Risk Management and Medical Liability:
Anatomy of Medical Errors

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History

• 1768: Sir William Blackstone
  – “mala praxis” where injuries . . . by the neglect or unskillful acts of (a person’s) physician, surgeon or apothecary, . . . because it breaks the trust which the patient has placed in his physician and leads to the patient’s destruction

2012 Joint Commission: top sentinel events

- Unintended Retention of a Foreign Body,
- Delay In Treatment
  - Fresno Pt?
- Wrong-patient, wrong-site, wrong-procedure,
- Suicide,
- Op/Post-op Complication,
- Fall, Criminal Event,
- medication error
- The Joint Commission Sentinel Event Data Summary Report.

http://www.jointcommission.org/sentinel_event_statistics_quarterly/
Anatomy of Medical Errors

- **Listen to BACH**

- **1999 report from Physicians Insurers Association of America (PIAA)**

May 14 2008: Actor Dennis Quaid testifies House Reform and Government Oversight Committee on FDA regulations

"(Health care mistakes) happen too often in hospitals all over this country."

- "The nurse didn't bother to look at the dosage on the bottle. It was 10 units that our kids were supposed to get. They got 10,000. What it did was it turned their blood to the consistency of water."
Epidemiology: To Err is Human

• 1/5 Americans or family (22.8 million) mistake in a doctor's office or hospital
  – *The Commonwealth Fund, 2002*

• 44,000-98,000 people die in hospitals each year as a result of preventable medical errors
  – Institute of Medicine. 2004
  – 2009: 200,000: Robert Wachter MD UCSF

• 700,000 emergency department visits and 120,000 hospitalizations are due to ADEs annually

• At least 40% of costs of ambulatory (non-hospital settings) ADEs are estimated to be *preventable*

• *Budnitz DS, Pollock DA, Weidenbach KN, Mendelsohn AB, Schroeder TJ, Annest JL. National surveillance of emergency department visits for outpatient adverse drug events. JAMA 2006;296:1858-66.*

Res Ipsa Loquitur: the thing speaks for itself
(elements of duty of care and breach can be inferred)

1. *It ordinarily would not occur without someone’s negligence*
   - 28 y/o 4 weeks post C section: stomach pains
     - Ultrasound nl
   - 6 months later returned
     - Ultrasound showed mass → pelvis to naval area
   - Surgery for presumed cancer
     - Mass noted three feet small intestine and colon with lymph nodes
     - Immediate removal included colon and intestine for cancer staging!
     - Path: mass opened → 2 liters of pus with surgical sponge in the middle!
Case of Witnessed Syncope?

• 39 y/o Dentist
  – “passed out”, while pitching to son before little league game
  – Spontaneously improved!

• ROS: no dyspnea

• PMHx: asthma, AR

• Ambulance transport to San Diego ED
  – HPI: Sudden sharp anterior CP, pleuritic, non-radiating, no diaphoresis.
  – BP 145/88, exam nl
repeat ECG & cardiac enzymes 6 hrs later ➔ no change
ER physician: admit atypical CP for observation
MOD ➔ no cardiac risk factors ➔ outpt evaluation ETT
Argument? ➔ outcome?
Aortic Dissection

- HPI:
  - Sudden severe chest pain anterior → posterior or jaw radiation
  - Near syncope

- Risk Factor
  - Hypertension or aortic disease

- Mortality?
Questions in the evaluation of Aortic dissection

1. ECG→ abnormal?
2. Widened mediastinum on CXR?
3. Anxiety and premonitions of death psychiatric etiology of chest pain?
4. Lab tests can be useful?
   - D dimer <500ng/ml
     - useful for those at low risk
     - Neg Pred Value = 96%??→ data changes!
   - A rapid 30-minute immunoassay for the serum concentration of smooth muscle myosin heavy chain
     - sensitivity approaches TTE!
     - Research tool


• **CXR:**
  - sensitivity of 64% (70/109)
  - specificity of 86% (92/107) for aortic disease.
What is the most common physical exam finding in Early Aortic Dissection?

