

Testimony of Jonathan C. Javitt, M.D., M.P.H.
Senior Adjunct Fellow, Potomac Institute for Policy Studies
Adjunct Professor, Johns Hopkins School of Medicine
Chair, Health Subcommittee, President's Information Technology Advisory Committee

Contact

1700 Pennsylvania Ave
Suite 720
Washington, DC 20006
jjavitt@healthdirections.net
202-349-1477

Mr. Chairman, Members of the Committee, distinguished staff, and guests, thank you for inviting me to testify before you today. My name is Jonathan Javitt. I am a physician who has been active in pioneering applications of medical records since 1982. It has been my honor to Chair the Health Subcommittee of PITAC, the President's Information Technology Advisory Committee, a bipartisan panel of experts that serves the Executive Office of the President, which was established by the High-Performance Computing Act of 1991 as amended by the Next Generation Internet Research Act of 1998 and subsequent Executive Orders.

As you know, PITAC operates under the Federal Advisory Committee Act and is in the process of finalizing its Report to the President on Transforming Healthcare through Information Technology. Although the draft recommendations of this report have been presented in our public meeting and posted to our website they will not be formally adopted until our next public meeting. Therefore, any testimony I give before you today, while consistent with those recommendations, is based on my own experience and observation and is not the formal recommendation of PITAC.

You have asked me to provide you with testimony on potential savings associated with electronic medical records, both in human and economic terms. In short, the answer is

that we know that the savings are there, but those savings have not been consistently measured in a manner that can be used to score federal initiatives to computerize our health care system within the budgetary rules agreed to by the executive and legislative branches of our government. I have spent sufficient time talking to leaders within the Congressional Budget Office, the Office of Management and Budget, and the President's Council of Economic Advisors to be certain in my testimony. Moreover, it is my belief that agencies and programs under the direct purview of this committee have the potential to provide us with critically needed information on this subject that will inform future public policy in arenas that go far beyond the immediate focus of this committee.

In using the appellation "Electronic Medical Records (EMR)," it is critical to distinguish between EMR in isolation or EMR as shorthand for an e-health environment that includes not only the record keeping system, but also computerized order entry and decision-support tools to prevent medical error within an environment that shares patient data among the caregivers who must coordinate the care of a given patient including those in doctors' offices and clinics, hospitals, laboratories, and pharmacies. An electronic medical record without those features may offer convenience and workflow advantages in the local practice setting, but does not inherently improve care or offer the potential to reduce the costs of care any more than a well-maintained paper chart.

My experience in this area is both academic and practical, having been a founder and developer of commercial enterprises that offer electronic medical record systems and computer-aided decision support systems that are now used in the care millions of Americans. I have also had the opportunity to visit and evaluate in considerable detail

the electronic health environments of the Veterans Health Administration and the Department of Defense.

There is no question today that a properly constructed e-health environment is directly associated with preventing medical error and reducing avoidable death and suffering. We all quote the Institute of Medicine (IOM) findings that suggest over 98,000 annual deaths from medical error. It is critical to remember that the errors studied were primarily errors of commission, rather than omission and were committed in the inpatient setting. Thus, the IOM may only be talking about the tip of the iceberg. We know that one in five laboratory tests is performed in the U.S. because the results of previous tests are not available at the point of care. We believe that one in seven hospitalizations occurs because critical information about patients has not been transmitted from caregiver to caregiver. Moreover, we know that one in eight physician's orders is not carried out as written when we rely on traditional paper-based systems. It is time that we stopped delivering 21st century care using administrative methods that were well established when Hippocrates entered practice more than 2,000 years ago.

The outstanding work of Drs. Clem McDonald in Indianapolis, Blackford Middleton and David Bates in Boston, and Brent James in Utah, to name just a few has amply demonstrated that errors are prevented, hospital costs are avoided, and lives are saved when modern computer technology is added to the practice of medicine. There are simply too many bits of information for the human computer to track perfectly, particularly when patients are cared for by multiple doctors. Case studies, including those of the Health Information Management Systems Society, document internal savings within health care enterprises when electronic health records and attendant technologies

are introduced. However, there is broad consensus within the healthcare world that much of the savings associated with such investment devolves to the benefit of those who pay for healthcare and to society as a whole.

