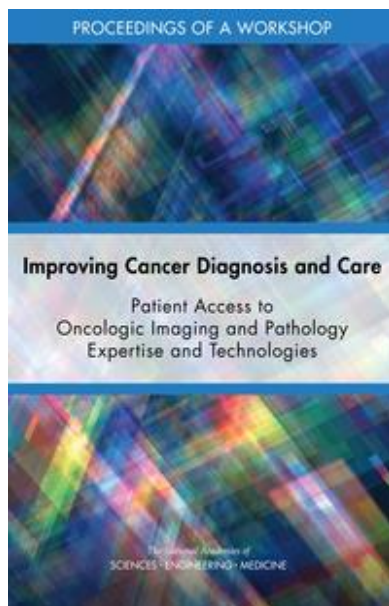


Question: *Approximately how many meniscus knee surgeries are performed each year in the U.S.?*
 a) 10,000 b) 50,000 c) 100,000 d) 250,000 e) 500,000

Book Review: Improving Cancer Diagnosis and Treatment

From the National Academy Press



Books from the National Academy Press are seldom exciting reading, and this one is no exception; however, many of us will receive a diagnosis of cancer sometime in our lifetimes, so it might be prudent to discover what experts are thinking when it comes to improving cancer diagnosis.

I'll begin with their view of the how specialists should interact with patients during the diagnostic process. The assembled experts identified the following roles: communicate to the patient in a way they can understand, increase the patient's awareness of subspecialties, ask the patient's opinion when improving diagnostic tools or assessing their performance, and find ways to collect health data from patients for the electronic health record. Expect this if you have cancer.

Other key ideas that did not involve patient input include the following: provide incentives for integration of radiology, pathology, and oncology collaboration and reports, ensure clinicians have direct access to decision aids, support life-long learning, assess whether the clinician is following guidelines, give feedback on performance, use artificial intelligence, ensure that clinicians are

properly trained in new technology before it is applied, and apply processes that ensure quality in nationally shared databases.

Cancer is a frightful disease, but the calling to patients, beyond looking out for themselves, is to do what they can to make diagnosis better for the next victim with a similar cancer. This may mean that you will have to force your way onto your care team. Books from the National Academy Press can be downloaded for free once you subscribe. <https://www.nap.edu/>.

Lack of Shared-Decision Making

I began last month's newsletter summaries with an article questioning the wisdom of declaring the need for shared-decision making (SDM) in the case of implantation of a cardio-defibrillator. The topic is so important to patients, that I'll begin my summaries this month on the same general topic, that being [SDM](#) in the case of screening for lung cancer. Current guidelines require SDM before screening for lung cancer. A team of investigators scored SDM according to a scale called "Observing Patient Involvement in Decision Making." Scores may range from "0" meaning no SDM at all to "100," which indicates the highest level of SDM. The investigators examined fourteen recorded conversations that took place between primary-care or pulmonary-care physicians and their patients considering lung cancer screening. Eight of the patients were current smokers.

The mean time of overall discussion of the 14 recorded visits was 13 minutes, with only 1 minute on average devoted to lung cancer screening. The availability of decision aids was not discussed. There was essentially no discussion of the potential harms of screening, and the clinicians, without exception, recommended screening. On the SDM scale of 0 to 100, the average score was 6 (six!). The

potential harms from screening include detection of a nodule that leads to an invasive procedure (e.g. biopsy), only to find no cancer. Another harm is the finding and treatment of a cancer that never would have shortened the patient's life. I'll admit that these are challenging "harms" for patients to understand.

[Rita F. Redberg](#), MD posted her observations about the SDM study summarized above. She pointed out that most people screened for lung cancer are not in the group that would benefit from screening. She adds to the potential harms of over-screening, including the anxiety experienced by a "positive" finding when it is nothing more than a meaningless finding and radiation exposure. Most importantly, she notes that SDM is lacking in many clinical settings to include screening for breast cancer, screening for prostate cancer, knee replacement surgery, and stenting in the face of stable heart disease. She notes that SDM should be part of the fabric of clinical practice. There is a long way to go before this is the case.

