APPROACH TO ROUTINE INTERACTIONS WITH INDUSTRY: A PRIMER FOR RESIDENTS

Vineet Arora, MD, MA, John A. Schneider, MD, MPH, William B. Borden, MD, and Holly J. Humphrey, MD

One of the most frequent challenges faced by medical trainees is appropriately managing interactions with representatives from the pharmaceutical industry. These interactions can raise ethical and professional questions, such as whether it is appropriate to accept a gift or to attend an industry-sponsored educational event and how to interpret medical information or promotional material provided by industry representatives.

Given the challenges that these interactions may pose, it is particularly important for physicians-in-training to understand current policy regarding the relationship between physicians and the pharmaceutical industry. Medical professional organizations [1–3], medical educators [4], student groups [5], and the pharmaceutical industry itself [6] have all issued guidelines that comment on this relationship. These policy statements evolved out of a growing body of literature that describes widespread relationships between physicians and industry [7] and that suggests that these relationships can alter physicians' behavior [8]. The guidelines range from full bans on contact with industry during medical training, as reflected by the American Medical Student Association's "Pharm Free" campaigns [5], to the voluntary marketing code put forth by the Pharmaceutical Research and Manufacturers of America [6], the organization representing pharmaceutical companies. Although data suggest that most medical students and residents have some contact with the pharmaceutical industry, few undergraduate or graduate medical educational programs have curricula to educate medical trainees on how best to approach interactions with industry [9–12].

The growing body of literature on physician-industry interactions combined with increasing attention from the press on the ethical and professional questions raised by these interactions prompted the Accreditation Council for Graduate Medical Education (ACGME) to issue a white paper in 2002 with specific recommendations for residency training programs [13]. Although the ACGME leaves individual programs to determine their own policies governing physician-industry interactions, it urges program directors to promote an educational environment "free of influence." Regardless of institutional policy, the ACGME recommends that all residency programs institute a formal curriculum on physician-industry interactions and the implications of these interactions for patient care, with specific attention to the core competencies. For instance, education regarding conflict of interest and the role of disclosure in addressing potential conflicts would address professionalism, while education on cost of medications and use of drug samples and generic drugs would address both systems-based practice and practice-based learning and improvement. However, formal curricula translated at the level of residency programs are lacking.

In response to this educational need, we developed an interactive workshop based on real life scenarios that house staff may face in their training programs. The goal of the workshop is to demonstrate ethical and professional dilemmas encountered in routine interactions with the pharmaceutical industry and to provide a practical conceptual framework with which to approach these interactions. This workshop has been in place at the University of Chicago for the internal medicine house staff for 5 years. At the beginning of each year, interns and residents participate in an interactive discussion led by faculty facilitators centered around video-based scenarios. These scenarios were developed by our group to demonstrate routine encounters house staff may have with industry.

The 3 scenarios developed for our workshop form the basis for the fictional vignettes presented and discussed in this article. These vignettes are designed to demonstrate a day in the life of a residency program. In the article, we follow Dr. Carbone, a first-year internal medicine resident on a day of a visit by Mr. Bennett,

Vineet Arora, MD, MA, Department of Medicine and Pritzker School of Medicine, University of Chicago, Chicago, IL; John A. Schneider, MD, MPH, Department of Medicine, University of Chicago; William B. Borden, MD, Department of Medicine, University of Chicago; and Holly J. Humphrey, MD, Pritzker School of Medicine, University of Chicago.

a representative of a pharmaceutical company that has just introduced a new antibiotic. In the first scenario, Dr. Carbone and another resident network with Mr. Bennett outside a morning conference. In the second scenario, Dr. Carbone attends a lunchtime journal club sponsored by Mr. Bennett's company, which begins with a brief presentation by Mr. Bennett. In the final scenario, Dr. Carbone encounters a poster placed by Mr. Bennett in the house staff lounge, announcing a dinner sponsored by Mr. Bennett's company where a faculty member will be speaking. Each scenario is followed by a discussion of relevant literature, guidelines, and policy statements that may aid in assessing the ethical issues raised. We conclude with a set of practical strategies for residents with which to approach the types of situations presented.

Scenario 1: A Few Gifts

Dr. Carbone asks Dr. Manning, a fellow resident, if he is going to morning conference, reminding him that a drug representative is here with antibiotic guides. They proceed to the display outside the conference room, where they see Mr. Bennett, a familiar face. Mr. Bennett greets the residents and engages them in a brief conversation.

"What rotation are you both on now?"

"I'm doing an ambulatory elective, which is a nice change," says Dr. Manning.

"I'm not so lucky, " says Dr. Carbone. "I'm in the ICU, doing my third straight month of inpatient care."

"At least the month is almost over," Mr. Bennett says encouragingly.

