

A Tale of Two Cities: Different Perspectives on the Industry Support of Resident Education Debate

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Vignette

A small residency program in the Midwest is contacted by a major pharmaceutical company about sending the program's residents to an industry sponsored course on intraocular surgery to be held off campus. The course content and faculty were selected by the sponsor. The industry sponsor has offered to pay for the resident travel expenses and the course registration was waived for all participants.

Dr. Dunn's Perspective

I am reminded of two quotations in preparing this editorial. The first is from H.L. Mencken, that Baltimore writer and icon, who wrote that, "For every complex problem, there's a simple solution- and it's wrong." The second is from an anonymous professor at Harvard Medical School who, while describing the university's goals for joint research with private enterprise, said, "We want to get pregnant without really losing our virginity." Setting aside for the moment that the latter quote was made before *in vitro* fertilization made pregnancy eminently feasible without the need for something as sinful as sex, both of these statements apply to the current dilemma. One can argue that the simple solution to the potentially corrupt-

ing influence of industry in residency training is simply to ban industry representatives from the ivory tower. One can also argue (IVF notwithstanding) that it is no more possible to work productively and ethically with industry than it is to have immaculate conception. The underlying support for these approaches is, I feel, both impractical and unwise.

Residents often joke that their ophthalmology programs should be called the "[Insert name of company here] Institute of Ophthalmology", depending on which surgical equipment is used in the operating rooms or which company sponsors the majority of CME courses. My own institution is no exception. Drug companies have endowed chairs, provided free post-operative eyedrops, and taken residents out for countless meals, among other things. Well-known clinicians are frequently asked by non-peer reviewed ophthalmology journals (the "throwaways") to affix their names to articles that are written by professional writers that tout a particular topical antibiotic, glaucoma drug, or phacoemulsification machine, and are paid handsomely for "ghostwritten" and guest-authored articles. As a resident and then a cornea fellow in the 1980's, I saw a generation of intraocular lenses explanted when the long-term complications of pupil-fixed and rigid anterior chamber lenses, touted just a few years earlier by ophthalmologists with strong ties to industry, were shown to cause pseudophakic bullous keratopathy. It is naïve to think that the pharmaceutical industry sponsors the type of intraocular surgery courses discussed here for residents solely to promote their education. Companies have a vested interest in promoting their own products- hardware, software, and pharmaceutical- by means overt and covert that will increase the chances that these products will be used by the residents once they enter private practice or academic medicine. Just last year,

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the federal government settled (for \$310 million!) a claim against a group of manufacturers of artificial joints for the illegal inducement of physicians [1]. There are also any number of dramatic examples of corrupting influence and commercial misuse of the scientific literature, such as the suppression of evidence that the COX-2 selective non-steroidal anti-inflammatory drugs increased the risk of heart attack. More pervasive and insidious is the pressure by drug companies to avoid publication of negative results of clinical trials. In one case, researchers charged that the drug manufacturer Merck withheld key data from rofecoxib trials from federal regulators and misrepresented the Vioxx research. A case-study review of industry documents demonstrates that clinical trial manuscripts related to rofecoxib were authored by sponsor employees but often attributed first authorship to academically affiliated investigators who did not always disclose industry financial support [2].

So why with all this history would I support the participation of residents in a surgical course in which the content and faculty are selected by the sponsoring company and the travel and accommodation are provided free to the resident? First and foremost, because it's the resident's choice. As program director, I can make it as difficult as possible for the resident to go by not forwarding promotional information about the course or forcing the resident to take vacation time to go, but I have no authority to forbid it. Second, I have taken part in intraocular surgery courses for residents that I felt were very beneficial to them, both surgically and didactically; in fact, one such course in which I regularly participate is in my opinion far superior to anything we can offer at my program because of the breadth of its faculty and the overall course content (I must emphasize the fact that the faculty and content are determined by the course director, but transportation and lodging are paid for by the sponsoring companies). Third, residents (particularly those at small programs in geographically isolated areas in which there are no other ophthalmology residencies) may not have access to the kind of microsurgical facilities that enables them to develop their surgical skills. True, the ACGME mandates that all ophthalmology residency programs maintain a functioning practice lab, but it is likely that such facilities are not state-of-the-art, and that the number of practice phacoemulsification machines does not lend itself to teaching an entire class of residents simultaneously. Fourth, there is something to be said for residents having the opportunity to interact with their peers from other programs, with the chance to discuss their own surgical experience, techniques, and education. I have benefited from suggestions from my own resi-

dents after they attended industry-sponsored courses and told me how surgery is taught elsewhere, and I think other programs have found suggestions from my own residents to be helpful. Finally, we are being hypocritical as educators if we deny residents the opportunity to take part in such courses. Faculty members at every academic institution work with industry on clinical trials, drug development, and entrepreneurial activities. University guidelines, primarily in the form of disclosure and other means of making such relationships clear, are designed to prevent bias and scientific fraud. Does it make any sense to think that we are doing our residents a favor by pretending we can avoid the potential for conflict? As in campaign finance reform, I believe the most effective way to minimize the potentially corrupting influence of money is transparency.

