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Professional Collaboration Day: Synergy Through Collaboration Panel

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S U P P L E M E N T T O
Pharmacy and Therapeutics



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Academia, Medicine, and the Pharmaceutical Industry

What the Media Tell Us about the Relationship Between the Pharmaceutical Industry and Medicine

DAVID B. NASH, MD, MBA

We've all heard about Enron and WorldCom, and, closer to home, HealthSouth. Those of us who work in the pharmaceutical industry and medicine are not immune to the behavior that caused these corporate scandals. It was in this atmosphere of corporate malfeasance that the federal government passed the Sarbanes-Oxley Act of 2002, and it is in this same atmosphere that the pharmaceutical industry and academia work together as partners today.

Conflicts of interest arising from pharmaceutical industry funding are drawing the attention of the mainstream press. Three popular books were published on the subject last year. One, called *Critical Condition: How Health Care in America Became Big Business and Bad Medicine*, by Pulitzer Prize-winning authors Donald L. Barlett and James B. Steele, attacks the influence of market forces on the doctor-patient relationship. For example, every physician who gives a drug sample to a needy patient is being taken in by the pharmaceutical industry, according to these authors. They recommend the creation of something they call the U.S. Council on Health Care, an overarching national body that would organize all the monies in the health care system, making allocation decisions like the Federal Reserve Bank.

Jerome Kassirer, MD, formerly editor-in-chief of *The New England Journal of Medicine*, wrote a book called *On the Take: How Medicine's Complicity with Big Business Can Endanger Your Health*. He urges us as health care providers to swim against the prevailing current—that we need physicians who have the courage to publicly say, “We won't be influenced by the power and money of pharmaceutical industry.” As medical editors, he



David B. Nash,
MD, MBA

writes, we must have explicit rules and regulations to prevent both real and perceived conflicts of interest. Dr. Kassirer would like to create a national panel of experts, modeled on the Institute of Medicine, to examine conflicts between our work and our colleagues' work in the pharmaceutical industry.

Dr. Marcia Angell, also a former editor of the *New England Journal of Medicine*, attacks many aspects of the pharmaceutical industry, including the price of drugs, the industry's influence on physicians and legislators, and the conduct of clinical trials in *The Truth about the Drug Companies: How They Deceive Us and What to Do about It*. Of particular interest to those of us at medical schools is her opinion that industry sponsorship of campus buildings perpetuates conflicts of interest and should be eliminated.

Also last year, *The New York Times* ran a story about physicians who were paid tens of thousands of dollars by pharmaceutical companies to prescribe particular drugs to particular patients and to be members of speaker's bureaus. The article reveals that the pharmaceutical industry contributes over 50% of the money that funds Continuing Medical Education (CME)—the grand rounds, conferences, and speaker's bureaus that create the educational material that physicians must keep abreast of to

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The following remarks were made during the Mates David and Hinna Stahl Memorial Lecture in Bioethics by David B. Nash, MD, MBA, on May 31, 2005.

maintain our licensure—which raises some serious questions about the relationship between the industry and CME.

A *New York Times* article from May of this year claims that many clinical trials are unfairly designed, with inappropriate results. It calls for a national registry of all clinical trials from all companies, which would ensure transparency of the trials' details: what doses were used, exactly which drugs were compared, and what the side effects were. The *Times* reports on the move by journal editors around the world, led by Richard Smith, MD, former editor of the *British Medical Journal*, to discuss clinical trials issues in the medical press, calling for reform of corrupt practices like inappropriate dosages and altered patient selection criteria.

Medical students, researchers, and others who are troubled by these conflicts of interest have established some Web sites. One site, called “Healthy Skepticism: Countering Misleading Drug Promotion,” was created by Dr. Peter Mansfield in Adelaide, Australia. His organization's Web site, at www.healthyskepticism.org, has a mission statement, which is “to improve health by reducing harm from misleading drug promotion.” Medical students here in the U.S. created the Web site called “No Free Lunch,” whose basic message is “just say no to drug reps.”

Clearly, our national thought leaders and medical students (as well as those outside the U.S.) are concerned about this issue, as I am. As scientists, we all recognize the importance of clinical trials. We must be able to have absolute faith in them, but right now we can't, and that's a problem we need to address.