Dr. Carbone politely inquires about the new antibiotic, giving Mr. Bennett the opportunity to present his brief, prepared remarks about the drug. He concludes by saying the drug is the "latest thing in antimicrobials" while producing 2 silver pens from his briefcase.

Dr. Carbone then asks Mr. Bennett if he has a new antibiotic guide, to replace the one she lost on her last call cycle. As he hands Dr. Carbone the latest edition, he mentions a golf outing they are planning at the country club with the chief of cardiology. Dr. Manning, who's considering a career in cardiology, quickly responds that he'd love to join. Mr. Bennett offers to leave details in their mailboxes. The residents thank Mr. Bennett and proceed to the conference room.

"Nice!" Dr. Manning exclaims.

"Maybe…I don't know. Something doesn't seem right," says Dr. Carbone.

"What do you mean? We work hard all day and all night. Don't you think we deserve something nice every now and then? And you want to go into cardiology, don't you? What better way to get in with the department!"

Although still unsure, Dr. Carbone does recall hearing that one of the senior residents got a paid trip to the national conference and was heavily recruited afterward.

Discussion

This vignette illustrates the range of gifts that may be offered to residents by pharmaceutical representatives and raises the question of whether it is appropriate to accept these gifts. As we see, gifts from the pharmaceutical industry may be modest, such as pens and antibiotic guides, or more lavish, such as a day of golf or travel to a national conference. Unfortunately, current guidelines are inconsistent with respect to the acceptance of gifts and any conflict of interest that may arise from such acceptance (**Table 1**). For example, the American Medical Association (AMA), the largest physician organization, states that gifts are "appropriate" as long as they are of modest value and are predominantly of an educational purpose or of primary benefit to patients [1]. However, the American College of Physicians (ACP), the nation's largest medical specialty organization representing internists, has developed a policy for individual physician interaction with industry that "strongly discourages" gifts of all types [2]. Furthermore, the ACP suggests that all physicians answer the following questions before accepting any gift from industry: 1) What would my patients think about this arrangement? What would the public think? 2) What is the purpose of the industry offer? 3) What would my colleagues think about this arrangement? 4) What would I think if my own physician accepted this offer?

Although it is generally accepted that any gift can influence behavior and represents a potential conflict of interest [8,14,15], modest gifts of predominantly educational value (eg, an antibiotic guide) are generally tolerated, whereas lavish gifts that serve a social purpose (eg, a round of golf) are strongly discouraged. Certain gifts can even be highly beneficial. For example, an antibiotic guide may help an otherwise busy resident adhere to evidence-based guidelines for appropriate antimicrobial therapy. However, current guidelines on physician-industry interactions are not as clear on gifts that might be educational in nature but expensive (eg, a $500 medical textbook) or gifts that are inexpensive but do not provide an educational purpose (eg, a candy bar) [16,17]. A distinct set of guidelines specifically targeting residents is absent.

Scenario 1 also illustrates the frequent contact most

residents have with pharmaceutical industry representatives [12]. The familiar presence of industry representatives within residency programs likely is a reflection of the exponential rise in the number of pharmaceutical sales representatives in recent years. Including part-time and contract workers, the pharmaceutical industry employed 87,892 sales representatives in 2001, up 110% from 41,855 in 1996 [18]. Industry representatives are trained to socially engage resident physicians. Because residents tend to be a vulnerable group subject to exhaustion or burnout, they may not be able to critically appraise all information they receive from industry representatives. Specific marketing practices used with residents include techniques involving food and gifts and the use of testimonials that may not follow accepted clinical practice (eg, claiming that a certain agent is the "drug of choice" when in fact it is not the first-line agent for a particular condition or indication), appeals to authority (eg, use of "experts" such as physicians, nurses, and other health care providers in marketing a specific agent), and "bandwagon" appeals (ie, an appeal that emphasizes the number of users of a specific drug or the importance that "everyone is using it") [19].

Scenario 1 raises a final point worth noting on the topic of gifts. Dr. Carbone has learned that cardiologists at her institution plan to join Mr. Bennett for a round of golf. It is not uncommon for residents to observe faculty freely engaging in such industry-sponsored activities. However, it is well recognized that academic teaching faculty are often role models for residents and students [20]. By engaging in industry-sponsored interactions, faculty members implicitly endorse such interactions through their behavior. In this fashion, they are teaching residents through the "hidden curriculum," or the set of institutional practices that are transmitted to impressionable students and residents [16].

Scenario 2: Journal Club

At noon, Dr. Carbone and other medicine residents gather for a journal club, where Mr. Bennett is providing lunch. The article for discussion is a recent randomized controlled clinical trial of helical computed tomography scanning for pulmonary embolism.

