PSA

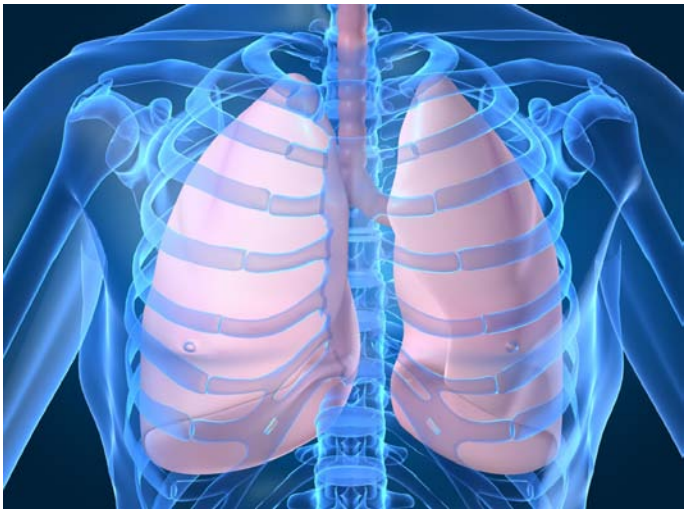
Patient Safety America Newsletter

August 2010 http://PatientSafetyAmerica.com John T. James, Ph.D.

Question: Many elderly patients die while hospitalized. The quality measurement of care provided to these patients in the last few days of life at a highly-regarded university hospital was (100% optimal):
a) 95% b) 85% c) 70% d) 60% e) 50%

Steroid Doses and Chronic Obstructive Pulmonary Disease (COPD)

You have seen drugs advertized on TV that claim to relieve the symptoms of COPD. A distressed grandmother is suddenly able to play in the park with her grandchildren or an incapacitated older man is suddenly able to polish his shiny antique truck with vigor. COPD affects roughly 20 million Americans and causes about a half million hospitalizations each year. The incidence is increasing such that it may become the third leading cause of death (if one does not count medical errors). The benefit of administration of corticosteroids to treat flare-ups of COPD is well known. In an editorial making reference to a concurrent research finding, two MDs comment on the two options for administration of corticosteroids in hospitals.[1,2]



The options are to administer the drugs orally at a lower dose (60 mg over 2 days) or give higher doses intravenously (600 mg over 2 days). Treatment recommendations call for use of lower doses associated with the first approach; however, the vast majority of COPD patients (92%) receive the high-dose, intravenous treatment, which invites an increase in adverse events. The research question is whether the lower oral doses are associated with worse recovery from flare-up of COPD than the intravenous doses.

The answer is that the lower, safer doses are just as effective.[2] In addition, the use of oral drugs saves about $500 per hospitalization. This does not seem like much until one factors in the large number of patients that receive the intravenous treatment - perhaps about a half million per year. My rough estimate would put the savings at about $250 million per year, which is small change to the healthcare industry, but still a significant saving. When the investigators performed a propensity matched comparison (matching each patient in the low dose group with a similar one from the high-dose group) they found that lower-dose treatment had ***less*** risk of treatment failure. Failure was defined as need to institute mechanical ventilation, death in the hospital, or readmission within 30 days for another flare-up of COPD.

The authors speculate on why there is such a large discrepancy between guideline recommendations and clinical practice.[2] Their list includes lack of physician knowledge of how corticosteroids are absorbed and metabolized, instinctual feeling of doctors that more is better, and the need to utilize intravenous treatment to justify continuing hospitalization. The investigators acknowledge limitations to their study and suggest that a clinical trial be conducted to discern with certainty the best treatment option for flare-ups of COPD.

Is a Diagnostic Error in Your Future?