Among the core competencies that we are asked to document for our residents is "Systems-based Practice." As taken from the ACGME website, the expectation is that residents "demonstrate an awareness of and responsibility to the larger context and system of health care." It is to the detriment of our residents if they have no context into which to place themselves in the current healthcare climate, in which industry plays such a central role. There is a balance that can be struck between the "just say no" approach and the "outstretched hand" approach (some of my residents seem to think that every ophthalmology examination lens, surgical instrument, book, and DVD- not to mention meals at meetings- ought to be provided by someone else...). So what are some of the options here? The most effective may simply be to have the residents returning from the intraocular surgery course to talk with their colleagues and faculty about their experience. What did they get out of it? What biases did they perceive? What evidence-based data were presented? Did the speakers ever publish their research or techniques in peer-reviewed journals? Talk about your teaching moments. Of course, it seems reasonable to ask of speakers at any industry-sponsored course the same sort of disclosure that is asked of speakers at all CME courses, be it a local Grand Rounds presentation or the annual meeting of the American Academy of Ophthalmology. I ask my own residents to consider how they think their work might be perceived when presenting at a meeting if they were required to acknowledge their acceptance of free travel and other inducements, and how they might be unduly influenced later in their careers when it came time to choosing a particular type of surgical machine in their practice. All residents, by the way, should be required to review a study that found that over 60% of residents felt they personally were not

influenced by pharmaceutical marketing but that over 80% of their colleagues were [3].

We are in the business of teaching our residents how to become ophthalmologists. There are many aspects to that: surgical, medical, and professional. In the ideal world, residency programs would not “pharm out” any of their surgical teaching to industry-sponsored courses like this. In the ideal world, I would not be walking around the Academy Meeting carrying a bag emblazoned with the logos of various pharmaceutical companies, either.

Dr. Sadun’s Perspective

It sounds innocent enough. Industry is supporting resident education. Education is good. Hence, the support of residency education by big pharma, as in the vignette above, is good. And J.P. Dunn has made a compelling case that some educational goals are served by this arrangement.

This scenario brings to mind the old saying, “If you dance with the devil, the devil don’t change. The devil changes you.” However, that will not be my argument. I do not claim that big pharm is the devil. But it is still a dangerous dance that some residency programs seem to be prepared to accept. In the vignette above, the major pharmaceutical company not only sponsors the course but has designed the program. It has probably chosen a very pleasant venue for the course. But this course content and course faculty were selected by a company that has fiduciary responsibility to its own stockholders to invest money that was calculated to bring the company a return far greater than the investment. By accepting this convenient arrangement, the small residency program has not only abrogated its responsibilities for teaching critical elements of the residency curriculum, it has placed its residents as hostages into the hands of caretakers with their own agenda. And it has given an implied endorsement to the industry and its product. The case I wish to make is that “there is no such thing as a free lunch” (Robert Heinlein).

When the pharmaceutical (or medical device) industry has the opportunity to teach a complete program or curriculum, it has five primary objectives, which I propose as a model to be referred to as STORM: 1) the SHAPING of the current medical Zeitgeist; 2) the TRAINING of residents with a slanted or pharmaceutical-favorable view that will color their opinions; 3) the OBLIGATION instilled in residents who subconsciously will want to return the favor; 4) the implicit

acceptance of RECIPROCATION as an acceptable model with which to do medical and academic business; and 5) the sending of the MESSAGE that physicians are in fact due an entitlement of free things, contracts, supplemental income and other goodies.

It is not the intent of this editorial to argue that these industry objectives are malevolent. But recall that it is not physicians, nor even patients, to whom the pharmaceutical industry owes allegiance and fiduciary responsibility. It therefore behooves the program director and department chair to keep in mind that the pharmaceutical industry has an agenda--and this agenda is not the same as our academic agenda. It is the common belief of many faculty that we and our residents, as doctors, are too smart for these industry objectives to work; that we are too smart to fall for these ploys. Unfortunately, the data clearly demonstrate that it is we in academics that are fooling ourselves. It is indeed sheer hubris to think that the pharmaceutical industry would invest billions of dollars in stratagems that are ineffectual in influencing us. I have chosen to reference some compelling articles that speak to each of the five STORM issues.

