



The Law of Unintended Consequences

**Zimbabwe elephant crushes trophy
hunter, killing him**

Tests I Wish You'd Never Ordered (Choosing Wisely ©)

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Moderator, (Infectious Disease)

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Disclosures: none

Definition of a well person:

“someone who has not
been completely worked up”

G. Kolata 2001

Medical Error Is Third Leading Cause of Death in US

Medical error is the third leading cause of death in the United States, after heart disease and cancer.....say authors Martin Makary, MD, MPH, professor of surgery, and research fellow Michael Daniel, from Johns Hopkins University School of Medicine.

BMJ 2016;353:i2139



Sept 22, 2015

Improving Diagnosis in Health Care, a continuation of the landmark Institute of Medicine reports finds that diagnosis—and, in particular, **the occurrence of diagnostic errors—has been largely unappreciated.....** The committee concluded that **most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences.**

Our Previous Opinionated Panelists

- Mark Baldwin, DO (Nephrology)
- Timothy Barreiro, DO, MPH (Pulmonary/Critical Care)
- Jack Bragg, DO (Gastroenterology)
- John Bulger, DO (Internal Medicine)
- Martin Burke, DO (Cardiology)
- Robert Chilton, DO (Cardiology)
- Patrick Cullinan, DO (ICU)
- Mitchell Davis, DO (Gastroenterology)
- Robert DiGiovanni, DO (Rheumatology)
- Gregg Friess, DO (Hematology/Oncology)
- Scott Girard, DO (Internal Medicine)

Our Previous Opinionated Panelists

- Robert Hasty, DO (Internal Medicine)
- Leonard Hock, DO (Geriatrics)
- Kevin Hubbard, DO (Hematology/Oncology)
- Michael James, DO (Cardiology)
- Marc Kaprow, DO (Palliative Care)
- Bryan Martin, DO (Allergy/Immunology)
- William Peppo, DO (Pulmonary/Critical Care)
- Jack Prior, DO (Nephrology)
- Roberta Rose, DO (Neurology)
- Stephan Sokalski, DO (Inf. Disease)
- John Sutton, DO (Endocrinology)
- Paul Wenig, DO (Rheumatology)
- Sandra Willsie, DO (Pulmonary/Critical Care)*

*Deceased

So.....what do the following scenarios all have in common?

Case # 1

- After failing multiple courses of oral antibiotics for c/o persistent fatigue and joint pain, a PICC was placed and ceftriaxone was started
- After three weeks of ceftriaxone, the joint pain remained, w/ new onset of fever and rash
- This was followed by hypotension and tachycardia, admission to the ICU with intubation, pressors, and multiple broad spectrum antibiotics
- This patient died from septic shock related to a CVC-associated bacteremia

Case # 2

- After being seen at an alternative medicine clinic w/ years of c/o of myalgias, arthralgias, headaches and lethargy, this pt was treated w/ rifampin, TMX, doxycycline w/o improvement
- A PICC was placed for multiple IV antibiotics, including ceftriaxone
- After 5 months of combination oral/IV antibiotics, no benefit was seen. The antibiotics were discontinued but the PICC was left in place

- One week later, chills and fever of 102.9°F developed, prompting the alternative medicine clinic to restart ceftriaxone!
- Later that same day, her temperature increased to 105.3°F followed by septic shock, requiring ICU admission w/ pressors
- Blood and PICC grew *Acinetobacter spp*
- She survived after several weeks of hospitalization

Case # 3

- One year after a flu-like illness associated w/ arm, leg and back pain, a woman in her late 40s was diagnosed w/ Lyme disease using the recommended two-tiered serology. She received two 4-week courses of oral doxycycline
- 2 years after this diagnosis, she c/o fatigue, cognitive difficulties and poor exercise tolerance

- She was started on I.M. penicillin for 5 weeks w/o improvement
- She was then switched to IV ceftriaxone x 4 months, followed by IV azithromycin X 6 months
- One year following this, a new IV catheter was placed for another round of ceftriaxone as well as oral doxycycline plus tinidazole plus azithromycin - all for ~ 4 weeks

- Back pain, SOB and malaise developed, leading to hospitalization w/ subsequent removal of the IV catheter
- Blood and catheter tip cultures grew *Pseudomonas aeruginosa*
- She was placed on 4 wks of IV aztreonam

- Because of worsening back pain, she was again admitted to the hospital
- Subsequent w/up revealed vertebral osteomyelitis with bone bx growing the same strain of pseudomonas that matched her previous cultures

Case # 4

- After 5 yrs of progressive symptoms, a woman in her 50s was diagnosed w/ ALS
- Evaluation by a second physician led to a prescription of herbs and homeopathic remedies with no improvement, resulting in her being placed on IV ceftriaxone, plus oral TMX, acyclovir, fluconazole and tinidazole

- After 7 months of this, treatment was discontinued due to the development of *C. difficile* colitis which became intractable w/ persistent symptoms over the next 2 years until she died from complications of ALS

Case # 5

- A woman in her 60s w/ multiple medical problems including a chronic neuropathy was started on IV immunoglobulin every 3 weeks via an implanted port
- After 10 years of this, she developed a port-associated MSSA infection requiring its removal

- After completing a course of IV antibiotics via a newly placed PICC for the MSSA bacteremia, the patient refused to have the PICC removed
- 2 months later, she developed a new fever. The PICC was removed and the tip cultured, growing coagulase-negative *Staphylococcus*. Following a course of IV antibiotics, she was discharged home
- A new port was implanted for more immunoglobulin therapy (!!!!)

- She was again admitted for fever but also a new c/o back pain
- Blood cultures were again positive for MSSA
- Ultimately she required surgical drainage of a paraspinal abscess (as well as another prolonged course of antibiotics)

So.....what did the following scenarios all have in common?

- All were diagnosed with “Chronic Lyme Disease”
 - either a “clinical diagnosis” (“seronegative” Lyme disease)
 - or....use of tests that have not been validated

Chronic Lyme Disease

- may not exist
- if it does, multiple randomized placebo-controlled studies have shown that prolonged courses of IV antibiotics do not improve long-term outcomes
- Unknown how many folks are treated for this diagnosis. Also unknown how many folks develop serious complications as a result of these treatments

Primum non nocere.....

Someday, YOU - and every
single person you know and
love - will be a patient

Today's Opinionated Panelists (all w/ superb credentials)

- Martin Burke DO, FACOI
(Cardiology)
- Scott Girard DO, FACOI
(Internal Medicine)
- Marianne Holler DO, FACOI
(Palliative Care)
- Bryan Martin DO, FACOI
(Allergy/Immunology)