Diagnostic medical errors have been estimated by physicians to result in the deaths of approximately 50,000 Americans each year.[3] In the case of my son's inept medical care by cardiologists that led to his death, there was a major diagnostic error. The consulting cardiologist from Austin wrote in his medical record that his first electrocardiogram showed "a QT interval that was on the upper limit of normal. His corrected QT interval is approximately 490 ms." In fact normal values of QT intervals do not exist without correction for heart rate; it is only when a QT interval has been corrected for a patient's heart rate that it can be considered normal or abnormal. My son's *corrected* QT interval of ~490 ms, coupled with the fact that he had fainted while running and had a slow heart beat, gave him a "Schwartz diagnostic score" of 5.5.[4] A score of 4 or more yields a high likelihood of a diagnosis of long QT syndrome. The consulting cardiologist had totally missed this diagnosis despite the fact that the Schwartz criteria had been in the medical literature since the 1980s,[5] had been in cardiology text books,[6] and had just been emphasized in a major cardiology

journal as something a competent cardiologist should know.[4] A published statement from Dr. Schwartz expresses his exasperation at his colleagues failure to make this diagnosis: "The unusual combination of an often lethal disease for which effective therapies exist and of a rather elementary diagnosis makes inexcusable the existence of undiagnosed, and therefore untreated, patients [with long QT syndrome]."[6]

An invited commentary by two MDs reveals several important characteristics of diagnostic errors.[7] These errors occur when the diagnosis is delayed, wrong, or missed. My son's case would fall into the third category; his diagnosis was missed. To view a heart-felt testimony on the lethal effects of a delayed diagnosis of kidney cancer, go to: http://www.youtube.com/watch?v=eBFaFyyCRc0&feature=player_embedded. The most common cause of such errors is lack of knowledge by the physician.

The commentary suggests that we no longer need to dwell on the prevalence of diagnostic errors; "we know that diagnostic errors are frequent and important."[7] It is time to do something to reduce their numbers. Decision-making tools for physicians could help in this regard. However, the authors question whether the healthcare industry would support more attention to reducing diagnostic errors. In their opinion, such errors are regarded as the cost of doing business unless there is wild outlier, and when diagnostic errors lead to higher costs, the payers pay-up because such errors are never uncovered. If accountable-care organizations become widespread, this could reduce the number of diagnostic errors because such organizations could not pass along the extra costs to the payers.

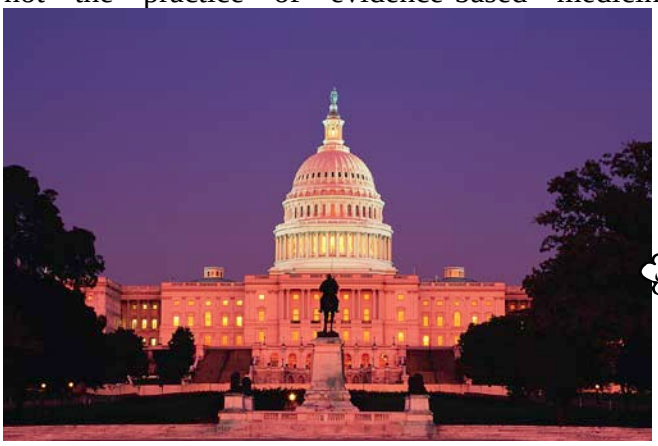
The commentary described above was invited because of a study that looked at diagnostic errors evident in medical records in The Netherlands.[8] The investigators examined almost 8,000 medical records from hospitalized patients to identify adverse events and their causes. The investigators concluded that 13% of all preventable adverse events evident in the medical records were due to diagnostic errors. Death was four times more common from diagnostic adverse events than from the other types of adverse events. They recommend that doctors be made aware of the magnitude of diagnostic errors and participate in interventions designed to reduce their number. The authors point out that their study is limited to evidence in medical records. We know that evidence of serious adverse events is often left out of medical records in the United States.[9]

Outrageous Case for Tort Reform

A study by three MDs of opinions of physicians about the overuse of procedures was published in the *Archives of Internal Medicine*.[10]

The overuse of procedures is called defensive medicine, which physicians attribute to their fear of malpractice litigation. Overwhelmingly doctors felt that medical costs in the form of unnecessary tests and procedures were higher because physicians feared malpractice litigation. Citing an old study from 1996, the authors assert that as much as $60 billion are misspent each year on defensive medicine. Would tort reform reduce this amount?

