

# Patient Safety America Newsletter

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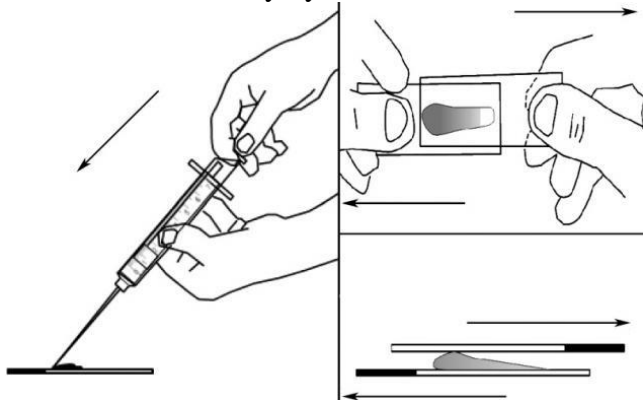
John T. James, Ph.D.

**Question:** In 2011 the life expectancy of U.S. citizens was 79 years. What was the life expectancy of urban dwellers in 2010 in China where 1/24<sup>th</sup> as much money is spent per capita on healthcare?

- a) 72 years    b) 74 years    c) 76 years    d) 78 years    e) 80 years    f) 82 years

## Bogus Breast Biopsies

My PhD degree is in pathology, the scientific study of diseases. I remember watching during graduate seminars as MD pathologists looked at slides projected on a screen and debated the diagnosis based on each one. It often seemed that there were as many opinions as pathologists. Unlike the hyper-skilled pathologists depicted in TV shows, the real world pathologist knows that his expertise is tempered by experience. This was recently made clear by an article published in the *JAMA* and a comment on the study by two MDs.<sup>1</sup>



In the original study, 240 microscope slides from breast biopsies, consensus-classified by three expert breast pathologists, were assembled. Then 60 randomly selected slides were sent to each of 115 pathologists that were representative of the general population of pathologists. The primary finding was that there was 75% concordance between the experts' diagnoses and the participating pathologists' diagnoses. The writers observed that these findings are "disconcerting." They noted that the diagnosis of "atypia," which is present in about 10% of all breast biopsies each year, was over-interpreted in one sixth of the study's diagnoses. Over-diagnosis can lead to unnecessary surgery.

Another troubling facet of the study was the finding that 4% of the time the pathologists missed

the diagnosis of invasive cancer and 16% of the time they missed ductal carcinoma *in situ* (tiny cancers localized to milk ducts in the breast). These diagnoses each have specific treatment modalities that will obviously be missed if the proper diagnosis is missed.

**The message for women that are subjected to a breast biopsy, presumably following a suspicious mammogram, is to get a second independent opinion if your diagnosis may be opening the gateway for more invasive treatment. In addition, if you agree to a biopsy, then ask if the pathologist that will read the results is an expert in reading such slides. You do not want to be sent down the wrong medical trail by a bogus diagnosis.**

As I was writing this article, a story broke about the wisdom of Rita Wilson, wife of actor Tom Hanks, in seeking a second opinion on her breast biopsy in which her cancer was missed by the first pathologist ([Rita Wilson](#)).

## Emergency Room Visits Caused by Psychiatric Medications



Psychiatric medications are the cause of many visits to the ER. According to an article by an MD in the *JAMA* last month, in the 3 years from 2009 through 2011, almost 90,000 ER visits involved a psychiatric medication.<sup>2</sup> The most common adverse reaction to the medications were movement disorders and spasticity ([medications](#)). One-fifth of these ER visits resulted in admission to the hospital. About one

eighth of the adult visits to ERs caused by psychiatric medications were due to the sedative zolpidem tartrate (Ambiem®, [Ambien](#)). In adults over 65, this portion increased to one-fifth.