Policy Reactions

Concern about conflicts of interest recently prompted the National Institutes of Health (NIH) to pass a new set of regulations that focus on physician-scientists who have decades-long histories of pharmaceutical funding. The NIH now prohibits compensated or uncompensated employment by the pharmaceutical industry, including consulting, teaching, speaking, writing, and editing. This is a move by our scientific leaders to reassure you and me, as taxpayers, that there are no conflicts of interest, or “dual commitments,” behind their behavior. I think it won't be long before scientists migrate away from the NIH,

recognizing that they can't continue their work in such a repressive atmosphere.

Modern Healthcare reported in its July 2003 issue that federal agents were sent to Massachusetts General Hospital by the U.S. Attorney's Office in Boston to subpoena pizza. Cold pizza and pads and pens emblazoned with various pharmaceutical company logos were confiscated after a typical luncheon for interns, residents, medical students, and members of the pharmaceutical industry.

The big question is: what is really going on between the industry and the rest of the medical world? How much influence truly exists? The research evidence holds some answers.

What the Evidence Tells Us about Influence

Jason Dana, MS, and George Loewenstein, PhD, reported in the *Journal of the American Medical Association* that any gift—whether it's a pen, a pad, a pizza, or a check for \$10,000—is too big. All gifts, according to their social science research, have the power to subconsciously create bias in a physician, nurse, or pharmacist who receives those gifts. Considering all the medical meetings I have been to and the tote bags, mugs, pens, and pads that adorn not only my office but the offices of every doctor I know, according to this research, not only am I biased, but every doctor I know is biased. If they are right, industry's marketing techniques must have a powerful influence on physicians' prescribing behavior.

In a special issue of *The American Journal of Bioethics*, an article called “All Gifts Large and Small”¹ (sponsored by Pfizer) raised the issue of informed consent. It claims that interns, residents, and medical students lack informed consent in their dealings with pharmaceutical company representatives and suggests that when salespeople meet with students and physicians, they should elicit written informed consent from them, alerting them to possible biases in their presentations.

Researchers at Wake Forest University School of Medicine in North Carolina conducted a survey in which they asked interns, residents, and new physicians what they knew about how drugs are developed and sold, what they really cost, and how

¹ Katz D, Caplan AL, Merz JF. All gifts large and small: Toward an understanding of the ethics of pharmaceutical industry gift-giving. *Am J Bioeth* 2003;3(3):39–46.

important they are.² Most of them had little knowledge of how the industry works, what the detail force is, and who pays whom and for what. So Wake Forest created a curriculum, implemented it, and then retested. Subjects scored much higher in the second, third, and fourth years of this new curriculum (Figure 1).

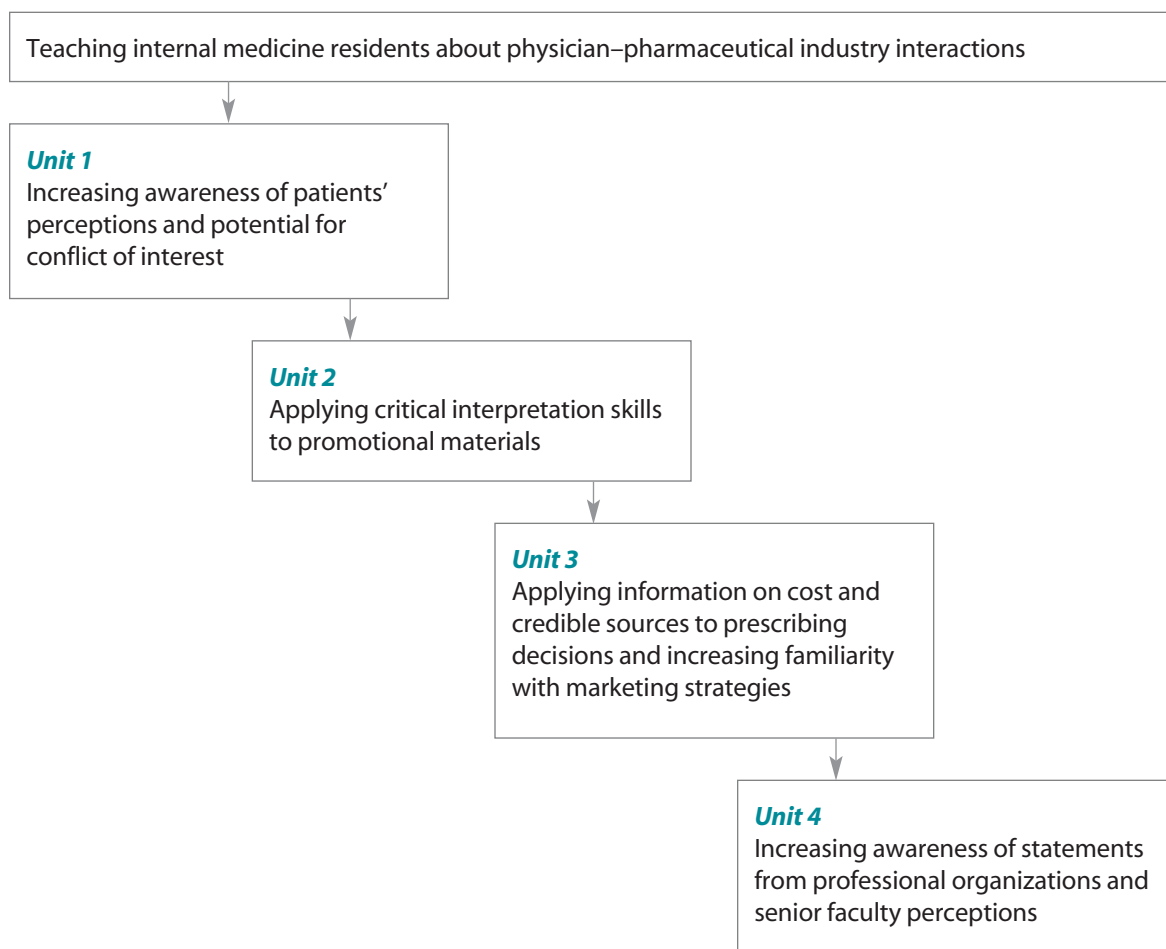
The media tell us that there is a problem with conflict of interest in the relationship between the