1. Aortic murmur?
2. Congestive heart failure or cardiac tamponade?
3. Shock?
4. Neurologic deficits including decreased consciousness, or weakness?
5. Normal exam?
6. Abnormal/asymmetric pulses in upper and lower extremity?
TEE: true lumen & false lumen of an aortic dissection. Must swallow probe, sedation?,
CT: Fast, S/S 96+%, iodine?
MRI: 98% S/S, limited availability, time consuming
Hon. Stephen E. Hjelt

- Methodist DeBakey Heart & Vascular Center vs prosecution expert
- Error!
  - Error led to death!
  - SOC?
Standard of Care:
Success *NOT* Required

A physician is not necessarily Negligent just because his/her efforts are unsuccessful or he/she makes an error that was reasonable under the circumstances.
Tort of negligence:

1. A duty was owed?

2. A duty was breached: SOC not met?

3. Proximate cause?
   - The breach caused an injury

4. Damages?
Tort Law

- SOC: Bolam Test?
  - SOC is only there to help the defendant!
  - Evidenced based?

- Lady Justice
  - Sword → courts power
  - Scales
    - Objective standards by which competing claims are made
  - Blindfold
    - Justice is objective without favor to power, money, identify
Case 2:

56 y/o man, cc: CP
2 weeks later: cc: CP
New doctor 2nd overbook
Later that day

• 11:30am pt calls:
  – pain not improving!
  – Nurse takes down note and places it on doctors desk

• Doctor continues to see pts.

• What happens?
Suits involving MI are typically brought by

1. Younger patients with negative past histories
2. Patients with abnormal ELECTROCARDIOGRAM’s
3. Typical classic chest pain
4. All of the above
Burden of Proof

**Latin**: *onus probandi*

1. **Beyond a reasonable doubt**:  
   – (highest level of proof, used mainly in criminal trials)

2. **Clear and convincing evidence**:  
   – (intermediate level of proof, used mainly in civil trials in the U.S.)

3. **Preponderance of evidence**:  
   – (lowest level of proof, used mainly in civil trials; typically means *more likely than not* $\rightarrow 51\%$)
Telephone Triage?

• What is the risk?
• Why do patients call?
  – Sooner appointment?
  – Antibiotics?
  – Pain Meds?
  – ER or no?
• Documentation?
9y/o T & A

- T#3 post op
- Unable to swallow pain meds or eat
- Call to ENT

- Call back same plan
- Call to Family doc
- Transdermal pain relief

- Worked great
- 6 hours later eating and drinking
- Mother happy!
- Next morning?
6m → status epilepticus?
Rady Children’s Hospital, S.D. CA.

- 1 am → Admission ED
- 6m with infantile seizures
- Lip puckering, poor feeding
- Argument about etiology and plan?
- Admit to Step Down
Rx

- Nursing demands response
- Triple therapy?
- **2am consult** Peds Neurology
- Plan
  - Slow push of 10mg/kg Phenytoin (*Dilantin*)
  - Decimal error
- What happens?
Doctors working late hours

- The Story of Libby Zion March 1984
  - Grand Jury
    - Sidney: "They gave her a drug that was destined to kill her, then ignored her except to tie her down like a dog."
    - declined to indict for murder
  - Civil Trial
    - 375K, Court TV
  - Medical Board: 38 counts
    - Not guilty
  - 1989 Bell Commission → work hour restrictions → 80
• FDA: 1.5 million people are injured each year due to medication errors.

• Institute of medicine: 7,000 deaths in the United States alone every year.

• RESULTS:
  – 19% of the doses (605/3216) were in error. 1/5
  – The most frequent errors
    • wrong time (43%)
    • omission (30%)
    • wrong dose (17%)
    • unauthorized drug (4%).

• No difference between JACHO or no JACHO or size
International?