Before the discussion begins, Mr. Bennett gives a 3-minute presentation, discussing current indications for his company's new antibiotic as well as potential future uses. "We are currently working on getting approval for treatment of community-acquired pneumonia in conjunction with a macrolide antibiotic," he notes.

Mr. Bennett then cites a recent large study showing the antibiotic to be as effective as azithromycin in the treatment of acute exacerbation of chronic obstructive pulmonary disease. He adds that the drug also has convenient twice-daily dosing.

When asked by one of the residents if the drug is on the hospital formulary, Mr. Bennett reports that his company is working to get it approved.

In closing, Mr. Bennett notes that the article he referenced is available as a handout and that there are pens to be picked up in the back of the room. Without further comment, the residents begin their journal club.

Discussion

This vignette illustrates the relatively common noontime conference interactions between house staff and pharmaceutical representatives. A recent national survey of internal medicine residency program directors revealed that more than 85% of respondents allow pharmaceutical representatives to provide food for educational conferences [7]. One reason for this is the recognized financial dependence of graduate medical training programs on pharmaceutical industry funding [10]. In this case, the provision of a free lunch to residents, which may be cost-prohibitive for a training program, may encourage greater house staff attendance at a noontime educational conference.

The degree of interaction that occurs between residents and industry representations at meal sponsored conferences may vary. For instance, only 45% of program director respondents reported allowing pharmaceutical representatives to give presentations at conferences [7]. The type of conference (eg, morning report, journal club), the conference organizer (eg, program director, intern), and a prior agreement between the pharmaceutical representative and the program usually dictate the degree and type of interaction that will occur. Hence, pharmaceutical representative involvement may range from sponsorship without recognition, to product display outside the conference, to a presentation of the product prior to formal conference proceedings (as illustrated in scenario 2). These "negotiations" are not well documented or described but are likely to be inconsistent and to vary with changes in resident leadership (eg, chief resident). In scenario 2, the involvement of a pharmaceutical representative at journal club appears to be a familiar occurrence for resident attendees and is not explicitly recognized.

A major concern with industry presence at educational conferences is that this presence may bias a legitimate educational activity. Many professional

Table 1. Organizational Policies and Guidelines for Resident Interaction with the Pharmaceutical Industry

	American Medical Association (AMA)	American College of Physicians (ACP)	Accreditation Council for Graduate Medical Education (ACGME)
Who are they?	Largest physician organization in the United States	Largest medical specialty organization in the United States, representing internists	Accrediting body for graduate medical education (residency and fellowship) in the United States
Policy or guideline	Gifts "should primarily entail a benefit to patients and should not be of substantial value. Individual gifts of minimal value are permissible as long as the gifts are related to the physician's work (eg, pens notepads)."	The acceptance of individual gifts, hospitality, trips, and subsidies of all types from industry by an individual physician is strongly discouraged. The acceptance of even small gifts has been documented to affect clinical judgment and heightens the perception (as well as the reality) of a conflict of interest.	The ACGME defers to both the ethics guidelines and individual programs to determine specific policies but does make recommendations for residency curriculum based on core competencies.

guidelines recommend that educational activities must be legitimate and without bias. The ACGME, for instance, requests that education be "free of influence" [13]. In scenario 2, Mr. Bennett provides specific information about his company's new antibiotic and notes approved indications for the drug, but he does not present similar information about other alternative antibiotics, including potentially available generic agents. He also does not provide information about potential side effects, contraindications, or costs associated with his company's new antibiotic. In fact, the presentation of this biased information in an educational forum designed to promote critical appraisal of the literature appears paradoxical and challenges current ethical guidelines. The AMA states that responsibility for and control over the selection of the content, faculty, educational methods, and materials pertaining to an educational conference should belong to the conference organizers [1]. However, this policy often does not apply to the statements of pharmaceutical representatives during such educational conferences in a residency program.

Finally, it is important to note that a gift or interaction that comes with conditions conflicts with ethical guidelines. The AMA guidelines state that there should be "no strings attached" to any gift or offer of financial support [1]. In considering scenario 2, it appears that Mr. Bennett's provision of lunch at the journal club is not entirely free of any conditions that must be met by the residents. Although there is no explicit or implied request for action by the residents, the group is aware that the lunch is free on the condition that they listen to Mr. Bennett's presentation.

Scenario 3: A Free Dinner

At the end of the day, as Dr. Carbone is leaving the house staff lounge, she sees 2 ICU interns looking at a poster on the bulletin board in the coatroom. The poster advertises a dinner sponsored by Mr. Bennett's company. She overhears the brief conversation between the interns.

"Are you going?"

"A free French meal with drinks? You bet! And look, Dr. Quimby will be speaking."

"What do you have to do if you go?"

"Just listen to Dr. Quimby's talk, which will probably include information about the new antibiotic the company makes."

"Are you sure that's all that's expected? Nothing in this world is free. We must be paying for this somehow."