² Watkins RS, Kimberly J Jr. What residents don't know about physician–pharmaceutical industry interactions. *Acad Med* 2004;79(5):432–437.

pharmaceutical industry and the rest of the health care world; the research shows us that the problem is real. In *The Tipping Point*, Malcolm Gladwell writes that social change comes on like an infectious epidemic: one person gets an idea and spreads it to another person, who gives it to 10 more people; they travel, give it to 50 more; soon social mores, habits, and beliefs have been changed. For example, suddenly it's considered distasteful to smoke in public. Have we reached the tipping point in our society when it comes to the relationship between medicine and the pharmaceutical industry? If so, what are we

FIGURE 1 Interactions between physicians and the pharmaceutical industry

This schematic illustrates the curriculum, for interns and residents, showing physician–pharmaceutical industry interactions.



Source: Adapted from Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. 2001.

going to do about it? We've come up with a plan at Jefferson Medical College that I think could be used as a model.

Conflict of Interest: A Plan for Change

Three years ago at Jefferson Medical College, we created the Jefferson Industry Advisory Council, or JIAC. I suggested we bring the principles together on our turf for a private press-free dialogue about how we can make our relationship work, in light of the public concern about it. Academia and the pharmaceutical industry depend on each other for clinical trials, CME, and research dollars. To reform is necessary, but to disengage would be impractical.

I'm happy to report that scores of companies from around the world recognize the power of an open dialogue about what is really important to us all. We talked about creating new Web sites; new research opportunities; and high-quality, enduring educational materials out of our work together. We talked about focusing more on the scientific questions at hand and less on advertising.

At our medical college, we no longer accept checks made out to individual faculty members from the pharmaceutical industry; they go directly to the school, where department chairpersons reallocate

the money as they see fit. And the college controls all educational information.

Conclusion: Reconciling Roles

We have a responsibility as teachers to explain to our medical students that they have dual roles in society: an economic role and a public service role. Every physician must understand that he or she controls nearly 16% of the world's largest economy. No country spends more on health care than we do: nearly \$6,000 annually for every man, woman and child, approximately \$1 billion a day.

On the other hand, as Jordan Cohen, president of the Association of American Medical Colleges, says, we have to change our culture—from one that is based on individual needs and desires to one that is based on what he calls the "population imperative"—to a culture based on cooperation and collegiality, where our individual needs and desires are sublimated for the greater good. Can we teach our students to sublimate their own needs and desires for the good of the public they're being trained to serve? While working to reconcile these roles, we must recognize that the public is concerned about an inherent conflict of interest, and we must take pragmatic steps to address that concern.