**The lesson here for anyone taking psychiatric medications or looking after someone on these medications is to deal with adverse effects before they reach the point of requiring an ER visit. Do not ignore side effects until they become serious. The wise patient will seek non-pharmacologic solutions to “psychiatric” problems before any medication is taken. Furthermore, the wise patient will ask for the minimum dose that may achieve the desired outcome. Medications are an invasion of your body.**

### *A Patient Safety Blind Spot*

Almost all baby-boomers remember the small rear-view mirrors placed only on the driver’s side of the behemoths of the 60s. These limited-visibility mirrors soon led to the discovery that blind spots were a common danger. These days such mirrors come in pairs, one now on the passenger side, and are much larger. Many new vehicles are equipped with back-up cameras. Blind spots have almost been eliminated. That may not be the case with hospitals and the use of new technologies.

Three experts express their view that hospital oversight of use of new devices and especially new surgical technology is often limited.<sup>3</sup> Their prime example is robotic surgery and the da Vinci Surgical System introduced in 2000. A patient that was harmed by an inexperienced surgeon doing his first solo robotic prostatectomy, leading to much suffering and eventually his death, sued the maker of the robotic system, but the manufacturer was not found guilty of negligence in training. The clear implication was that physicians and hospitals must take responsibility for ensuring adequate training. The writers conclude that hospitals must bear legal responsibility for privileging physicians to apply new technology, and they need to develop ways to do this while keeping patients safe.

**If the use of new technology is in your treatment plan, you would be wise to know the experience the hospital and your physician have had with the new technology. The inability to use new medical technology properly has led to much patient harm.**

The writers note that this is a “high yield target for improving patient safety.” This all reminds me of a study from several years ago in which cardiologists were asked through a national survey if their competency had been assessed within the past three years.<sup>4</sup> Three-fourths admitted that their competency had not been assessed.

### *Healthcare in China*

I once did a door-to-door effort in which I met people that came here from many other countries. One woman who answered her door was from China. Since she had been in the U.S. for a while, I asked her how she liked healthcare in America. She gave me a disgusted look and said in her accented English “terbul.” “Worse than in China,” I asked. “Mush wus,” she replied. Our discussion went no further. What does the Chinese system offer the people of that relatively poor country that we might learn from in the U.S.?<sup>5</sup>



Perhaps the first advantage of that system is its low cost. The per capita cost each year is about \$375, which is about 24 times lower than the U.S. system cost. The portion of the gross domestic production (GDP) spent in China is only about one-third the GDP consumed by the U.S. medical industry. The Chinese system is characterized by a large disparity between urban and rural care and outcomes. For example, the national average infant mortality in the first year of life is 6.3 per 1000 live births, about 1 point worse than in the U.S. However the urban/rural numbers are 3.7/7.3 per 1000 live

births. This disparity mimics the disparity in the U.S. between races and between rich and poor.

The Chinese system has convulsed through major transformations in recent years. Into the late 1990s, the Chinese system was one of limited health insurance and price controls. The mistrust of the public forced the leaders to adopt a free-market system in 2003 with widespread health insurance, but this changed little for the people. In 2008 the leaders abandoned a system based on free-market principles, being determined to provide affordable healthcare for all by 2020. By 2012 95% of the population had health insurance and a universal primary-care system had been launched.

I can only marvel at the ability of the Chinese system to respond to public dissatisfaction so much faster than the U.S. non-system. There are problems in the Chinese system. Physicians are not that highly regarded and trusted as they should be. This is reflected in the annual salary of senior physicians, which is equivalent to \$15,000 to \$50,000. The authors note that the ongoing experiments in China bear watching as that country's system learns and evolves.

### *Over-medication of High Blood Pressure*

There is little doubt that appropriate treatment of high blood pressure in older folks can prolong their lives; however, what constitutes appropriate control is rapidly evolving, pushing aside the old notion that "lower is always better." Several reports this past month caught my attention regarding the relationship between a systolic blood pressure (SBP) less than 130 mmHg and the risk of mortality or cognitive impairment. Herein I'll try to capture the essential points, but if someone you take care of may have too low blood pressure, then you must discuss this with their physician in light of the recent studies I summarize here.

