



Patient Safety America Newsletter

January 2011

<http://PatientSafetyAmerica.com>

John T. James, Ph.D.

Question: According to a new study published in the Archives of Internal Medicine, how many times does the death rate increase for patients who get hospital-acquired Clostridium difficile (an opportunistic infection) compared to those who do not get the infection while in the hospital?

- a) 2 times
- b) 3 times
- c) 4 times
- d) 5 times
- e) 6 times

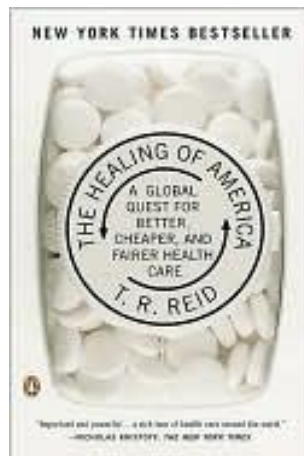
Book Review: *The Healing of America*

By T.R. Reid

Last month I was privileged to participate as a “Patient Activist” at the Institute for Healthcare Improvement meeting in Orlando. The final speaker was Tom Reid, a longtime correspondent for the Washington Post and commentator for National Public Radio. He delivered a fascinating talk about various healthcare systems around the world and why we need to learn from them. After his talk I bought his book and had a short discussion with him about how to engage the faith community in real healthcare reform.

During his talk he observed that all developed countries observe the moral imperative that everyone has a right to decent healthcare – *all except the United States*. He noted that only in America can citizens be bankrupted by healthcare costs. Mr. Reid’s book parallels the talk he gave and provides insight that dispels misconceptions about American healthcare and healthcare in other nations.

He makes it clear that he did not find a system where there are not complaints from some segment of the system. In Japan and Germany the doctors complain of low payment for services, in Canada the wait for many types of care is too long, but in the end no system performs anywhere near as badly as the American healthcare industry. In



America we allow 20,000 of our fellow Americans to die each year from treatable diseases.

Mr. Reid traces the origins of each healthcare system and provides a personal as well as broad-based perspective on the care in each country. On a personal level Mr. Reid has a sore shoulder for which he seeks care in each country. The reader will be surprised where he found inexpensive and effective treatment and where he was told to “live with” his sore shoulder. No one should be surprised that an American surgeon wanted to do a full joint replacement, an unneeded and expensive procedure.

In some countries, such as Japan, the range of covered services and treatments was remarkable. Did you know that house calls by physicians are common in several developed countries and that patients know *up front* exactly the amount they are expected to pay a doctor? Mr. Reid gained access to national leaders in many of the countries he visited to develop a nation-wide perspective on their care systems. He notes that economic leaders view the American healthcare system as the “bogyman of the world.”

If you only read one book this year, then this is the one to read. It is well written, important, and interesting. I could quibble about some of the salary comparisons Mr. Reid gives. For example, he seems to overestimate the income of primary care physicians in the U.S., but that is a small detail. He also seems to naïvely assume that gaining access to American healthcare is always a good thing. Frankly, healthcare in America can be quite dangerous to your health (see next article for example). Many of Mr. Reid’s observations will not reinforce the conservative misconceptions some of us have about our healthcare industry.

FIVE STARS. Penguin Press, 2009, \$25.95

Patient Safety- Still Unimproved

Most of us live our lives with attention to safety, so when we experience an accident that could have been prevented, we learn from our mistake so that we improve the safety of our lives. For example, when I was a kid, cars did not have seatbelts. I remember the deaths of 8 teenagers in one automobile accident on a country road near my house. No one was wearing a seatbelt. Society has learned that seatbelts and more recently air bags save many lives each year. Laws mandate that we must wear seatbelts and cars built in the past decade all have air bags. Despite driving more miles each year, the number of deaths from automobile accidents in 2009, not counting pedestrians hit by cars, has dropped to about 30,000 people per year.¹

One would think that in the wake of a widely publicized estimate from the Institute of Medicine (IOM) in 2000 that 98,000 Americans die each year in hospitals from medical errors, there would have been a concerted effort to stem the tide of death. This month a disturbing report was published that showed there is no evidence that patient safety was improved in ten representative North Carolina hospitals in the years from 2002 to 2007.² Given the volume of activity centering on patient safety since the IOM report, this finding was a surprise to many experts.