Several investigations have explored the psychology of physicians who receive industry benefits, educational and otherwise. These conclude that clinicians are usually unable to remain as objective as they believe they are and in fact make choices heavily influenced by familiarity and training (“T” of our acronym). One study found that residents who attended grand rounds were more likely to prescribe a drug associated with the sponsor of the grand rounds even though the residents did not remember who sponsored the educational event [4-5]. In a prospective controlled randomized trial, Adair and Holmgren [6] showed that free drug samples significantly influenced what residents prescribed. Furthermore, residents maintained a strong sense of obligation (“O”) that has accrued after receiving personal or educational benefits from industry [4,7]. Often, the motive of the physician is to reciprocate (“R”) a perceived debt [8-9]. Companies carefully evaluate the market impact of industry expenditures and invest in medical education after determining their own benefit [4]. Many physicians feel that they have a right to freebies [10]. As Paul Lichter, a longtime chair in ophthalmology has pointed out, there is, in our field, a pervasive sense of entitlement (“M”) that is part of the larger culture of medical education and this entitlement is maintained by physicians in their practice [10-11].

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I left the “S” (for Shaping the Zeitgeist) for last, as I consider this to be the most important and insidious danger. The Zeitgeist is the spirit of the age or world view sometimes fashioned by the movers and shakers. Trends in medicine are tricky things made up in part by scientific theory, clinical evidence and also the traditions of teaching. Often there are disconnects between what academics feel represents the best clinical practice and what is common protocol. A major factor in such trends comes from the influence of industry. One may have faith that in a free market society, this is all fair game. Advertisements to physicians and patients might be full of slant and bias but in the marketplace of ideas, better methods usually prevail. But such faith depends on the general availability of information and the relative sophistication of the decision maker. Residents may be disadvantaged in both respects, especially early in their training. Yet, once they leave their training program and establish their own practices, they often become relatively cut off from further access to good information and, at the same time, emotionally, intellectually and financially committed to certain forms of medical or surgical practice. Hence it remains crucial for academic institutions to make these informed judgments and assume their given roles on shaping resident habits.

If the pharmaceutical industry has STORM as its resident-related agenda, what is the academic agenda? We are all familiar with the tripartite mission of research, education and patient care. But that is a relatively local agenda. In fact, there are two general forms of academic missions; one is university-based and the other universal.

The better known university-based academic mission is that of making new knowledge (medical science), teaching knowledge (education) and applying knowledge (patient care). There are several ways that the pharmaceutical industry can help each academic department with these three objectives.

The less obvious academic mission is more global or universal. This involves academics as the depository of medical knowledge, the repository of authority and, most interestingly, the shaper of the medical Zeitgeist. It is to this last element that the pharmaceutical industry may be the most serious threat. If we, as academic clinicians, are not careful, the choices of techniques and approaches and standards of medical care will be made less by the so-called thought leaders, and more by industry with its commercial agenda.

So what does the good residency program do in the above vignette? It could decline the invitation to participate in the industry-sponsored course on intraocular surgery and in so doing reclaim the power to teach and influence the residents entrusted to them. That satisfies elements of the universal academic mission, but, assuming that the course is a good experience, this could detract from the university-based mission that includes medical education. Or the residency program could try and support elements from both sets of academic missions by establishing guidelines for such a course such as: 1) limit the course to three days; 2) require a minimum of eight hours a day that must be course or lab work; 3) require that a minimum fraction of the course (say 50%) must be devoted to general principles; 4) limit or justify the outlay per resident; and 5) demonstrate a course curriculum and faculty that are reasonably balanced to include divergent points of view and alternative modalities of care. Such balance may be achieved by the sharing of such courses by two or more competing pharmaceutical or instrument companies. In addition, residency programs should teach its residents about the data surrounding the influences of marketing forces before the residents attend any industry-sponsored conferences. The inclusion of a conflict-of-interest curriculum in residency training would help inoculate residents against unconscious influences.

Supervision of compliance to such guidelines could be entrusted to the residency director with further oversight from the department chair and ACGME. This might be preferable to establishing new committees and infrastructures equivalent to already established IRBs that also require federal oversight. For if we, in academia, do not come up with a workable scheme, the government surely will fill the void.

The benefits brought to us by the pharmaceutical industry are clear, but do these benefits justify the ills? Alternatively, there must be a way to manage the tradeoffs and serve the many legitimate interests involved. This very debate, with compelling points made pro and con, can contribute to framing the question. We can not simply subcontract or delegate to the pharmaceutical industry, whose responsibilities are fiduciary, that which has been entrusted to us--the noble duties to teach and shape the medical Zeitgeist. Our challenge is to find a balanced solution that allows us to satisfy both the university-based and, equally important, universal academic missions.

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