Estimates of national savings achievable through the universal application of electronic health records and related technology range from \$80 billion to \$350 billion annually. Figures of this magnitude make inherent sense to executives of other major industry sectors who have seen more than a 30% reduction in administrative costs by getting the paper out of their systems. A similar reduction in the cost of medical care would free up sufficient resources to insure every uninsured American, lower the cost of care to working families, and pay for our new Medicare prescription drug bill without raising taxes or premiums. We must recognize that as medical technology advances, so too, will the clinical cost of care. The only place to save substantial cost is through the use of computer technology to simplify the administration of care and to reduce the occurrence of error.

The problem is that while we have outstanding cost-effectiveness data from the hospital perspective, we have almost no data that measure savings from the economic perspective of the payer. The Veterans Administration has some macroeconomic observations that suggest they are providing care to twice as many people with only 30% more money than they were a decade ago. They attribute that in part to their outstanding computerization initiative.

I have recently completed a clinical study on the value of computer aided decision support from the payer's perspective, together with colleagues at Active Health Management, an enterprise that gathers simple electronic health information on behalf of

nearly five million Americans and alerts physicians to potential opportunities to improve care. That study, which covered 40,000 insured residents of a Midwestern city, demonstrated an 11% reduction in hospitalization and more than a 5% reduction in overall cost of care. The study is expected to be published shortly in a leading, peer-reviewed journal. Unfortunately, I know of no other data, generated at the level of scientific reliability that we require for other healthcare investments, in which the introduction of e-health technologies is associated with clear savings to the payer.

I believe that compelling proof of savings from the payer's perspective is an essential to generating the level of federal investment that will be required to computerize our nation's health care system. For such investment to be made, savings must be scorable within the budget rules established by the executive and legislative branches of government. Otherwise, such investment will require the raising of additional taxes or expansion of the federal deficit. This is particularly true since, Government, in one way or another, pays for 57% of health care in the United States, when one tabulates the costs of Medicare, Medicaid, the Federal Employee's program, military and veteran's programs and the corporate tax deductions associated with employer-sponsored health insurance. The good news is that if we make the investment, the resulting savings are likely to enable us to do with our healthcare system what we know we must do to ensure quality care for all Americans.

The VA has not focused on measuring the cost-effectiveness of its extraordinary investment in EHRs, but with your committee's encouragement, it could team with expert health economists and demonstrate to the entire country how critical that investment has been. This is not a criticism of the VA. Their mission is providing for America's

Veterans, not doing health economic research. In this case, however, their experience is vital to informing much broader public policy. I urge you to encourage them to embark on this research and to assist them in gathering any required research expertise from other departments in government.

The U.S. Army has demonstrated some extraordinary health benefits through its Health-e-Forces program at Walter Reed Army Medical Center and other collaborating hospitals. Health economic analysis of that work, perhaps in collaboration with expert organizations such as the Agency for Healthcare Research and Quality in HHS, would likely provide proof of savings that are critically needed as we address the question of how to computerize this nation's health care system.

The potential savings to military and veterans' healthcare alone, an area of deep interest to your committee, gives you a compelling interest in the computerization not only of care provided by those departments of government, but of care contracted for in the civilian sector by those departments of government. I am confident that if we are able to measure the savings and thus make the investment required to computerize the civilian sector of our healthcare system, we will secure the viability of that system for future generations.

There is an additional economic measure that is needed and almost never discussed, that of the consumer preference or utility. I have yet to meet a person who chose one hospital over another because of an electronic health environment. The typical American does not recognize the dangers associated with paper-based methods. We hear the occasional horror story of the wrong organ being transplanted or the infant who was killed by receiving an adult dose of narcotics. We fail to recognize that every time we enter a

paper-based healthcare environment, we are needlessly endangering our lives. The VA has proven to us that by instituting a bar-coding system adapted from the rental car industry, medication administration errors have been reduced from 12% of doctors' orders to less than one in a thousand.

Most investments we make in healthcare do not and are not intended to save money. They are made to add quality and longevity to life. As Americans come to recognize the value that computerizing the health care system can bring to the care of themselves, their parents, and their children, we will be able to focus not only on the attendant monetary savings, but on the true economic savings, in terms of life, quality of life, and human productivity.

Thank you for inviting me today.