



Testimony of Jerry Avorn, M.D.
Professor of Medicine, Harvard Medical School
Chief, Division of Pharmacoepidemiology and Pharmacoeconomics,
Brigham and Women's Hospital, Boston
April 2, 2009

Introduction:

I appreciate the opportunity to testify today at this pivotal time for the nation's health care system. My name is Jerry Avorn, and I am a Professor of Medicine at Harvard Medical School. I did my undergraduate pre-medical work at Columbia University, then attended Harvard Medical School, and completed my training in internal medicine at its teaching hospitals. For nearly thirty years, my research has focused on the effectiveness, safety, and affordability of prescription drugs, and how those drugs are used by physicians and by patients. I lead a 25-person research unit, the Division of Pharmacoepidemiology and Pharmacoeconomics, in the Department of Medicine at the Brigham and Women's Hospital in Boston, one of the main teaching and research institutions at Harvard. I have taught and practiced geriatrics and primary care internal medicine at several Harvard teaching hospitals since 1974, and have a particular interest in the use and outcomes of prescription drugs in the elderly. I am the author of *Powerful Medicines: the Benefits, Risks, and Costs of Prescription Drugs*, which was first published by Knopf in 2004 and is currently in its 10th printing.

The problem:

We doctors badly need more information about the drugs we prescribe. Our ability to take the best possible care of our patients is severely hampered by a lack of this information. There is also a need for our patients to be astute consumers of the medical choices available to them, and the nation increasingly expects those who pay for health care to be able to make the smartest possible choices. The information gap I will discuss today limits decisionmaking on all these fronts.

By history and by law, the FDA is not mandated to evaluate new drugs or medical devices against other treatment options. Its enabling legislation requires it to approve a drug for marketing if the manufacturer demonstrates "effectiveness," which may simply mean that it works better than placebo, a dummy pill. But I never had a patient say to me, "Dr. Avorn, please prescribe me something that's a little better than nothing." Patients and doctors want to know *the best* treatment for a particular condition – but that is not evidence that pre-approval testing was ever designed to collect. Many observers feel that changing the legal standards for the drug approval process would be infeasible, and many

others argue that it would be undesirable. In any case, after a product is marketed, important new information about its safety or effectiveness could be collected which would be important for doctors and patients to know about, but which is beyond the purview of the initial approval process itself.

Once a new product is on the market, its manufacturer is likely to launch a massive sales campaign. The pharmaceutical industry spends far more of its revenues on marketing and promotion than on research and development. The most costly new products are the ones that are most aggressively advertised to doctors and to patients, whether they represent a real advance or not. A time-tested generic drug may be the most effective treatment for conditions such as high blood pressure or diabetes, and generics often have the most well-established safety records as well. They're also likely to be the best value, by a long shot. But the profit margins on generics are wafer-thin, so their manufacturers don't have the resources to take out expensive ads on the evening news, or send perky salespeople to doctors' offices to offer us free meals and gifts to persuade us to prescribe them. This skews use of medications (as well as other medical interventions) toward the costliest choices, even when they're no better than other alternatives – and may even be worse. Other perverse economic incentives may also prevail when expensive treatments or tests, like chemotherapy or MRI testing, become profit centers of their own for the physicians who order them.

The manufacturers of drugs and devices are investor-owned companies, not public health agencies. That is not a moral judgment, it is an economic fact. Given their responsibility to maximize return to their shareholders, it would be naïve to expect companies to be a good source to fund and disseminate studies that might sink lucrative products. There is a clear and embarrassing track record of drugmakers actually suppressing the results of research which revealed problems with their products; this has occurred with the antidepressant Paxil, the cardiac surgery drug Trasyolol, the cholesterol medication Baycol, and many others. There are examples of this problem from nearly every field of medicine. At the start of the decade, when my own research group wanted to study the apparent link between Vioxx and heart disease while that drug was on the market, we had to seek funding for the research from its manufacturer, Merck, since there was so little federal support available for such work. When our study showed a clear link between Vioxx and heart attack well over a year before it was withdrawn from the market, Merck tried to persuade us to de-emphasize some key results, remove a co-author from the paper, and then dismissed the very methods they had previously supported.

Until now, it has not been anyone's job to determine how well alternative treatments work – and how safe they are – compared to one another. We are often totally in the dark in trying to choose between several drugs for the same condition, since those studies are hardly ever done. Our patients probably think we are playing with a fuller deck than we really are. Perhaps members of Congress think so as well. We are not.

As bad as this situation is for drugs, the informational gap is even worse for other kinds of health care intervention. A new medical device such as a pacemaker or defibrillator or artificial hip primarily needs to show that it's not dangerous – not how

well it works, or whether it's better than existing products. And new surgical procedures, or new imaging studies such as MRIs or CAT scans, don't have to show that they work at all.

The worst consequence of this information deficit is that it prevents us from taking the best possible care of our patients. But at a time when the nation can't afford to provide health care for all its citizens, and even people with insurance have problems paying for their care, the economic aspect of this problem is also important. The United States has per-capita health care costs that are the highest in the world, by a great deal. Yet our medical outcome data are overall no better than those of many other industrialized countries, and often much worse. In these rough economic times, when more and more people have to pay for health care out of pocket, high costs can mean no care at all. For Medicare and Medicaid, not knowing which treatments work best, and which have the best value, leads to patient outcomes that are worse than they need to be, and costs that are increasingly unaffordable.

