimidation.

• Failure in communication with physicians.

• Failure of staff to communicate relevant patient information.

• Inadequate or incomplete education of staff.
Wrong-Site Surgery Defined

- Wrong patient
- Wrong body part
- Wrong side
- Wrong procedure
- Unnecessary/unauthorized procedure
- Wrong level of the correctly identified site
Wrong Site Surgery “Sentinel Events”

• **Wrong-site surgery** is considered indicative of serious underlying patient-safety problem.

• Largely preventable patient safety incidents that should not occur if the available preventive measures were implemented.

• Unexpected - resulting in serious physical, emotional injury, risk - to a patient.

• Not related to the natural course patients illness and being the most frequent sentinel event accounting for 13.4% of such events reviewed by the Joint Commission between 1995–2010.
Wrong Site Surgery

• 9,744 paid settlements for surgical “never events” in the United states from 1990 – 2010 to $1.3b.

• Mortality occurring in 6.6% of the patients.

• Permanent injury in 32.9%.

• Temporary injury in 59.2%.

• Cost of these events to the healthcare system and the enormous harm to the patients call for vigorous attention.
Standards of Practice for Surgery/Procedure-64B15-14.006

- Responsibility of the treating physician or an equivalently trained DO or MD practicing within a Board approved GME program to explain the procedure to and obtain the informed consent of the patient.

- Not necessary to witness signature

- Except in life-threatening emergencies - once the patient has been prepared for the elective surgery/procedure and the team has been gathered in the surgery/procedure room and immediately prior to the initiation of any procedure, the surgery/procedure team will pause and the physician(s) performing the procedure will verbally confirm the patient’s identification, the intended procedure and the correct surgical/procedure site.

- Physician performing the surgery/procedure shall not make any incision or perform any surgery or procedure prior to performing this required confirmation.

- Notes of the surgery/procedure shall specifically reflect when this confirmation procedure was completed and which personnel on the surgical team confirmed each item
Standards of Practice for Surgery/Procedure
64B15-14.006

- Confirmation of the patient’s identity shall be made by using two or more of the following corroborating patient identifiers:
  1. Name. 2. Assigned identification number. 3. Telephone number. 4. Date of Birth. 5. Social security number. 6. Address. 7. Photograph.

- Applicable to anesthesia

- If the physician(s) leave(s) the room where the procedure is being performed, upon his or her return, the pause set forth in paragraph (b) above must be performed again.

- (3) Management of postsurgical care.

- (4) The operating surgeon can delegate discretionary postoperative activities

- Delegation …… if the other practitioner is supervised by the operating surgeon or an equivalently trained licensed allopathic or osteopathic physician or a physician practicing within a Board approved postgraduate training program.
Causes of Wrong – site Surgery

**Systems Error**

- Lack of institutional controls/formal system to verify correct surgical site.
- Lack of a checklist or follow through.
- Exclusion of certain surgical team members.
- Reliance solely on the surgeon for determining the correct surgical site.
- Unusual time pressures – emergencies, volume.
- Pressures to reduce preoperative preparation time.
- Procedures requiring unusual equipment or patient positioning.
- Team competency and credentialing.
- Availability of information.
- Organizational culture.
- Orientation and training.
- Staffing.
- Environmental safety/security.
- Continuum of care.
- Patient characteristics, obesity, unusual anatomy, that require alterations in the usual positioning of the patient.

**Process Errors**

- Inadequate patient assessment.
- Inadequate care planning.
- Inadequate medical record review.
- Miscommunication with the surgical team/patient.
- More than one surgeon involved in the procedure.
- Multiple procedures on multiple parts of a patient performed during a single operation.
- Failure to include patient/family/significant to identifying correct site.
- Failure to mark or clearly mark the correct operation site.
- Incomplete or inaccurate communication among members of the surgical team.
- Noncompliance with procedures.
- Failure to recheck patient information before starting the operation.

