

Question: Among 11 high-income countries, the U.S. spends far more per capita than any of the other countries. How does its performance rank among those countries? A) 1 B) 3 C) 6 D) 9 E) 11

From Last to First in Healthcare

It's no secret that the U.S. healthcare delivery system is an extreme outlier when compared to systems in other developed countries. Two experts had the undaunted courage to give their view in the *New England Journal of Medicine* on how we might go from dead last to first.¹ The authors provide a graph showing that we are failing when compared to 10 other wealthy countries. We



spend far more per capita than any other country, yet our health-system performance is far below that of other countries. In my opinion, it is a study in what greed and lack of transparency yield. Let's look at the fixes the writers propose.

The first problem that must be fixed, they opine, is limited access to healthcare. Uninsured and underinsured people in the U.S. are victims of the way healthcare insurance works in the U.S. – it serves those who can pay. The second fix emphasizes primary and preventive care over specialty care. The third fix involves reducing the administrative burden that is inordinately high in the U.S. The fourth fix is to provide services that lift people out of poverty. Essentially, government spending should place more emphasis on reducing poverty and less on medical care.

I cannot disagree with these lofty goals, but how might one do this in the face of intense health-industry lobbying, and subsequent Congressional pandering to the industry? I would look back to the history of how worker rights, women's rights, and minority rights became the norm for our nation. The healthcare industry exploits sick people, industrial giants exploited workers, and minorities and women were exploited by cultural norms of racism and misogyny, respectively. The exploitations were reversed by affording rights to the exploited populations. I have proposed that all patients be given strong, enforced rights when dealing with the healthcare industry.² This is directly tied to the rising call for a patient-centered system. I have asked the Centers for Medicare and Medicaid Services (CMS) to enhance the law pertaining to Patient's Rights, but bureaucrats in that agency have refused to act on any new rights. Here is a booklet on current rights: [Medicare Rights](#). In the meantime, be a wise consumer of healthcare and don't assume CMS is going to enforce your limited rights.

Patient-reported Outcomes (PROs)

One right of patients I proposed to CMS involved patients giving feedback on the quality of care they received in a healthcare setting. This feedback would be placed in a database accessible by all (transparency!). To some extent this is presently being captured by CMS's HCAHPS score ([Survey](#)), but the content and use is controlled by hospitals and government bureaucrats, not patients.

An article in the *New England Journal of Medicine* showed that at some institutions exactly what I have proposed is already being done. Three experts wrote on the value of PROs for the patient to

be optimally informed when engaged in decision making.³ Two graphs in the article were typical of the kind of information patients can access. The graphs presented data on the outcomes of specific invasive procedures. For example, one graph showed the time course of relief from pain after knee surgery. Relief from knee pain went from a score of 30 to 70 in 2 months after surgery, higher scores being better. By one year after surgery, the score averaged in the low 80s, not totally free of pain.

Similarly, for urinary symptom relief after prostate resection, before the surgery the score was about 15 and dropped slowly over the year after surgery to 8, where a lower score is better. Again, the symptoms did not disappear at the end of a year.

The authors make the point that this sort of PRO data help physicians. Using PROs, doctors can better understand how much distress may remain in the patient post-surgery. Screening questions can be answered by the patient before being evaluated by the surgeon, saving the surgeon's time. Thorough PROs also facilitate discussions between clinician and patient on the expected outcomes, especially unwanted side effects. **If you are contemplating an invasive procedure, then learn about the details and ask your surgeon for his PRO data. If patients begin to show an interest in PROs, then clinicians are more likely to start collecting them. You, the patient, must become an informed partner in your care.**

Systolic Blood Pressure and Mortality

At what point does one need to start taking actions to lower systolic blood pressure (BP)? Reports have suggested that systolic BP should be kept below 120 mmHg, yet others claim that as one ages, the limit can be up to 150 mmHg. A commentary in *JAMA Internal Medicine* attempts to clarify the numbers in terms of one's risk of death.⁴ Looking at data from hundreds of thousands of veterans with slight to moderate kidney failure, but not on dialysis, the odds ratio of mortality remained near 1 over the range of systolic BPs from 120 to 160 mmHg. The authors point out that the way BPs were measured in the SPRINT study, the one indicating the need for BPs below 120 mmHg, likely

underestimated clinically relevant BPs about 10 to 15 mmHg because of the way they were taken. In light of a recent meta-analysis, the ideal target is below 140 mmHg, perhaps as low as 130 mmHg.

In a study published in another journal, the results of blood-pressure reduction appear to be somewhat different. The investigators used the SPRINT data to discern if extreme lowering of systolic BP to below 120 mmHg had effects different than lowering it to below 140 mmHg.⁵ They found that intense lowering induced a greater risk of an adverse kidney event, but it reduced the risk of a cardiovascular events and death. There are many ways to slice the data, but the clearest way to me is to use their "deaths per 100 person years" numbers. For the intensive group this was 0.77 and for the standard group it was 1.05. If we added the compensation suggested for SPRINT data (above), then the systolic blood pressure limits were closer to less than 132 mmHg and less than 152 mmHg when converted to clinical equivalents. Personally, I'm targeting 135/80 mmHg without any medications. I'd consider medications if I reached 150/90 mmHg. Go figure.

Better Systems Improve Patient Safety

When a poor outcome happens, there are generally lessons to learn. A physician describes a decision to insert a specialized pacemaker in a 90-year old woman with many health problems. She died soon after the procedure.⁶ Rather than blaming the doctors involved, the author suggests looking at the system to identify causes of this poor outcome. Questions to ask: was there documented shared decision-making? That is, did the patient, knowing the risks, really want the pacemaker? Another set of questions center on physician's training, credentialing, and volume of procedures. The writer points to the aviation system as one that has used systems analysis to discern the root cause of bad outcomes.

