

## **INDUSTRY AND PHYSICIANS: THE GOOD, THE BAD AND THE UGLY**

*Dan R. Thompson\**

One of the things that I need to tell you is that I own some stock in Merck. I don't own \$10,000 worth, but I don't know if that makes me more valid than if I owned \$5000 worth or I owned \$50,000 worth. But it's there. I also noticed out here, that Merck is one of the benefactors of Albany Law School.

One of the things when you get to be my age is you remember things, and one of the things that I remember quite well is the original spaghetti cowboy movie or western, which was called *The Good, Bad and the Ugly* with Clint Eastwood. Looking at industry and physicians interaction there's a perception this is a drug industry issue. It's not. We live in an environment where the device manufacturers are also involved. And while we tend to think more of drugs, this is not the only part. When I arrived over at Albany Med about a quarter to six this morning, I saw one of the device reps getting out of his van and bringing in a whole pile of things. He was going to the operating room to help somebody to implant some device. I won't tell you what I thought it was, but it was something that you would all recognize.

And so the problem is not unique just to the pharmaceutical industry, it's really something that's unique to the interaction between industry and physicians. I think we do have one of the more advanced drug systems in the world and generally the pharmaceutical industry is in pretty good shape. As you know, generally things have not been good the last year or so.

Usually physicians make good choices in drugs, and I say that knowing what we just heard, and I think that's hopefully because of two things I'll talk about a little bit more as we go along, but I think it has to do with hopefully the scientific basis of what's going on. One of the things I've heard from some of our medical students is: "Why do I have to do two years of pre-clinical science

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work?” Well, part of that is to give you the basis for understanding the practice that you’re supposed to be doing. I graduated in 1973 from medical school and that information that I learned, a lot of it is long gone, but is a basis for what it is that I do all the time.

Most physicians have pretty good habits, but I’m going to now show you that not all of them are good. The drug industry on the other hand has had a good profit ratio. You can see this chart stops in 2002, and I tried to find something more current or newer than this information, and I couldn’t find anything. But you can see profitability has done quite a nice job when you look at where the rest of the world has sort of gone. And while there have been some slowdowns and the like, nevertheless the drug industry has done quite well. So why do we care?

One of the things that we just heard was prices have gone up. This is not from when I started, this is from 1997. If you look at 1997 and you go all the way over to the other side, we went from \$78 to \$154. Look at the increase, that’s gone up. So the costs of things are expensive. You’re talking about a \$10,000 drug, and I’ll tell you about an off-label thing. I’ve taken care of an elderly patient, who had a major trauma, had a bleed, was bleeding to death, and I gave him \$38,000 worth of a drug to stop his bleeding, and he’s here. It was off-label, okay? But I knew the science and I didn’t know whether it would be reimbursed, but I thought it was important and so I did that.

But this is a problem. This is *the* problem. I’m getting older, I haven’t quite signed up for Medicare even though I’m eligible to do that. I fortunately have AMC paying most of my drug bills and so it’s pretty good. But this is an issue. This is a real issue for us. So I think we’ve got a problem. I originally was going to write up here “Houston, I have a problem,” and that, again, is something that is showing my aging.

When we look at developing new drugs, one of the things that we hear from the drug industry all the time, and from the device industries, is that it’s expensive to make drugs. Research and development are very important. I think it’s interesting to look at this graph, not so much as to look at the specifics for it, but you see the bars, the bars are the research and development, how much it costs to do things. The solid line is new drug entities, okay? Those are applications to the FDA. The dotted line is new molecular entities, not “me too” drugs. They’re not a variation of my Nexium, they’re not a variation of my Pepcid, and they’re not

a variation of my Keppra. They're new molecules. Not very big, right?

So development of truly new drugs is a problem. If you look at it, you can see up here and in the pie graph, about a third are new molecular structures. These are the truly new drugs that we have. Two-thirds of them are not, they're variations of something that we've always had. That's not always bad because sometimes the second generation is better than the first generation, but not always. A lot of old tried and true drugs are actually good. I'm old enough to remember when there were a lot older drugs, and a lot them are still good—and are usually more efficacious from a financial standpoint.

Where do we get drugs? Well, research and development by the pharmaceutical industry has been very important, you can see 15% of new drugs come from that route. Fifty-five percent of it comes from the NIH-funded, National Institutes of Health, labs. And the corollary to that is the foreign academic institutions, which are a similar type of process. So there's only 15% of this coming out of that process that's the new drug from the drug companies.

So, got a new drug? The drug company's job is to sell drugs. I love it. Every quarter I get my fifty-two cents a share from Merck. The interesting thing about it is no matter what the price of the stock is I still get fifty-two cents. I find that to be very interesting. And I thank my mother every quarter because she gave me the stock. Now it's not worth as much as when she gave me the stock, but nevertheless.

But that's their job. Their job is to market drugs. The FDA allows them only to market drugs for things that the FDA has approved it for. So we heard the word "indications." I don't like that word, indication. I think the FDA "indication" is different than the indication of that Factor VIIA I gave that gentleman who walked out of the hospital okay?