As for patients, we can insist on SDM, by asking questions appropriate to the proposed medical procedure. Specifically, ask what the benefits and risks are and how those are known. Insist on quantitative data, not vague opinions. Ask for a decision aid. Ask which guidelines are being followed and how a copy may be found. Let your clinician know you are recording your conversation because your memory is not all that good (ha-ha).

Knee Surgery or Not

Speaking of knee surgery, an [investigation](#) was published in the *JAMA*, comparing the outcomes from knee surgery (arthroscopic partial meniscectomy, APM) and physical therapy. Patients had been diagnosed with non-obstructive meniscal tears. The physical therapy consisted of 16 sessions spread over 8 weeks. A group of 320 patients was randomly assigned one of the two treatments. The primary outcome was change in patient-reported knee function based on a standardized questionnaire. The study design was called "non-inferiority." This means that the investigators were asking if the physical therapy was less effective than APM. If the difference in scores had been >8 , the physical therapy would have been deemed inferior. The follow-up period was 24 months.

The outcome showed that on average the group treated with physical therapy showed a score

improvement 4 points below the improvement in the APM group. The authors conclude, based on their findings, that physical therapy may be considered an alternative to APM. More adverse events appeared in the APM group than in the physical therapy group.

Three [experts](#) provide a perspective on the study summarized above. Other studies have found results comparable to the one above, and some insurance companies have stopped paying for APM without prior physical therapy. The authors ask why, in the face of compelling evidence, do surgeons continue to perform surgery. They offer the following thoughts: surgery may appear to elicit a cure, but the placebo effect may be present; there is inertia built around the surgical community's norms for doing surgery; and the last is the financial incentives to perform more surgeries. The authors call for more specific guidelines to clarify instances when surgery is the best choice and when it is not. They emphasize that such guidelines should focus on the needs of the patient, not the medical industry. I would point out that the only way surgeons can get away with doing unnecessary surgery is to deny patients the information they need to engage in shared-decision making.

Is Your Doctor Burned Out?

Burnout is characterized by emotional exhaustion, depersonalization, and lack of accomplishment. For the purpose herein, it is an adverse reaction to work conditions. Roughly half the clinicians in the United States have some symptoms of burnout. An [MD](#) wrote an invited commentary about the connection between patient outcomes and burnout. As one would expect, burned out clinicians produce worse patient outcomes. Somewhat indirectly, the author favors pairing of quality improvement projects with projects designed to reduce clinician burnout. Such studies must be rigorous and multi-centered if possible.

The author's list of factors for improvement included the following: improve workflow and usability of electronic medical records, reduce chaos, improve the trainee experience, and examine the regulatory environment to remove unnecessary burdens on clinicians.

I would propose that research be performed to measure the rate of clinician burnout in other developed countries. Countries with low burnout

rates for clinicians may provide a model to work toward in the U.S. I would also point out the greed factor in the U.S. There is a human tendency for us as we make more money to desire to make more money. It is an insidious part of our nature. A clinician may take on an especially heavy work load to feed his desire for more income. This is an invitation to burnout, in my opinion.

Artificial Intelligence and Colonoscopy

I don't know anyone who gets excited about their next colonoscopy. Given that this procedure is not especially pleasant, one would hope that all is done to optimize the value of the unpleasant invasion of your body. A [huge team of investigators](#) asked if artificial intelligence may be used to decide whether polyps discovered during colonoscopy need removal to stave off colon cancer or can be left in place. The answer is "yes it can." Here's how the study was performed.



The study involved 791 patients and 23 endoscopists. They used special endoscopes that magnified up to 520X and a tissue stain called methylene blue. A computer-aided diagnosis pointed to whether the polyp can be left in place or not. Either it is precancerous or it is not. Clinicians found 466 polyps of which 98 percent had correctly predicted pathology using the real-time computer algorithm when compared to the gold standard of pathological analysis of each resected polyp. About 40% of the polyps were found to be precancerous.