- RX malaria
- Burmese medical student → fever
- Qd → Quinine
- What happens?
<table>
<thead>
<tr>
<th>Abreviation/acronym</th>
<th>Intended meaning</th>
<th>Misinterpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>o.d.</td>
<td>Once daily</td>
<td>Right eye</td>
</tr>
<tr>
<td>T.I.W. or tiw</td>
<td>Three times a week</td>
<td>Three times a day</td>
</tr>
<tr>
<td>SC</td>
<td>Subcutaneous</td>
<td>Sublingual</td>
</tr>
<tr>
<td>q.d. or QD</td>
<td>Everyday</td>
<td>q.i.d or four times daily</td>
</tr>
<tr>
<td>Qhs</td>
<td>At bedtime</td>
<td>Everyhour</td>
</tr>
<tr>
<td>IU</td>
<td>International units</td>
<td>IV or intravenously</td>
</tr>
<tr>
<td>Per os</td>
<td>Orally</td>
<td>Os taken to mean left eye</td>
</tr>
<tr>
<td>Mcg</td>
<td>Microgram</td>
<td>“mg” or milligram</td>
</tr>
</tbody>
</table>

Latin apothecary abbreviations
## Samples of common errors
Typed and written abbreviations for drugs

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<th>misinterpretation</th>
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<tr>
<td>AZT</td>
<td>Zidovudine</td>
<td>Azithioprine</td>
</tr>
<tr>
<td>DPT</td>
<td>Diphtheria-pertussis-td</td>
<td>Demerol-phenergan-thorazine</td>
</tr>
<tr>
<td>HCT</td>
<td>Hydrocortisone</td>
<td>Hydrochlorothiazide</td>
</tr>
<tr>
<td>HCTZ</td>
<td>Hydrochlorothiazide</td>
<td>Hydrocortisone</td>
</tr>
<tr>
<td>MgSO₄</td>
<td>Magnesium sulfate</td>
<td>Morphine sulfate</td>
</tr>
<tr>
<td>5-ASA</td>
<td>5 aminosalicylic acid</td>
<td>Five tablets of aspirin</td>
</tr>
</tbody>
</table>
June 3 2010

- Fatal medication errors in U.S. hospitals peak in July, possibly because of the inexperience of new medical residents, a new study finds.

- University of California, San Diego
  - 244,388 death certificates issued between 1979 and 2006 that listed medication error as the primary cause of death.
  - July deaths from medication mistakes were 10 percent higher than the expected level
  - *Journal of General Internal Medicine*. 

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*A certificate of death from 1946 showing details.*
6 y/o boy 1994: Rady Childrens SD

- Fall off skateboard
  - Unable to ambulate
  - Knee pain $\rightarrow$ xray nl?
- Dx: contusion $\rightarrow$ Home
- Radiology: Day 2
  - Noted lesion
  - Faxed to PMD
  - What happened?
Red Flags
Pediatric MSK

Age
• Onset: Night pain?
• Location of pain?
• Constitutional symptoms:
• Trauma?
• Growing pains???
2am: 13 y/o boy with back pain

- Admit: ROS
- Stepdown crosscover
- Red Flags
  - Spanish speaking family
  - Writhing
  - Soiled underwear
  - What did I do?
Transverse Myelitis

- Segmental inflammation of spinal cord
- Attacks of inflammation can damage or destroy myelin
- Etiology?
  - Viral infections
  - Immune related
  - Syphilis
  - Lyme
  - Vaccinations
- RX:
  - Corticosteroids
  - PT
14 month old boy

- **HPI:**
  - Leg length & gait
  - Mother pediatrician

- **PMHx & Birth Hx⁻wnl**
  - Development Hx: wnl
  - Child began walking at age 12 months.

- **PE**
  - Asymmetric skin-folds
  - Limited abduction L
What test can lead to diagnosis?

AP Pelvis

> Acetabular Angle

Broken Shenton’s line
Which of the following is not a risk factor for DDH?

1. Male sex
2. Breech presentation
3. Torticollis
4. 1st birth
5. Club foot

Three Risk factors!
• concentrate the glory and share the blame
What is the most sensitive test to identify developmental dysplasia of the hip in a 2-week-old newborn?

1. Ortolani & Barlow tests
   – Click vs clunk?
2. Dynamic ultrasound
3. X-ray studies
4. All of the above
Pavlik harness.