But when we look at it, look at the blue versus the purple, the blue is marketing and the purple is research and development. Look at all the way over to the left, my favorite drug company Merck is over here and Pfizer's over here. They spend a lot of money to market those drugs, okay? Their job is to sell drugs. One needs to keep that in mind.

So how do they spend it? It's very interesting. In the journals that we all get, we have all sorts of advertising in there. The journals that I tend to read segregate the drug advertisements

into the front and the back, they're not in the center where the meat and potatoes that I'm usually looking at. But that's sort of a fixed price. On the other hand, if you look at all the way up at the top, not so much at the numbers, but the top has to do with sampling drugs. Following that has to do with detailing—the sales rep that comes into the office that's going to talk to me about the drugs and going to leave me samples. At Albany Med they can't leave me samples and I don't see drug salesmen, but that's not true of most physicians.

But the one that's in the bottom, the light blue one, is interesting because I think it's going up and this is one of the things we're going to talk a little bit about. It has to do with direct-to-consumer advertising. I think if we look at that, the idea is that here that direct-to-consumer advertising is happening. We were talking earlier about how many people have seen an ad for blue pills. How many people have seen an ad for Cialis? Cialis is interesting and the blue is interesting. They tell you if you have an erection for more than four hours you should call your doctor. It doesn't happen, but if you're a guy that's worried about that—four hours? My goodness. The fact is that what we're doing is we're now directing it not to the doctors who should be thinking about what's going on, but to consumers. And the things that we're talking to consumers about things that are likely to ask their physicians for. Not always bad, but it's good?

What they're really doing is educating the consumers about their disease process. I'll show you that. There are 90,000 drug reps in the United States. Ninety thousand! There's one for every five physicians. And they hire lobbyists. They hired 623 lobbyists in 2004. There are 1.2 lobbyists for every member of congress. Their job is to sell drugs. Does it work? Well, the top five pharmaceutical companies spent over \$40 billion in 2006 for marketing and administration. It's important to note that Pfizer thinks it really works. Because they say that is probably the most scientific—or almost the most scientific thing—they do. How do they do that? They mine data. We'll talk about that a little bit.

What's mining data? Well, they get information from the drug stores that tell them what I prescribed. Now, I don't prescribe anything outside the hospital, but they would be able to get that. You can get that if you're a stock analyst. I didn't know that, but I found that out this morning from one of your colleagues, okay? So they obviously think that it works, they wouldn't spend forty

billion dollars for that.

So what happens when we have a drug rep that meets with a physician? Well, physicians that regularly interact with drug reps tend to use new drugs sooner and when they become available rather than later and waiting for, for instance, some more literature to be coming out. When you look at how it is they got their information, they tended to rely less on unpublished—or unbiased—sources of evidence. They've listened to those nice, shiny brochures, very similar to the ones that we get at the car dealer, okay? If you look through a medical journal and look at the colors, you'll see they're wonderful. That's part of those \$40 billion.

Then what follows is what I call the pitch. Interaction's not important to look at, but if you look at how physicians have reported their interactions with not just the pharmaceutical companies, but the other companies, you'll see that almost 80% of physicians have accepted drug samples. What's the reason for drug samples? People who accept drug samples are more likely to prescribe that drug. This will become important. I always thought it was good because if I had a patient that couldn't afford stuff I could give him samples and that would really be good, okay, and I'll show you some more about that.

Food and beverages, I think you can see, is less important. One of the things that has happened over at Albany Med is that we have stopped the use of food while drug reps sell. That's been very hard to do. It's been very hard to do because people like to have free lunches. People get reimbursed for doing Continuing Medical Education. I can do a little educational study with some company, and if I'm worried about my CME's, I can get them free. I don't have to pay for them and they'll pick the price for me. They get to determine what I will see and learn.

On the other hand, if I can't afford to go to a meeting, they may send me to a meeting or they would send me down to downtown to one of the nice steak houses to have a nice dinner followed by a short presentation by somebody. Not always bad. You can get paid for consulting; you can be on a speaker's bureau; you can be on an advisory board. You can see that almost every physician had one of those relationships. Ninety-four percent of them. Kind of interesting.

Now, our chairs ought to be beyond this, they shouldn't be dealing with this. I think if you looked at the numbers, the numbers are very similar to the ones that were there before. The

chairs are not any different and I'm sure my chair would say it's the other guys that do that, okay? Conferences or lunches, look at all the way over here on this side, they actually gave some people luggage to go to meetings. So as I said, it's the other guys, right? It's no influence on my part prescribing practices. If you look there I've got a nice big high line, right? But if you look over in the moderate over on the other side, the other guys have got a lot, I don't have any. So it's always the other guys, right? It's always the other guys.

We can look at some of these things. We can say, "Okay, these are inappropriate things." This is the same list that I showed you before. Look at what people thought about them and you can see that at over half of the people thought it was very appropriate to accept an antibiotic. I did too. But you can see when you go all the way over to the luggage that even there some people thought that was appropriate to get luggage, all right?