Academia and the Pharmaceutical Industry: Working Together

PAUL T. ANTONY, MD, MPH

On June 14, 2005, a distinguished group of panelists representing the pharmaceutical industry and academia came together to discuss and identify potential ways these two important health care players could work together to further efforts to eradicate a common enemy—disease.

Although a healthy dose of skepticism and wariness exists on both sides, nonetheless it is apparent that each side needs the other if any progress is to be made in reaching the common goal of improving this country's health problems.

Called "Professional Collaboration Day" and convened by the Jefferson Industry Advisory Council (JIAC), participants in the half-day program talked openly about shortcomings and potential collaborative efforts to achieve common health goals. The day began with the following presentation by Paul T. Antony, MD, MPH, Chief Medical Officer of the trade group representing pharmaceutical manufacturers, and concluded with a spirited question and answer period that begins on page 9.

Academia and the pharmaceutical industry have a valuable partnership that needs strengthening. As partners, we share a common enemy, and that enemy is disease. The pharmaceutical industry provides more money for research and development than anyone else—more than the National Institutes of Health (NIH) and universities. These latter institutions do much of the early work involved in understanding basic disease mechanisms. The pharmaceutical industry often collaborates with these institutions on basic research and then performs most of the drug development and clinical trials that translate basic disease information into practical treatments that patients can use.

There has been a great erosion of public trust in the research enterprise, particularly in clinical trials and in the way we communicate medical information to the public and physicians. The pharmaceutical industry and academia must work together to restore that trust. To do this, we have to consider areas where we share common interests, including the conduct of clinical trials; communicating risk-benefit information; intellectual property protection; health outcomes research; evidence-based medicine; and Continuing Medical Education (CME).

Clinical Trials

One of the basic assumptions behind the clinical trials controversy is the idea that trials are corrupted by industry funding. The extreme view is that the industry should not be doing any clinical trials—that a governmental body should control them instead. Marcia Angell, MD, proposes that the NIH take control of all clinical trials while taxing the pharmaceutical industry, suggesting that there is no other way to ensure that the clinical trials are scientifically sound.

Paul T. Antony, MD, MPH, is Chief Medical Officer of the Pharmaceutical Research and Manufacturers of America (PhRMA).



David B. Nash, MD, MBA, and Paul T. Antony, MD, MPH

The pharmaceutical industry is committed to performing scientifically sound clinical trials. Many more clinical trials are sponsored by the industry now than 30 years ago. Thirty years ago, it was common for an academic investigator to design a trial, propose it, and interpret and present the data. Now it's much more common for industry scientists to be involved in the design of trials. Most drugs are safer today because, prior to approval, the industry performs more clinical trials and enrolls more patients per trial than in the past. But in part, because there is more information available today, the public's perception is that drugs are less safe, when in reality there are higher standards for drug approval today.

An industry researcher who designs trials is acutely aware of how important it is to get drugs on the market quickly, so that patients can benefit from the treatment and so that there can be a benefit from the time before a competitor comes out with another drug or before a patent expires. Six months to an industry researcher is often different from six months to an academician.

I've discussed this issue with tuberculosis researchers in India, where academic researchers wanted to follow trial subjects who successfully responded to treatment for eight years to check for a relapse. But if I'm developing a new drug that appears to be very effective, I may have to cancel the

project because I might not be able to afford to wait eight years for these additional data, or if I suffer from tuberculosis and I am waiting for a new treatment, I don't want to wait eight years. As a tuberculosis sufferer, I might wonder if researchers could find a way to get the treatment to me quickly while continuing to collect data. This is part of the controversy about how much clinical data should be required prior to approval versus after-approval postmarketing surveillance.

The pharmaceutical industry is accused of failing to publish negative study data,

and critics claim that only positive data are reported. But as anyone who has ever tried to publish a paper will tell you, there is often little demand in *The New England Journal of Medicine*, for example, for papers on compounds that don't work. Our member pharmaceutical companies have now committed to publishing the results of hypothesis-testing trials, whether the results are positive or negative, in a database that is available to the public (www.clinicalstudyresults.org). Pharmaceutical companies are interested in finding solutions, but coming to an agreement on a universal solution without violating antitrust laws can be a difficult process.