Let's have a closer look at the study. The investigators chose to study hospitals in North Carolina because attention to patient safety has been more intense there than most other states. The



going-in assumption was that there would be demonstrable improvements in patient safety. The investigators randomly selected ten hospitals representative of the types of hospitals in the United States as a whole. They examined 10 randomly selected medical records per quarter from each of the ten hospitals over a total of 24 quarters from January 2002 through the end of 2007. Initial record reviews were performed by a trained nurse using a “trigger tool” for identification of possible patient harms. Physicians performed secondary screening to confirm the presence of patient harm. Independent evaluations were also performed by an external team.

The internal review identified 25 patient harms per 100 hospital admissions of which 63% were deemed preventable. Based on statistical analysis of the internal reviews, neither the rate of preventable harms nor the overall rate of harms decreased over the 6 year period. According to the external reviews, which found significantly fewer errors than the internal reviews, the rate of preventable harms almost achieved a statistically significant reduction in the 6 years of the study.

One can speculate on why there was no demonstrable improvement in patient safety despite concerted efforts in these hospitals. In my opinion, improvement in patient safety must fully engage each patient or their advocate in the flow of care. A book I reviewed in my November 2009 Newsletter called “*High Performance Healthcare*” noted that the primary integrator across the continuum of care in hospitals was the patient advocate. Any approach that overlooks the critical value of the patient or his advocate in his care is destined to have limited success. Of course this would require hospitals to give up some of their control of the inpatient experience, something they are reluctant to do.

Safer Surgery

Sooner or later we are all going to need surgery. If performed well, surgery can lead to health improvements that border on miracles. On the other hand, poorly performed surgery can kill or maim hapless patients. A team of investigators from the Netherlands asked how much improvement in outcomes can occur in top-quality hospitals if they implement comprehensive surgical checklists.³ The investigators compared the outcomes of about 3,800

Our findings validate concern raised by patient-safety experts in the United States and Europe that harm resulting from medical care remains very common. Though disappointing, the absence of apparent improvement is not entirely surprising.

Christopher Landrigan, et al., 2010²

surgeries before implementation of the checklist to the outcome of about the same number after implementation. The study was strengthened by measuring outcomes in a control group (no checklists) of similar hospitals in the Netherlands.

The checklists involved almost 100 items spanning the surgical steps from preoperative phase through discharge instructions. The results were striking. The total number of complications per 100 patients decreased from 27 to 17. Most importantly, the number of deaths was halved from 1.5% to 0.8%. Outcomes were unchanged in the group of control hospitals.

An editorial by an American doctor from Michigan discussed this study in some detail.⁴ He pointed out that if pilots can use checklists to avoid simple oversights, then so can surgeons. He suggests that checklists must be a priority for the healthcare industry with the potential to “avert tens of thousands of surgical deaths and hundreds of thousands of serious complications every year in the United States.” He does point out that checklists cannot compensate for variations in the basic skill of the surgeon.

The lesson for patients is to ask if checklists will be used when you undergo surgery. Do not allow yourself to be brushed aside by a response such as “we have done this operation hundreds of times, so we don’t need any checklists.” On a personal note, the surgery I had in 2008 in The Methodist Hospital in Houston involved use of a Foley catheter, which in my case was not properly inflated. The catheter fell out a few hours after the operation and had to be reinserted causing me increased risk of infection and risk of damage to the site of my surgery. Was the surgical team using a checklist to ensure that the catheter was properly inflated? No. Even in the best hospitals comprehensive checklists can reduce patient risk.

Dangerous Drug Prescribing for Older Folks

Three investigators looked at the drugs prescribed to Medicare patients with the intention to

determine the regional variation in rates of prescribing and in the quality of the prescribing.⁵ They assessed lower quality by two measures: 1) use of medications that are high-risk for the elderly and 2) use of medications that have potential adverse interactions with diseases. They reviewed the pharmacy and medical claims of more than a half million Medicare patients from 2007 and identified these as belonging to one of 306 zones in the Dartmouth hospital referral regions (a standard way to sort medical care referral regions).

They then divided the rate of use of high-risk drugs and the rate of use of drugs that could interact with diseases into quintiles based on quality scores. The rates of use of high-risk drugs varied from 11% to 44% and the rates of use of harmful-interacting drugs varied from 10% to 31%. They also examined the amount of spending on drugs in these regions. They found a correlation between non-drug medical spending in each region and the use of higher-risk medications.