So what does that have to do with what we write when we get the pen out and we write it on the chart or we write it on the order? In my opinion, there's very little or none. On the other hand, I think in terms of other physicians is that there's a lot. So we tend not to think that it affects us. It's the other guys.

One of the pictures I intended to use, and then I decided not to because I'd had so many pictures of Dirty Harry was of three pens. They're sitting on my counter at home. Two of them from drug companies and the third one is from American Express. What's the point? They're all advertising, right? If you look at people who accept pens it changes how they write prescriptions, people have looked at that and literature tells that.

So we get down to the ugly. The good thing is that office marketing has decreased. I said we are doing away with free lunches, and what the suggestion has been is that the companies, if they want to provide free lunches, can give us a bulk amount of money and they'll put it in a pot and it'll be spent around. As far as I know from talking to the Dean, that's not happened over at Albany Medical College. No drug company has been willing to give us the money to feed people and not to have a hook at the end.

One of the things that we're doing is we're trying to have a more informed consumer. In this case, I think the best consumer is probably the physician to control these kinds of things, but it's not the only one obviously. But one of the bad things that has happened has been the direct advertising. I'll give you some

idea. If you talk to the drug companies, they're really not doing this because they want to sell drugs; they're doing this because they want to make people aware of their disease. And they've actually done that. As you look down here on the blue line over here it's gone up higher, okay? But still 80% of them recognize that the medication used can be connected to the ads. And 41% of the people talk to their physicians about it. That's not bad. But the question is: is what you see on TV and what you should take into account before you prescribe the medication for that patient, is that the right drug or is that what's in the car brochure that they've seen? The total spending in millions of dollars in direct advertising has gone up and the percentage of sales has gone from 14% to 18%. As drug reps get pushed out of the medical schools, reps get pushed out of the offices, and prescribers are not seeing them, you've got to make it up someplace.

The place to make it up is now we're seeing it on TV. You can see there's been some change; it's been some place in the neighborhood of 22 to 29% of people who've asked about advertised medicines when they've gone to their physician. The drug company's job is to sell drugs, okay? Did they read the fine print? How many of you have ever looked at one of the ads? Most people don't bother. You can see here that 22 %, roughly, of them have read it. Probably because it was something that they thought was important to them. But still only one out of five read it, okay? What's in there? Well, it's what the FDA says they can put in there.

Now, one of the things that we all think that we depend on has to do with publications. The same publications that we were talking about, our drug compendia are coming from. It's very interesting if you look at it, research funded by drug companies was more likely to have outcomes that favored their drug. They don't publish stuff that's not true. Now you have to register things. But how many have looked for the studies that were not published from the list.

I'm the chairman of the Institutional Review Board over at the medical college and when we have a study come in it has to be registered so you can find it and say, "Yeah, Merck did that one, never got published, but it had a bad outcome," okay? Positive results! Journal editors don't like to publish negative results. We need to get over that to a certain extent, but I have a good friend who is the editor of *Critical Care Medicine* and he doesn't

like to publish those kinds of things. But they're probably very important.

What happens is that some of the drug information is more likely to appear non-peer reviewed. In other words, it's stuff not reviewed by a group of physicians who look at it and try to dissect it and make sure that it's reasonable stuff. These are the things that frequently are passed out. You don't see something from the *New England Journal of Medicine* necessarily, which is peer reviewed. And even the *New England Journal* will admit that they miss sometimes. Industry sponsorship and study outcomes, you can see they're all good; they're all over on the side of the line that says, "Yeah, this is good stuff." So they don't publish stuff. We know that they don't even do a good job because sometimes they abuse the numbers. Somebody just reported that they had published twenty-one papers, fabricated all the data. It's a problem.

Clinical practice guidelines. I've been on clinical practice guidelines, none had anything to do with drugs, but the society has published some of those. Eighty-seven percent of the people who were authors had ties to drug makers. Half had relationships that had to do with the specific drug that were in the guideline. Only 9% of us believe that they were influenced, but we thought 20% of the other people probably were. A majority of the personal financial conflicts of interest that were there, forty-two to forty-four were not reported in the final publications. I think that most of the big journals have tried really hard to fix that. I went to the SCCM meeting in Nashville back a couple of months ago and every speaker was required, no matter what you did to talk, to disclose anything. Now we assumed it was voluntary, but we did.

So what are we doing about it? The *American Journal of Medicine* has a nice article on doctors in the drug industry. The *American Journal of Bioethics* has what is called a target article. This is an article that had to do with gifts in the interactions of stuff.

Small trial looking at can we change outcome. You can see what the conclusion was, you have to look at the numbers, and the numbers were not great. But that's the intent. *Academic Medicine* is a publication that's used by medical schools. There's the American Medical Student's Association, has a project called Farm-Free and I stole some of the graphs from them, so I need to thank them.

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And you've now seen the good, the bad and the ugly and we are all part of it.