Intellectual Property Protection

In the same way that the industry faces pressure to capitalize on its successful drugs, universities face pressure to capitalize on their discoveries through patents, which can be a major source of revenue for them. Patients, especially those with rare diseases, are often frustrated by this. Although industry and academic scientists want to work together to find disease treatments, they sometimes face roadblocks that prohibit them from working together because of patent concerns. Both academic and industry scientists claim that patent attorneys on both sides won't let them come to some kind of agreement.

I've learned through experience that solving this particular conflict is possible, but it requires serious compromise when both sides are closely protecting their own interests. In one case, the CEO of a pharmaceutical company had to get involved before a compromise could be reached. Unfortunately for patients, their needs can get lost when the industry and academia cling to their own interests instead of working together.

Health Outcomes Research and Evidence-Based Medicine

I think everyone in the field of medicine is in favor of generating useful information that will help patients and providers make better practice decisions. Using data to decide which drugs and procedures are right for patients benefits everyone.

But problems can arise, depending on how the data are handled. Who generates the data? Who owns the data? Who interprets and communicates these data? And who (and this is the most important question) uses it and how? Also, who should decide which treatments are cost-effective and which aren't?

An example of how evidence-based medicine can go wrong involves Oregon's evidence-based medicine work. Looking at a set of trials, researchers produced some recommendations. Research, generating recommendations as new knowledge, can be positive; what concerns me, though, is that *Consumer Reports* took that information and put it on its Web site, with statements that could lead consumers to believe that, "This is your best buy cholesterol-lowering medicine." No harm may have been meant, but patients who don't know any better might assume that the recommended "best buy" medicine is the best one for them and might discontinue the medicine they are taking without talking to their doctor. There could be factors like liver problems, for example, that would make a different drug a better choice for them, and consultation with a clinician would help determine the right choice. There are often subtle differences between drugs that can't be communicated by a "best buy" label on a Web site.

I experienced a shortcoming of health outcomes research when I was working as a physician for the Marine One Helicopter Squadron, which is the squadron responsible for flying the President. There were only five pilots who were authorized to fly the President, so their good health was essential. When someone in

the squadron got sick, say, with an upper respiratory infection, I had to choose between prescribing a drug that had to be taken four times a day for 10 days but cost pennies or another drug that needed to be taken only once a day for three days but cost about \$30. There were some people in the squadron who, I knew, would not take their medicine for 10 days and others who were just too busy flying the President all around the world to remember to take a pill four times a day. The people in the squadron were often living in close quarters, and it was easy for infections to spread. So for all these reasons, it often made more sense to prescribe the more expensive medicine. Prescribing recommendations according to population-based cost-effectiveness or health outcomes data may recommend using only the cheaper medicine. Health outcomes data couldn't capture the intangibles that made the more expensive medicine the better choice in that situation.

Continuing Medical Education

Continuing Medical Education is a controversial topic now, partly because of the Accreditation Council for Continuing Medical Education's (ACCME's) proposed guidelines. The guidelines say that if you've received any kind of industry funding, you are disqualified from speaking or making decisions about CME.

I think everyone would agree that if you receive funds, even \$10, you have an obligation to disclose that information; transparency is necessary. But reformers say that disclosure is not enough and that the only way to protect CME from conflicts of interest is to impose a strict ban on industry funding. Some propose expanding the ban from CME into areas like clinical practice guidelines. There is still controversy about the lipid guidelines because of the fact that many panel members had accepted industry funding in the past. There is also some suggestion that people who have received industry funding shouldn't sit on FDA advisory panels.

A strict ban is, in my opinion, a knee-jerk reaction. If there is a concern that there may be a problem, the solution is not to have some of the smartest people (who are often the people the industry targets for research collaboration) barred from participating. All of us in health care should keep the patient's best interests at heart. Patients do not benefit from banning the participation of key re-

searchers who may get funding from a wide variety of sources.

Q & A Section

Audience Question:

CME Thresholds of Influence

Are there any physicians in the U.S. who can honestly say that they have never taken anything from a pharmaceutical company, not even lunch as a resident? I'm the president of our state organization of family physicians, and I'm in charge of our CME. There is a clear call for disclosure in the ACCME guidelines, but there is no clear threshold for the ban. Do you know whether organizations that are creating CME conflict-of-interest guidelines are creating thresholds? And if so, what are they?

Audience Member's Answer: One Solution

I want to comment from the perspective of the CME committee here at Jefferson Medical College, where we have been wrestling with this issue. The ACCME policy is in flux. At first, it was interpreted just as Dr. Antony said: any conflict, you're out. But that interpretation prevented some of our finest teachers from participating in CME.