I'll propose a thought experiment built around a ladder of inference that I presented to a medical group this summer. The idea is to discern root causes. The starting point was the lack of training and credentialing of my son's cardiologist. This happens because the Texas Medical Board fails

to ensure adequate training because it checks continuing medical education on only 1 % of licensed doctors each year. Why are so few checked? Because there is a lack of board funding, which the Texas Legislature controls. Why is the legislature OK with limited funding? Because they are bought by the Texas Medical Association. My point is that a genuine root-cause analysis may lead outside the institution where the harm has occurred. And it often leads to laws tailored to favor the industry, not patients.

Better Diagnoses

This month I came across a series of articles related to improving diagnoses. There seemed to be wisdom in each of the articles, so I'll try to lace them together into a digestible dose of information. To begin with, making the correct diagnosis is not easy in many cases, none-the-less, the first step in improving diagnoses is to admit that one makes mistaken diagnoses.⁷ That was the theme of one article written by a young doctor about the cognitive mistakes he had made. These included keeping quiet after an error, missing features on an electrocardiogram, and missing a pneumothorax on an X-ray. The writer emphasizes the learning that happens when mistakes are openly shared and discussed. The writer cites an interesting finding in the making of diagnostic errors: 3/4ths of the errors were partially or wholly due to individual cognition errors rather than just systems, as is often asserted in the medical literature.

Three MDs lament the loss of diagnostic reasoning.⁸ They propose three general changes: improve teaching conferences and rounds, change the work environment to encourage diagnostic reasoning, and get better at assessing and monitoring diagnostic reasoning. Details of how this might be done are outside our scope; simply put: there is a compelling need for improving diagnoses.

In an interesting viewpoint, an MD writes that diagnostic errors are difficult to deal with on a technical level (let alone emotional level).⁹ This is largely due to the fact that errors originate in a physician's "diagnostic calibration," which consists

of diagnostic accuracy and the physician's confidence in the accuracy of her diagnosis. What this means is that any diagnosis has a true probability of being right and a concomitant probability of being wrong. If a physician's confidence is too high compared to the true probability of being right, then she may fail to order sufficient tests to "calibrate" the diagnosis. On the other hand, if the physician's confidence is well below the true probability of being right, then the physician may order too many unnecessary tests. To me, this article reflects the complexity of consistently getting the diagnosis right. How certain should a diagnosis be – that is the question.

This quandary brings us to a final article on diagnostic excellence. Two MDs write on the value of using computers to manage the complexity of getting things right in diagnoses.¹⁰ They discussed the reading of electrocardiograms. Using algorithms to read these things instead of the human eye, a doctor might identify a patient at high risk for sudden cardiac death.

This reminds me that my son's electrocardiogram was never properly read. His long QT interval, along with his collapse while running, should have led to a diagnosis of acquired long QT syndrome. This syndrome is associated with a risk of sudden cardiac death.

What does this mean to the patient? First, remember that any diagnosis has some uncertainty. **It's not out of order to ask your clinician how certain he is of your diagnosis. The patient must also make sure all information has been shared that might contribute to making a correct diagnosis. Finally, what may matter most is what has caused the diagnosis to be made.** In my son's case, he had [acquired long QT syndrome](#) because of his potassium depletion.

Breast Cancer Surgery

A couple of MDs trace the development of less invasive ways to surgically treat breast cancer based on evidence accumulated since the late 1800s.¹¹ For 60 years the Halstead radical mastectomy was used to treat the disease. Less



invasive surgery, coupled with radiation treatment revealed that radical mastectomy was unnecessarily invasive. The writers point out that it must always be evidence that drives change in standard of care. One example they cite is the use of surgery to treat acute appendicitis. A recent trial has shown that in 3/4ths of uncomplicated cases, antibiotics offer effective treatment. The writers suggest that “less than perfect” data may lead to changes that benefit the patient. They point to “common sense” rather than “statistical purity” as a relevant driver.

This view suggests the need for shared decision making between clinician and patient. The clinician should present the data to the patient in a way she can understand, and then spend some time discussing the probabilities of benefits and risks associated with each treatment choice. **A wise patient will expect shared-decision making when challenging choices are suggested.**

Calling Couch Potatoes to Early Death

A commentary on a recent study of the effect of sedentary lifestyle on all-cause mortality lauded the quality of the study.¹² The original study used

accelerometers to keep track of movement in middle-aged and older adults that were followed for 4 years.¹³ Of the almost 8,000 adults, 340 died during the study. The study found that with increasing sedentary times, divided into quartiles, the probability of death went from 1.0, 1.2, 1.6, and 2.6 times as likely. The least sedentary time was less than 690 minutes/day, whereas the highest sedentary quartile was more than 800 minutes/day. The study also identified that risk of death increased as the number of bouts of 30-minutes or more of sedentary time increased.

The wise person who wants to live longer will find a means to measure sedentary time each day and be careful to limit each sedentary period to less than ½ hour. So, my recommendation would be to put the TV remote where you have to walk to get it, walk around the house during TV commercials, stand to do computer work, walk to a park and play, or walk the mall until you memorize the stores.

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Answer to question this month: E) 11th, reference 1

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¹⁰ Obermeyer Z, Lee TH. Lost in thought – the limits of the human mind and the future of medicine. N Engl J Med 2017; 377:1209-11

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