A review article by an MD expert in the *JAMA* compared all-cause mortality in nursing home residents older than 80 years. One group was using two blood pressure medications to lower their systolic blood pressure to below 130 mmHg while the other group achieved a SBP less than 130 using 0 or 1 medication.<sup>6</sup> The risk of mortality in the 2-

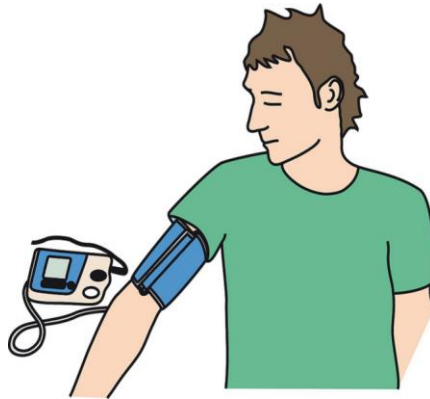
year study period was 1.8 times higher in those doubly medicated to below 130 mmHg when compared to those in the less-medicated group. There are several guidelines, but it seems that in general blood pressure in these elderly individuals should be controlled to between 140 and 150 mmHg, depending on other health factors such as diabetes or chronic kidney disease. The author notes his surprise that so many frail elderly residents were still being doubly-medicated to reduce SBP below 130 mmHg.

In another study, a large team of investigators asked if too much lowering of blood pressure in quite-elderly, cognitively-impaired adults may be associated with an increased rate of cognitive decline.<sup>7</sup> They found that too much lowering of blood pressure (say below about 130 mmHg during the day) was associated with a faster rate of cognitive decline as measured using the Mini-Mental State Examination over a median follow up period of 9 months. There were broad uncertainties reported in the study and no cause-and-effect was demonstrated. But it makes sense that lowered blood pressure in elderly individuals means less blood is being circulating through the brain, leading to more structural damage there and an increased rate of cognitive impairment.<sup>8</sup>

**If medications are being used to lower an elderly person's SBP below 130 mmHg and they seem to be experiencing cognitive decline, the wise care giver will ask the physician if a new SBP target, say between 140 and 150 mmHg, would be more appropriate.**

### *Lumbar Spinal Stenosis and Surgery*

Lumbar spinal stenosis (LSS), a narrowing of the spinal canal, is thought to be the most common cause for lumbar surgery. In my opinion, there is a potential conflict of interest here that the wise patient will manage carefully. If you have symptoms of this disease (pain in the lower back and weakness in the upper legs), and receive this diagnosis, you must carefully consider physical therapy before allowing surgery. This is especially true if you have gone to a physician that does a lot of back surgeries.



A randomized trial comparing surgical decompression and physical therapy in about 170 patients over 50 years old found that there was no difference in outcomes, as measured by physical-function scores over a period of 2 years.<sup>9</sup> The investigators suggest that “full disclosure of evidence involving surgical and non-surgical treatments for LSS [must be given to the patient].” This is the only way shared decision making can take place.



Overall, the evidence is not all that clear on which way to go with treatment. In some cases surgery seems to offer improved short-term results, but these improvements disappear after a few years. Depending on patient preferences, the best approach is to start the patient on a rigorous, standardized physical regimen. If this does not result in acceptable outcomes, then surgery is always an option, but patients must be informed that the benefits of surgery will fade over a few years.<sup>10</sup>

Patients with symptomatic LSS will be smart to ask questions of their physician (especially if he is a back surgeon) and seek a second opinion in many cases, perhaps from a sports-medicine physician who is familiar with the benefits of physical therapy.

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Answer to question this month: d) 78 years, reference #5. The rural-dwelling life expectancy was only 72 years.