So in our current version, we are defining the threshold the same way our college defines serious conflict of interest, which is funding of \$10,000 or more. We are using a system in which a physician holds a structured interview with a potential teacher to resolve serious conflicts. These interviews are one way to resolve conflicts without barring the speaker, and some other ways are listed by the ACCME.

Threshold Disagreement:

Dr. Antony's Response:

How much money does it take before the resulting conflict of interest affects your integrity? It's a

great question, and there is disagreement on the answer.

On one extreme, there is an organization called PharmFree, which strongly believes that even the gift of a pen or coffee mug can inappropriately influence physicians' behavior. Does that mean we should ban free pizza for medical students and residents? I ate occasional free pizzas during my residency, and I honestly feel that I have never prescribed a medicine to a patient that I thought was inappropriate for that patient because of a pizza. On the other hand, as anyone who has been to business school will tell you, pharmaceutical companies buy the pizzas for a reason. Many forces affect prescribing decisions, so the critical question is whether there is any evidence that this pharmaceutical company influence is having a negative impact on patient care.

The other point I'd like to make about sales reps is that they actually inform busy physicians about drugs they might not know about. When I was in clinical practice, I saw patients all day long. I had to do my charts in the evenings after a long day—I was busy. I tended to prescribe the same drugs over and over. It might not be the most efficient way of obtaining new information, but outside of an academic center, sales reps are one of the ways in which new drugs are brought to the attention of physicians.

We need to teach our medical students to be critical thinkers so that they can navigate their way through information, whether it comes from *The Medical Letter* or a sales rep. If I were to go to a Chevrolet dealer to buy an SUV, I'd expect the dealer to say that Chevys are great and Fords are not, and I would expect the opposite at a Ford dealership. In the same way, I've always been aware of more than one company's view on a particular drug.

Synergy Through Collaboration

A distinguished panel of pharmaceutical industry representatives participated in an open discussion about potential collaborative efforts between the pharmaceutical industry and academia. David B. Nash, MD, MBA, moderated the panel discussion. Panel members included Marcia J. Coleman, MD, MBA, of Wyeth; Kim D. Slocum of AstraZeneca; Joseph F. Devaney of Sanofi-Aventis; and David A. Simmons, MD, of Pfizer. Paul T. Antony, MD, MPH, of PhRMA, joined the panel for the Q&A session.



Panel members: Marcia J. Coleman, MD, MBA; Kim D. Slocum; Joseph F. Devaney; and David A. Simmons, MD

MARCIA J. COLEMAN, MD, MBA

New Guidance for Grants and Consultants

At Wyeth, I review all requests for educational grants. I'd like to start by talking about the 2003 Guidance for Pharmaceutical Manufacturers from Health and Human Services (HHS) and how it has changed our interaction with academia.

One element of the guidance addresses educational grants; it says that they should never be given with either past or future prescribing in mind. They also can't be given as disguised discounts or rebates. In addition, it recommends that the pharmaceutical industry separate its grant-giving function from its sales and marketing function. Pharmaceutical companies have responded to varying degrees to the guidance.

Another issue that the guidance addresses is the use of consultants. Academics are the thought leaders of medical practice; at Wyeth, we see those

thought leaders as people who will influence the future practice of health care, and we want to consult with them. We consult with them in a variety of ways: we may ask them to advise us on a clinical development program or protocol, or to be investigators, or to do postmarketing consulting. We might ask them to do promotional speaking for us, to develop slide decks, or to look at marketing and advertising materials and then give us their reactions as physicians.

The guidance requires that these consulting arrangements

be valid: that a consultant's compensation must be fair and clarified in a contract that shows exactly what the compensation is for. Some companies are being investigated for consulting arrangements in which someone was given a large amount of money on an annual basis with little done in return.

In June, Senator Charles Grassley sent a letter to most of the major pharmaceutical companies expressing concern about the possible use of educational or other grants to influence state formulary decisions. I am on a committee that will meet soon to discuss our response to this. I think we will hear more about this issue, not less, in the future.

KIM D. SLOCUM

The Pharmaceutical Industry Diffuses Information

Those of us who work in the biopharmaceutical industry are in the information business; it's not the

chemicals that you pay for when you buy a pharmaceutical product; it's the user's manual. The money we spend at these companies is to generate that user's manual. Why do we care about the diffusion of information? Because information diffuses poorly through the medical system in the U.S. Academia and other avenues for disseminating information have let us down.