The authors concluded that “Our results are consistent with an association between lower-quality prescription patterns and more adverse drug events that may require additional expense to treat.” Adverse drug events in older adults are a major cause of hospital admissions through the emergency department. **Until there is more accountability for improperly prescribed drugs in older adults, patients must be vigilant in questioning their doctors about the risks associated with the medications they are prescribed.**

Deadly Opioids

At the risk of “overdosing” you on the dangers of therapeutic drugs, you should be aware of the rapidly mounting number of deaths from unintentional overdoses of therapeutic drugs.⁶ This increase is fueled mostly by increased deaths from opioid drugs prescribed to treat pain. This issue has gained new attention because the Food and Drug Administration (FDA) devised a plan to make drug makers train physicians on the proper use of these drugs, but an FDA expert panel voted against the plan because it was insufficient. The expert panel recommended *mandatory* training for any physician prescribing these drugs.

In my opinion this training is long overdue. The numbers of deaths from accidental misuse of



therapeutic drugs per year is approaching that caused by automobile accidents (nearly 30,000). I personally know of two people in their early 30s who died from an accidental overdose of pain killers.

A perspective insert in *The New England Journal of Medicine* on regulating opioid use in the state of Washington was enlightening. In that state a new law mandates that physicians follow guidelines for pain management and track the outcomes in their patients. An expert physician was quoted as saying, "Physicians have not substantially changed their practices in response to treatment guidelines and voluntary educational programs; however, they will do so if they know their success in treating patients is being measured."

Some practitioners expressed concern that patients that need pain management may not be able to get it; however, there is recognition even among these detractors that measurement of outcomes is necessary. The law goes into effect in mid-2011. **If you know someone who is taking opioids (especially long acting ones) then ask them if they know the dangers of those drugs and have sought alternatives.**

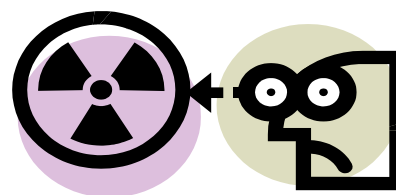
Medical Radiation Risks

The medical radiation burden on Americans has increased about 6-fold since the 1980s and this has drawn the attention of radiation experts and legislators. The test delivering the single largest source of radiation is one called myocardial perfusion imaging (MPI). This test involves injection of a radioactive tracer that travels via the blood stream to areas of the heart that have adequate blood flow; however, the tracer will be less concentrated in areas with poor flow, thereby identifying areas in images that may require special attention. Typically the test is performed while the patient is exercising and while he is at rest.

Obviously such tests can have value when used repeatedly to visualize areas with poor blood flow. A recent study asked how much radiation is received by patients undergoing repeated medical

testing.⁷ The records of about 1100 consecutive patients that had an initial MPI at Columbia University Medical Center in New York were evaluated to estimate the radiation dose these patients received from all medical testing from 1988 to 2008. About one third of these patients were found to have received more than 100 mSv cumulative effective dose. The authors assert that this is "a level at which there is little controversy over the potential for increased cancer risk." These high doses seem to be associated with multiple MPI testing.

The authors make several proposals for decreasing the cumulative dose of radiation to patients. **As a patient you should challenge the**



value of repeated tests that involve the use of ionizing radiation. Make certain that your doctor knows

about any previous tests you have had that used radiation. You do not want some cancer to appear when you are in your 80s because you had too much medical radiation in your 50s and 60s.

References

- 1) <http://www-fars.nhtsa.dot.gov/Main/index.aspx>
- 2) Landrigan, CP, GJ Parry, CB Bones, et al. Temporal trends in rates of patient harm resulting from patient care. *N Engl J Med* 363:2124-2134, 2010
- 3) De Vries, EN, HA Prins, RMPH Crolla, et al. Effect of a comprehensive surgical safety system on patient outcomes. *N Engl J Med* 363:1928-1937, 2010
- 4) Birkmeyer, JD. Strategies for improving quality – checklists and beyond. *N Engl J Med* 363:1963-1965, 2010
- 5) Zhang, Y, K Baicker, and JP Newhouse. Geographic variation in the quality of prescribing. *N Engl J Med* 363:1985-1988, 2010
- 6) Okie, S. A flood of opioids, a rising tide of deaths. *N Engl J Med* 363:1981-1984, 2010
- 7) Einstein, AJ, SD Weiner, A Bernheim, et al. Multiple testing, cumulative radiation dose and clinical implications in patients undergoing myocardial perfusion testing. *JAMA* 304:2137-2144, 2010
- 8) Oake, N, M Taljaard, C van Walraven, et al. The effect of hospital-acquired *Clostridium difficile* infection on in-hospital mortality. *Arch Intern Med* 170:1804-1810, 2010

Answer to question this month: b) a Canadian study showed a 3-fold increase in death rate⁸

Find past newsletters at:

<http://patientsafetyamerica.com/e-newsletter/>