Modified: Wrong site Surgery: A Preventable Medical. Agency Healthcare Research and Quality (US); 2018 Apr.
Wrong-Site Surgery 2004-20012
Causes and Remedies Reported by JCAHO

• Leadership
• Communication
• Human Factors
• Information Management
• Operative Care
• Assessment
• Physical Environment
• Patient Rights
• Anesthesia Care
• Continuum of Care
Failure or Delay in Diagnosing Sepsis
Sepsis Definition

• Symptomatic bacteremia, with or without organ dysfunction.

• Commonly defined as the presence of infection in conjunction with the systemic inflammatory response syndrome (SIRS).

• Severe sepsis - sepsis complicated by organ dysfunction; and septic shock, as a subset of sepsis – hypotension, shock etc.
Etiology

- Associated commonly with another condition:
  - Skin infection
  - Pneumonia
  - Urinary tract infection
  - Renal abscess
  - Other
Signs and Symptoms

- Fever, with or without rigors
- Confusion
- Tachypnea
- Depending on the adequacy of organ perfusion and dilatation of the superficial vessels of the skin – warm/cool
Sepsis

- Elderly
- Immunocompromised
- Pregnancy
- Chronic urinary tract or other infection
- Implanted device
- GB disease
- Etc.
Diagnosis of Sepsis

• Hospital setting – protocols in place.
• All is sepsis until proven otherwise.
• Laboratory – Blood cultures, CBC, Biomarkers.
• Imaging – Xray, CT, MRI.
• Cardiac studies
Sepsis

• High degree of suspicion – fever, confusion, chills etc.

• Outpatient – immediately refer to hospital preferably through ER to implement protocols

• If Tx as Outpatient – Maintain high degree of vigilance

• Inform patient of complications of infections and need to contact or go to ER ASAP.

• Advise them of the signs and symptoms
4 WAYS TO GET AHEAD OF SEPSIS

Infections put you and your family at risk for a life-threatening condition called sepsis. Sepsis is the body’s extreme response to an infection. It is life-threatening, and without timely treatment, sepsis can rapidly lead to tissue damage, organ failure, and death. Sepsis happens when an infection you already have—in your skin, lungs, urinary tract or somewhere else—triggers a chain reaction throughout your body.

Anyone can get an infection, and almost any infection can lead to sepsis.

1. PREVENT INFECTIONS
   Talk to your doctor or nurse about steps you can take to prevent infections.
   - Take good care of chronic conditions
   - Get recommended vaccines

2. PRACTICE GOOD HYGIENE
   Remember to wash your hands and keep cuts clean and covered until healed.
   - Handwashing
   - Keep cuts clean and covered until healed

3. KNOW THE SYMPTOMS
   Symptoms of sepsis can include any one or a combination of these:
   - Confusion or disorientation
   - Shortness of breath
   - High heart rate
   - Fever or chills
   - Extreme pain or discomfort
   - Chills or sweats

4. ACT FAST
   Get medical care IMMEDIATELY if you suspect sepsis or have an infection that’s not getting better or is getting worse.

Sepsis is a medical emergency. Time matters.

To learn more about sepsis and how to prevent infections, visit www.cdc.gov/sepsis.
<table>
<thead>
<tr>
<th>Age Adjusted Rate</th>
<th>Case Count</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>405.1111</td>
<td>97,220</td>
<td>20,244,914</td>
</tr>
</tbody>
</table>

Florida Cancer Rate/100,000 All Races - 2015
<table>
<thead>
<tr>
<th>Site</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Breast</td>
<td>113.8</td>
</tr>
<tr>
<td>Prostate</td>
<td>78.2</td>
</tr>
<tr>
<td>Lung Bronchus</td>
<td>54.9</td>
</tr>
<tr>
<td>Colon Rectum</td>
<td>34.9</td>
</tr>
<tr>
<td>Corpus and Uterus</td>
<td>23.9</td>
</tr>
<tr>
<td>Melanoma Skin Cancer</td>
<td>23.7</td>
</tr>
<tr>
<td>Urinary Bladder</td>
<td>17.7</td>
</tr>
<tr>
<td>Non Hodgkin's Lymphoma</td>
<td>16.2</td>
</tr>
<tr>
<td>Kidney Renal Pelvis</td>
<td>14.4</td>
</tr>
<tr>
<td>Oral Cavity/Pharynx</td>
<td>12.8</td>
</tr>
</tbody>
</table>
Breast Cancer