Generating the information we need:

There is a solution to this problem. It is based on the same concept that underlies all of modern medicine, and it's the reason we're not still using leeches and purgatives to treat most diseases. It is the idea that well conducted scientific studies can show us which treatments work best for a given medical problem, and are the safest. This information can be gathered through well-established methods of randomized trials and observational studies. The latter kind of research, which my group at Harvard performs, can review the clinical experiences of millions of people to learn how well similar patients did with different treatments. It also can enable us to ask these questions for special subgroups of patients, such as minorities, children, or the very old – groups that are often underrepresented or even excluded in the clinical trials that drug manufacturers perform to win FDA approval.

This kind of research is a public good, like clean air and good highways, which needs to be supported by government. The private sector is not going to do the research to identify drugs that are absurdly mis-priced or toxic, any better than the private sector was able to identify financial instruments that were absurdly mis-priced or toxic. This kind of applied research is not something we should fold into the mission of the National Institutes of Health, which has a fundamentally different goal of supporting studies to understand the basic mechanisms of biology and disease. The idea of comparing alternative treatments ought to be embraced by people on both sides of the aisle. If you favor marketplace choices in health care, then consumers, doctors, and insurers need this information to help them make prudent purchasing decisions. If you favor fiscal responsibility, now that the federal and state governments are the largest purchasers of health care, then the nation seriously needs such data to enable it to spend its health care dollars intelligently. No self-respecting corporation would spend millions of dollars – no less hundreds of billions of dollars – without determining which of its purchases were of the highest quality, and the best value.

Avandia for diabetes and Vioxx for pain were both drugs on which Americans spent over \$2 billion per year, and much of that was public money. Both drugs were on the market for five years before we knew that they each raise the risk of heart attack compared to similar treatments that work just as well. Learning that fact just a year or two sooner could have saved billions of dollars – and tens of thousands of heart attacks. It is fiscally and morally irresponsible not to support this sort of research.

Delivering the information to improve patient care:

But gathering such information will not in itself be enough; we need to make sure it gets translated into better patient care decisions. In addition to our research on drug safety and utilization, for 30 years my group at Harvard has been studying how to help doctors prescribe better. The drug companies are very adept at influencing what we doctors prescribe. They send affable people, known as “detailers,” to our offices to talk to us; they come bearing engaging, clear printed materials to underline their selling points, and end their visits with clear recommendations about what we should prescribe. By contrast, those of us in the academic world may have a fuller grasp of all the evidence, and may not be focused on pushing a particular product, but we are usually terrible communicators. As a result, prescribing is driven much more by attractive sales reps than by evidence-based experts.

In 1979, the predecessor of the Agency for Healthcare Research and Quality issued a request for proposals on improving the quality and economy of medication use. Recently out of my residency, I sent in a grant application with a simple premise: What would happen if we equipped people working in academic institutions with the same effective communications strategies that the drug detailers used so well? Couldn't we put those tools in the service of improving appropriate prescribing, rather than just increasing product sales? I named the approach “academic detailing,” and proposed testing it in a randomized controlled trial in four state Medicaid programs. The grant was funded (for a little over \$100,000), making it possible to implement and test this approach. It worked, and my colleague Steve Soumerai and I published the results in *The New England Journal of Medicine* in 1983. Since then, we and others have shown that such “academic detailing” can improve prescribing in a wide variety of clinical settings. We also found that in addition to improving care, it can produce savings that cover the costs of the program.

Academic detailing programs have now been established all over the world. In 2005, Governor Rendell of Pennsylvania asked me to set up a program in his state, to improve the quality of care and help contain the state's growing drug costs. In this program, my colleagues and I review the entire medical literature covering a common problem such as depression or high cholesterol, we package the information into a user-friendly format, and then send out specially trained nurses or pharmacists or physicians to meet with doctors in their offices to present recommendations about the best care. We place all our materials on line at www.RxFacts.org for public access. The Pennsylvania program has expanded, and the governments of Massachusetts and the District of Columbia last year asked us to establish academic detailing programs there as well. We

do this work through a non-profit organization for which I serve as an unpaid consultant. We are now helping to train academic detailers in state-funded programs in New York, South Carolina, Vermont, and several other states. Academic detailing makes it possible to take the next step beyond developing the information about what works best, and puts that information into the hands of doctors. It provides practitioners with a service that I would have liked to have had when I was practicing primary care: an evidence-based, non-commercial means of getting the very best current information about our therapeutic choices, not distorted by any sales agenda.

Senator Kohl has introduced a bill to provide such a service on a wider scale nationally, and Congressmen Waxman and Pallone are co-sponsoring a similar bill in the House. Funding research comparing treatment alternatives and then delivering that information to doctors through academic detailing can go a long way in improving the care we deliver to our patients. The comparative studies can clarify which treatments work the best, are the safest, and the most affordable; and academic detailing can provide the vital link to practice by getting this information out to doctors in a way that will directly improve front-line patient care decisions. I appreciate the leadership of this subcommittee in helping to move both of these vital health care agendas forward.