Although I sometimes take exception to a publication, in this case I am going to attack it straight on. I have no doubt that the results are accurate, but the MDs comments on their results are outrageous. The authors paint a woeful story of physicians fearful of unwarranted malpractice litigation even when they practice to the "standard of care." There is no such thing as well-defined "standard of care." One thing that is absolutely apparent is that whatever "standard of care" is, it is not the practice of evidence-based medicine.



That alone is outrageous and must the target for change. The stories I describe in this newsletter each month are proof of that. Tort reform may comfort physicians, but it leaves patients much more vulnerable to dangerous medical care.

As outrageous as the physician-authors' comments are, an invited commentary from Senator Orin Hatch of Utah on the costs of defensive medicine throws gasoline on the flame of my outrage.[11] Hatch does little more than pander to the wishes of the physician community, knowing that his readers will almost certainly be physicians and not patients. Let's drill down a little into his major assertion. He claims that "a 2008 study by PricewaterhouseCoopers (PWC) found that…the largest source of wasteful spending is defensive medicine."[12] But that "study" only reiterates a finding from a 2006 study by PWC for the American Health Insurance Plans.[13] And that "study" cites its source as a tedious statistical study of hospitalized heart patients from 1996.[14] This study from 1996 uses Medicare data from 1984, 1987, and 1990. So the information cited by Senator Hatch actually uses data from about 23 years ago; in other words, do not suppose that it is representative of current medical circumstances. For example, the American College of Cardiology and the American Heart Association only began issuing guidelines for care of heart patients in 1984.[15]

My point is that in 1984 the practice of defensive medicine was much more common because there were few if any guidelines. Now there are more than 50 guidelines for care of heart patients. If cardiologists would simply follow such guidelines and define the "standard of care" in terms of guidelines, the question of defensive medicine would become mute. Furthermore, the Office of Management and Budget issued a statement in 1999 and the Congressional Budget Office in 2004

finding that the results of the 1996 study on defensive medicine must ***not*** be applied to the cost of care of patients in general.[16,17] The solution to too much defensive medicine is in the hands of physicians and should never be trusted to legislators that want to reform the tort laws. Senator Hatch: Let's place blame where it belongs and quit using ancient and highly-limited data to argue for tort reform. Your constituents deserve a more informed legislative agenda than that.

Is a Healthcare Acquired Infection (HAI) in Your Future?

Ambulatory surgical centers (ASCs) have grown in number in the United States as patient care has shifted to surgical services that do not require a hospital stay. More than 5000 ASCs participate in Medicare. A team of investigators asked how rigorous infection control was in 2008 in these centers by counting lapses in infection control in selected categories in 68 ASCs in Maryland, North Carolina, and Oklahoma.[18] Data were gathered by

unannounced inspections of ASCs by qualified surveyors in each state. The surveyors looked for compliance with five practices: 1) hand hygiene, 2) injection and medication safety, 3) proper equipment sterilization between uses, 4) cleaning of environment in potentially contaminated rooms, and 5) handling of blood glucose monitoring equipment.

Of the 68 ASCs surveyed 46 had at least one lapse in infection control. Twelve of the 68 ASCs had lapses in 3 or more of the 5 survey categories. The most common lapses were use of single-dose medication vials for multiple patients, failure to properly clean equipment, and failure to clean blood glucose monitors between uses or change lancet penlet between patients. Although this was a "preliminary communication" it warrants attention by ASCs and by patients who seek safe care in these centers. Be alert for careless infection control during your treatment. Ask non-threatening questions. "You seem busy, have you had a chance to sterilize the glucose monitor? I can wait if you need more time. You do not want to be a victim of HAI like the folks in Las Vegas who got hepatitis C.

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Answer to question this month: c) 70% [19]