- One in eight women.
- Most commonly diagnosed cancer in women.
- Leading cause of death.
- Rare in men BUT can occur.
Standards for the timing of mammography vary by organization and by patient history. The US Preventive Services Task Force currently recommends that low-risk women older than 50 years receive mammography once every 2 years. ACOG currently recommends annual mammograms for all women 40 and older.
Breast Cancer Errors in Management

- Failure to engage high risk groups
- Failure to exam
- Poor follow up on palpable findings*
- Questionable mammogram – dense breast tissue – no breast ultrasound!
- Failure to workup mammographic abnormalities
- Consistency with American College of Radiology Standards
- Technical or technician performance issues
- Loss of reports! Therefore, no follow-up.
- Interpretative errors (most common reason for claims)
- Communication errors
Curbside Consults

- “A PET scan every 4 months”
- “Needle biopsy negative” no further workup
- “If no better need to see patient – “faxed over report have him look at report and write his thoughts on and send back”
- Four thoracentesis “no cancer”
- “I told him to do a bronchoscopy on you”
Failure or Delay in Diagnosing Cancer
Lung Cancer

• Lung cancer – one of most common cancer worldwide.
• Most patients present because of symptoms
• Hemoptysis, unexplained, change in cough
• Incidental finding on chest imaging.
• Delay in diagnosis
• Failure to follow through
• Communication between consultants

Florida Administrative Code 64B15-13.001(3)4(f)
Cancer Misdiagnosis in General – Causes?

- Miscommunication, - lab failing to accurately report biopsy results to physician or in a timely fashion or office failing to inform the patient about test results.

- Lab errors, including mishandling samples, misreporting results or incorrectly interpreting tests.

- Failure to “see the big picture” that could indicate cancer when synthesizing all the data about a patient.

- (Anemia – RA)

- The failure to follow up on diagnostic results, including failing to refer the patient to consultant for evaluation and treatment.
Cancer Misdiagnosis in General – Causes?

• Not screening a patient who is at-risk for a certain type of cancer.

• Discounting - potential for cancer because of the patient’s characteristics, such as assuming a woman is too young to develop breast cancer, rectal bleeding in young patient etc.

• Many cases of negligent cancer misdiagnosis or delayed diagnosis involve a series of system or process breakdowns.
Treatment Errors

• Error in the performance of an operation, procedure, or test.

• Error in administering the treatment.

• Error in the dose or method of using a drug.

• Avoidable delay in treatment or in responding to an abnormal test.

• Inappropriate (not indicated) care.

• Medication errors are major concern.

Preventive/Other Errors

• Failure to provide prophylactic treatment.

• Inadequate monitoring or follow-up of treatment.

• Failure of communication.

• Equipment failure

• Other system failure

EMR System prompt: “You caused an error that we never thought of. Click any key and see what happens.”
EMR ISSUES

- Failure of system design
- Does not function as a “folder/file/chart”
- Confusing interface
- Lack of patient/physician contact
- Incorrect information entered
- Tedious data entry
- Difficulty reviewing prior data timely
- System failure unable to access data
- Other issues
- Scribes?
EMR Errors

Fentanyl order altered by a decimal point; patient died.

Insulin order defaulted to wrong preparation (long vs short acting).

Fentanyl overdose resulting from failed auto-deletion of earlier orders of a lower dose.

EHR automatically “signed” a test result when in fact it had not been read;

Patient did not receive results of co-existing liver cancer and was treated for lung cancer only. Routing of electronic data.

Critical blood gas value misrouted to the wrong unit; patient expired from respiratory failure.

Critical ultrasound result routed to the wrong tab in the EHR;

Dr. never saw the result until a year later; patient experienced delayed recognition of cancer.

Abnormal cardiac ultrasound results misrouted, would have prompted anticoagulation; patient died of stroke.
Study: EHR Malpractice Claims Rising

- Two claims from 2007 to 2010.

- 161 claims from 2011-2016.