Have you ever heard the quotation: "If every doctor in the U.S. read two peer-reviewed journal articles a night, at the end of one year he would be 82 centuries behind in his reading"? The truth behind the joke is the subject of *Crossing the Quality Chasm*,³ the Institute of Medicine report, which

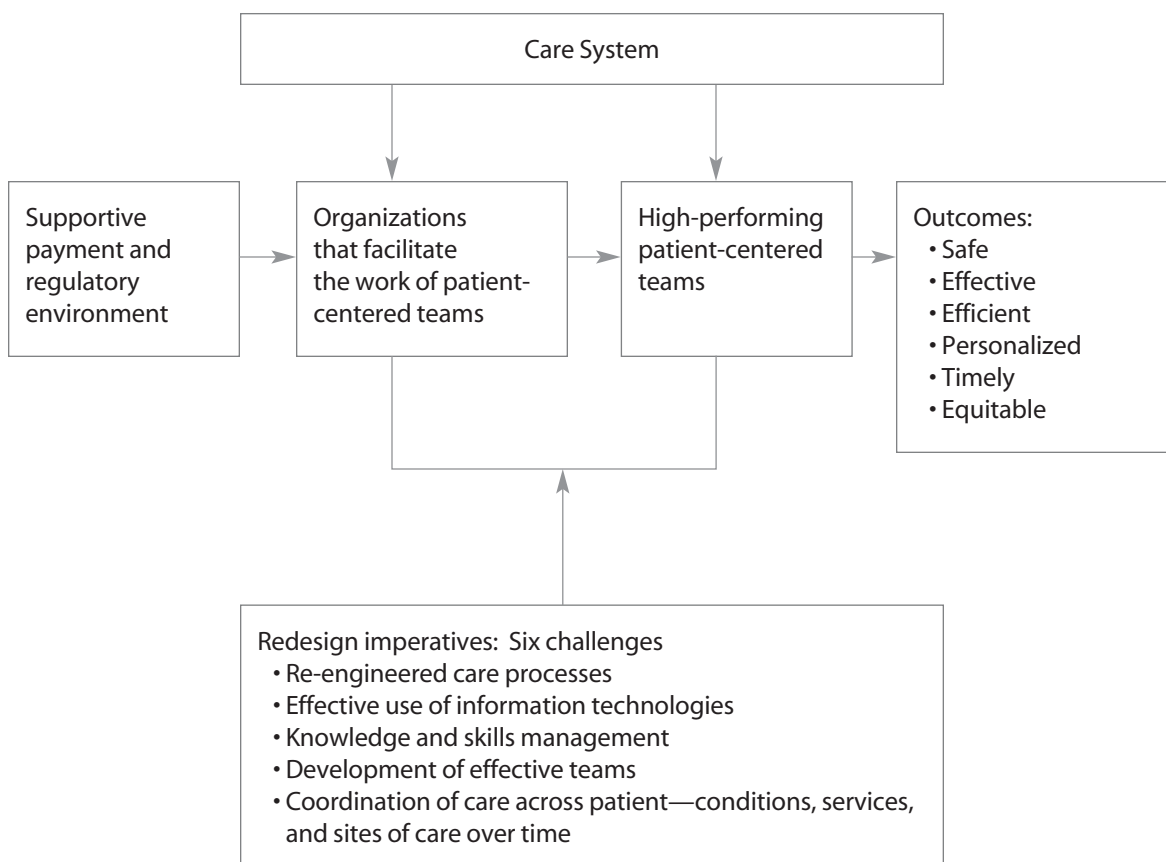
³Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press, Institute of Medicine, 2001.

said that the average physician is 17 years behind in his or her clinical practice. The report lists 10 "slam dunk" medical interventions—ones that should be used for every eligible patient. It lists the year we knew it was a slam dunk medical intervention and the rate of use between 1999 and 2001 (Figure 2).⁴

There is only one intervention on that list that has a usage rate of 90% or better, and it's the use of beta blockers after a myocardial infarction. I would venture to say that the pharmaceutical industry's interest in beta blockers has something to do with that. We have helped to improve the use of those products to change patients' lives.

⁴Balas EA, Boren SA. Managing clinical knowledge for health care improvement. In: *Yearbook of Medical Informatics*. Bethesda, MD: National Library of Medicine; 2000:65-70.