• Czech orthopedic Surgeon 1958
• Efficacy!
  – 90% success in 2-4w
  • ortolani→predictor!
• Positioning & risk?
• Duration
  – 3m<3m, or 2x age for infants
Late signs of DDH

A. Asymmetry of thigh folds
B. **Asymmetry of hip abduction**
C. Clear discrepancy of knee heights
Missed DDH
Med/legal Implications

• Leading cause of malpractice lawsuits

• DDH exam
  – every well visit until walking
  – Explain to parents
  – Document!

• What about the double diaper?
32 y/o c/o Pea sized lump in R Breast

Sept 8\textsuperscript{th} 2005
- FP palpates a firm, cherry-size mass.
- Fibroma?
- Screening mammogram, no clinical hx on form

Oct 17\textsuperscript{th}
- Radiologist performed a screening mammogram-neg

Oct 27\textsuperscript{th}
- Returned to FP for Rx of UTI
- Breast Ultrasound ordered
- Dec 16\textsuperscript{th} had the ultrasound-neg

Jan 2006-pt became pregnant

What happened?
Visit to OB

• May: mentioned lump to OB
  – Biopsy → + breast cancer
  – Declined an abortion

• July
  – Mastectomy
  – Stage IIb
  – After baby was born in October she underwent four cycles of chemotherapy, followed by a planned five-year course of Tamoxifen.

  – Pt sued her FP, radiologists and imaging center for malpractice
Arguments

- **Plaintiff**
  - Delay in Diagnosis (Oct→May)
  - **Clinical Information Needed!**
    - The family physician should have included in the referral form the clinical hx of a solid right breast lump!

- **Defense**
  - referred the patient to the radiology group?

- What was the outcome?
Outcome

• Plaintiff and FP agreed on a pretrial settlement of 1.9 million

• Plaintiff elected to discontinue the lawsuit against the radiologists and imaging center

• 7 month delay = 1.9 million?
Breast Cancer: 192,370 American women/year
40,170 women die/year
main cause of death in women ages 45 to 55.
Discussion

• **False Neg**
  – Ordering a *screening test instead of diagnostic test*
  – Estimates of the numbers of cancers missed by mammography are usually around 10%–30%
  – *false Neg: 2x premenopausal mammograms*

• **Countless malpractice cases**
  – Stopping the workup after a negative mammogram despite possibility of false neg

• Normal (left) vs cancerous (right) mammography
Inherent risks: Balance the Scale

Documentation Tips for Reducing Malpractice

Risk Peter G. Teichman, MD, MPA

• **Physician centered?**:
  – Physicians dispense advice and patients follow advice
  – Credit or burden for outcomes goes to the physicians

• **Reality:** impossible to guarantee outcome!!!

• **Shared decision making**
• Enroll pts in decision making process early
  – Align pt and provider expectations!
• **Informed consent!**
Concentrate the Glory → Share the blame

• Don’t hesitate to refer
  – Dx and Rx unsure?
  – Pt expectations are high?
  – Conflict between physicians?
    • 3rd voice in ER?
  – Target goals are not being met?
Documentation
Why does the medical record get us in trouble?

• Why key elements left out?
• Two cases same care two outcomes
  – 42 y/o with chest pain?
Documenting Tips for Reducing Malpractice Risk

• SOOOAP/SOAPE
  – Objective:
    • Findings “climbing up a chair”
  – Opinion
  – Options
  – Advice
  – Agreed plan

• Direct quotes
• Document chaperone
  – Always helpful?
• Avoid false certainties
  – Nodule vs fibrocystic changes
Dictate or type in room--Redesign the patient visit

• Initial goal was productivity?
• Side benefits
  – Improved HPI: “please stop me if I say anything that is accurate”
  – Continuity of care: Dictating plan statements such as "patient reminded to return to clinic for Pap smear in 1 month"
  – Patient Education
  – Risk management: Pt/Physician in Tune
Agreed Plan: 4 C’s of Risk Management: Compassion, communication, competence, charting

• Goals outcomes and time
  – "Recheck if not better in 2 days, sooner if worse.”
  – Document f/u plan

• Document warnings given
  – Prescribed amiodarone with warnings, #30, 3 refills

• End with concise phrase
  – consent → pt understands and agrees!

• Give pt AVS or PI
Primun non nocere

Thank you
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