- Of the 66 EMR claim from 2014-2016:
  - 50% - system factors (failure of decision support of Rx alert)
  - 58% “user factors” — copying and pasting progress notes

  Numbers do not add up as more than one claim per record

- Order of location – Doctor’s office, Hospital Clinic, Patient’s room.

- Specialty in Order: FM, OB/GYN, Orthopedics.
EHR Malpractice Claims

• “Legal Billing Nightmare”
• “that is not what I said” (dictation)
• See what you “thought you said” not what you said
• Drop down menus – without updating
• Cut and paste previous note – without updated
Systems Errors

- Complex environment
- Organized practices vs disorganization
- Reporting
- Recording
- Human factor
Bottom Line

• Safety is everyone’s concern.
• Past events reviewed changes made.
• Root Cause Analysis is in place and implemented.
• Messengers are rewarded not “shot”
• Protocols exist.
• Procedures are established and agreed upon
Bottom Line

• All humans will error – it is part of human condition.

• We may not change the human condition.

• We cannot Name, Blame, Shame – does not work.*

• We can change conditions under which people work.
How to Reduce Medical Errors

• Increase awareness of whole team (patient and team).

• Awareness of cognitive errors - differentials.

• Aware of system failures, conflicts.

• EMR – problematic for some physicians.

• Attention to process in office/hospital.

• Assure every member of team are committed to culture of patient safety and patient coming first.
Adverse Incident Reporting
Florida Statute 395.0197(5) states:

(5) For purposes of reporting to the agency pursuant to this section, the term “adverse incident” means an event over which health care personnel could exercise control and which is associated in whole or in part with medical intervention, rather than the condition for which such intervention occurred, and which: (a) Results in one of the following injuries:

1. Death;
2. Brain or spinal damage;
3. Permanent disfigurement;
4. Fracture or dislocation of bones or joints;
5. Resulting limitation of neurological, physical, or sensory function which continues after discharge from the facility;
6. Any condition that required specialized medical attention or surgical intervention resulting from nonemergency medical intervention, other than an emergency medical condition, to which the patient has not given his or her informed consent; or
7. Any condition that required the transfer of the patient, within or outside the facility, to a unit providing a more acute level of care due to the adverse incident, rather than the patient’s condition prior to the adverse incident.
Disclosing Medical Errors

- Physician’s duty to inform the patient of a medical error. Under Florida Statute 456.0575

- Practitioner must inform the patient, or the patient’s legal representative, in person about adverse incidents that result in serious harm to the patient.

- Notification of outcomes of care that result in harm to the patient governed by the disclosure statute shall not constitute an acknowledgment of admission of liability, nor can such notification be introduced as evidence.
Disclosing Medical Error

• Obtain legal/risk management advise
• Communicate
• Express concern – empathy
• No blame
• Present Plan
• Confirm Understanding
• Document above
250 physician suicides annually.

Physician who believe they have made an error three time more likely to attempt suicide.

Emotional turmoil even if right in presence of bad outcome.

Multiple hospitals have developed outreach for physicians.
Physician Health

- 15,000 physicians across 29 specialties responded
- 42% Burnout
- 12% Colloquially depressed
The Dangers of Burnout for Doctors and Patients

“14% of physician admit depression led to patient errors.”
“An Expert is a Master of the Basics”

“This is a football” Vince Lombardi
Assumed nothing
Discipline
Regimentation in the basics
Preventing Medical Errors

Physician Leadership
Culture
Competence
Empathy
Humility
Principles
Policies
Procedures
Practices
“All men make mistakes, but a good man yields when he knows his course is wrong, and repairs the evil. The only crime is pride.” — Sophocles, Antigone”
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• The 64B15-14.006 Standards of Practice for Surgery/Procedure.

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- Agency for Healthcare Research and Quality. Impact of Medical Errors on 90-Day Cost and Outcomes: An Examination of Surgical Patients. (July 2008)
- Clinics in Chest Medicine Volume 32, Issue 4, Pages 605–644
FDA’s MedWatch

- Gateway for medical product safety information
- Can send out urgent safety alerts via e-mail
- Allows adverse reporting of adverse events
- 1-800-FDA-1088
- http://www.fda.gov/medwatch
Websites


www.ismp.org/pressroom/Patient_Broc.pdf