Knowing whether or not to remove a polyp during performance of a colonoscopy should reduce the risk of harming patients. I recall a [study](#) from a few years ago showing that adverse events for patients 65 and older who have had a colonoscopy

are about 2 ½ percent. Removal of harmless polyps during the procedure unnecessarily increases risks.

According to a couple of Swedish MDs who commented on the artificial intelligence study, about \$33 million is spent each year in the U.S. on removal of polyps that would not have developed into cancer. They noted that the dye seemed unnecessary and that the technique is quick and is readily adaptable to existing colonoscopes. Furthermore, there is no learning curve to speak of. There are a few small hurdles to overcome, but the computer-aided system should become standard practice soon. The editorialists opine that the system should reduce human error, which is the nemesis of modern medicine.

American Health Care and Politics

I am going to deliberately delay distribution of my November newsletter until after the mid-term election so no one may accuse me of using it to persuade voters about which candidates to choose. I want to reflect some of the observations of Dr. [Don Berwick](#), MD, a venerable and compassionate past leader in health care systems. Early in his editorial he notes, "The Declaration of Geneva, adopted by the World Medical Association in 1946, and updated as recently as 2017, is more direct: "I WILL NOT PERMIT considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient."

Dr. Berwick points out that politics is now playing a huge part in how health care is delivered in the U.S. He levels several important criticisms at the Trump administration, and then asserts that politics cannot be extracted from health care. He enumerates the ways politics intervenes in health care in the U.S. The first is money. Because of the value associated with private profits and the fragmented nature of the American system, opportunities exist for political pressure to manipulate the system to maximize profits. Second, political positions on the role compassion plays in health care are different. Basically, should richer people be expected to help poor people with their healthcare because healthcare is a human right? Or not. How the two major political parties see the answer to this question creates multiple battlefields, and people suffer in the meantime.

The third politicized debate is the role science should have in regulation. Currently, science is set aside at the whim of the current administration. This is propagated through doubt mongering to a deceived public. The fourth political tension Dr. Berwick captures is the view of ourselves. Do we practice solidarity as Americans, knowing that those in need are to be helped? Can physicians place the interests of their patients ahead of their own interests? He asserts that if physicians ignore politics, then they may be ignoring the principles they accepted when they became physicians.

I agree with most of Dr. Berwick's ideas, but I think the solution to our healthcare problem is not going to come within the poison of politics. Medicare should be expanded gradually to lower age groups. As that happens, Medicare in the U.S. must be run by directly elected, non-governmental people determined to serve those who elected them from a specific region of this country. There would be no political parties and no government bureaucrats involved, and there would be no funding from any source for candidates to represent their region. Before each election, the incumbent and each candidate would make their case in a 1-page summary, readily available to all adults in that region. Honestly, if we do not get politics out of health care, then it will continue to be a disaster for many Americans. It needs to be directly in the hands of all people it serves. Congress would appropriate funding, but would have no say in how the new system is run.

Stop Mass Shootings

An MD gives his views on how to stop mass shootings in the U.S. As I write this President Trump has just suggested that the 11 people killed at a synagogue in Pittsburg, Pennsylvania would have survived if there had been an armed guard present. Let's see if that was on the physician's list. He proposes two approaches to reducing gun violence. The first is to greatly strengthen background checks for anyone anywhere desiring to purchase a gun. This is going to require that the military services get going on reporting members who exhibit behavior that should prohibit gun ownership. His second

proposal is to allow courts to remove guns from those who pose an imminent danger, but have no other indicators prohibiting gun ownership. He suggests that many of his proposed changes could be implemented at the state level. He does not propose providing an armed guard at each potential site of violence, thank goodness.

While such policies might slow gun violence some, I believe they will come up short of expectations. Laws tend to be implemented haphazardly, so there will continue to be many state-to-state weaknesses that individuals can exploit to obtain guns. There are millions of unregistered guns



in this country, so obtaining one is not all that difficult if one has cash. I think we must begin to limit the number of guns present in our society by type of weapon. No one needs an assault rifle and I see no need for any gun that shoots more than 5 rounds from a clip. I'd also begin requiring sales of nothing but [smart guns](#), and gradually recover guns that do not have limited use through smart technology.

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