FIGURE 2 Strategy for reinventing the health care system



Source: Adapted from Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. 2001.

TABLE 1 Percentage of Scientists Who Say That They Engaged in the Behavior Listed within the Previous Three Years (n = 3,247)⁵

Top 10 Behaviors	All	Mid-Career	Early-Career
Falsifying or “cooking” research data	0.3	0.2	0.5
Ignoring major aspects of human-subject requirements	0.3	0.3	0.4
Not properly disclosing involvement in firms whose products are based on one’s own research	0.3	0.4	0.3
Relationships with students, research subjects, or clients that may be interpreted as questionable	1.4	1.3	1.4
Using another’s ideas without obtaining permission or giving due credit	1.4	1.7	1.0
Unauthorized use of confidential information in connection with one’s own research	1.7	2.4	0.8***
Failing to represent data that contradict one’s own previous research	6.0	6.5	5.3
Circumventing certain minor aspects of human-subject requirements	7.6	9.0	6.0**
Overlooking others’ use of flawed data or questionable interpretation of data	12.5	12.2	12.8
Changing the design, methodology, or results of a study in response to pressure from a funding source	15.5	20.6	9.5***
Other Behaviors			
Publishing the same data or results in two or more publications	4.7	5.9	3.4**
Inappropriately assigning authorship credit	10.0	12.3	7.4***
Withholding details of methodology or results in papers or proposals	10.8	12.4	8.9**
Using inadequate or inappropriate research designs	13.5	14.6	12.2
Dropping observations or data points from analysis based on a “gut feeling” that they were inaccurate	15.3	14.3	16.5
Inadequate record-keeping related to research projects	27.5	27.7	27.3

The significance of *chi*-square tests of differences between mid- and early-career scientists is denoted by ** ($P < 0.01$) and *** ($P < 0.001$).

DAVID A. SIMMONS, MD
Thresholds and Influence

I think that thresholds are important, but numerical thresholds are problematic. Wouldn't we rather see a large-budget project with multiple industry sponsors than a small-budget project with a single sponsor? Let's say that someone who is in charge of a large research operation and who supervises many people has a large sum of pharmaceutical industry money—\$25,000 from each of five different companies. Wouldn't we rather see \$25,000 from each company than one researcher who has \$10,000 from one company?

The ACCME guidelines were created to address the issue of influence. But the motivation behind them was not to alter the pharmaceutical industry's behavior; it was to encourage transparency and disclosure, the responsibility for refusal, and an

understanding of health care law on the part of physicians.

The larger issue is influence. Patients influence you, your family influences you and how you feel on a given day, the media influence you, and the risk of a lawsuit influences those in the world of medicine. Whereas some would argue that it is possible to make decisions without being influenced by outside forces, I would argue that it is impossible not to be influenced by the world in which we live.

PAUL ANTONY, MD, MPH
Do the Right Thing

In the June 9, 2005, issue of *Nature*, there was an article called “Scientists Behaving Badly.”⁵ It

⁵ Martinson BC, Anderson MS, de Vries R. Scientists behaving badly. *Nature* 2005;435:737–738.

reported on an anonymous self-reported survey in which 2% of the mid-career NIH researchers had changed the design or results of a study in response to pressure from a funding source (Table 1). The integrity of research should never be compromised because of funding pressure. Whether we are in academia, government, or industry, we have to stand up for patients as health professionals by making good choices to ensure research integrity, because it's the right thing to do.

Audience Question:

Health Outcomes Research Funding

I have worked for the Department of Health Policy doing outcomes research. We have noticed that in years past, health economics outcomes researchers had their own budgets to stimulate academic partnerships and they did good-quality research; however, in recent years, those re-

searchers tell us that brand teams control all the money, and it's difficult to stimulate good-quality collaboration and research with no money. Can you address that?

Dr. Coleman: Fortunately at Wyeth, we've seen it go the other way; the health outcomes group has its own budget. But it comes down to economics; pharmaceutical companies have to decide how to spend their marginal dollars, and we have to get a return on our investments. It's difficult for us to get a return on a health outcomes study or in any phase 4 study, for that matter.

Dr. Simmons: There is an assumption behind your question that when a brand team controls the money, conducting good-quality research is impossible, which is not necessarily fair. A successful partnership is born when two parties have a shared interest, and when they align those interests and find a project that fulfills them.