"Just think of it as a way to hang out with your intern friends and to learn about the drug."

Dr. Carbone is about to leave the coatroom when she hears this intern give one final bit of encouragement to the other.

"Besides, this poster is still here. If someone had a problem with the drug company doing this, the poster would have been taken down. I'm definitely going."

"Well, I do want to hang out with you guys, but I need to think this through some more…maybe next time."

Table 1. (continued)

American Medical Student Association (AMSA)	Canadian Medical Association (CMA)	Pharmaceutical Research and Manufacturers of America (PhRMA)	Office of the Inspector General (OIG)
Largest independent association of physicians-in-training in the United States	National voluntary association of physicians that provides leadership and guidance to physicians in Canada	Organization representing the leading research-based pharmaceutical and biotechnology companies in the United States	Federal organization to protect the integrity of the Department of Health and Human Services
"Opposes the use of promotional gimmicks and inappropriate gifts serving no educational or informational purpose to influence medical students or physicians."	"Practicing physicians should not accept personal gifts from the pharmaceutical industry or similar bodies. These guidelines apply to physicians-in-training as well. Medical curricula should deal explicitly with the guidelines."	"Items primarily for the benefit of patients may be offered to healthcare professionals if they are not of substantial value ($100 or less)." "Meals may be offered so long as they: (a) Are modest as judged by local standards; (b) Occur in a venue and manner conducive to informational communication and provide scientific or educational value."	The OIG cites the voluntary code of PhRMA as a good starting point for compliance. "However, compliance with the PhRMA Code will not necessarily protect a manufacturer from prosecution or liability for illegal conduct."

Dr. Carbone feels equally conflicted about attending the sponsored dinner and wonders how to resolve her mixed feelings about participating in such activities.

Discussion

This third vignette demonstrates the uncertainty that house staff face in knowing not only what is considered to be the norm by their peers but also what is approved by the program leadership and supported by the hospital faculty. The natural desire to be part of the group, particularly strong in the challenging years of residency, brings to the surface for Dr. Carbone the question of her views on how to interact with the pharmaceutical industry. Like the one intern she overhears, she must weigh her views on pharmaceutical industry interactions against the desire to fit in with the group of other trainees. Clearly, the other intern is more comfortable with attending the dinner and sees it as a way not only to socialize but also to obtain valuable information about a new drug. Despite Dr. Carbone's reservations, she is aware that the social event will take place with or without her. Thus, by default, she must choose between joining her colleagues at a dinner where she is somewhat uncomfortable about the sponsorship or missing the social event.

In contemplating the appropriateness of the dinner, one of the interns points out that the poster has been displayed on a hospital bulletin board, implying some approval by the residency program administration. Although it is unclear what the program policy is in this scenario, the interns and Dr. Carbone are left to speculate what their program leadership may think of such a dinner event. Some residency programs post such flyers because they do believe that the dinners are an effective means of increasing the volume of educational events for their house staff. Other programs, while not necessarily approving of such dinners, allow the posters because they believe that the residents can decide on their own whether or not to attend such events. Regardless, in trying to work through the typically murky issues of what is appropriate, residents often interpret the posting of flyers as implicit support by their training program.

Further complicating the issue of whether the sponsored dinner event is appropriate is the suggested quality of the educational material that will be provided at the event. In some cases, sponsored lectures may feature high-quality educational material delivered by well-respected faculty. In scenario 2, an attending physician recognized by Dr. Carbone as an expert in the field will be speaking at the event, raising the educational value of attending the dinner. Reservations Dr. Carbone may have about the impartiality of the data she would receive at the dinner may be mitigated by the laudable reputation of Dr. Quimby, although she may also wonder whether the speaker's presentation could be at all influenced by receiving an honorarium from the sponsor. The Accreditation Council for Continuing Medical Education (ACCME) requires that speakers at continuing medical education events not only reveal financial relationships but also resolve any conflicts of interest

prior to the event itself [21,22]. Even with the ACCME requirements, observing the speaking arrangements of faculty provides house staff with more information on which to base their decisions regarding the quality of the material presented.

Approach to Industry Interactions: Practical Strategies for Residents

In addition to the variation in existing policies and guidelines governing physician-industry interactions, it is important to note that individual opinions and practices among physicians vary widely. Because of this variation, it is particularly important for residents to understand the range of views that can be held even within a single training program. For example, many bans on pharmaceutical industry interaction within an institution are led by an individual resident, who may feel particularly passionate about this issue. By contrast, other residents may adopt an approach that reflects a personal feeling of entitlement or a belief that gifts from industry are just reward for their laborious work during residency.

Given that contact with industry representatives is likely [12], it is critical that residents be prepared to apply effective strategies for making informed decisions. The following basic strategies provide a foundation on which to build an individual approach to routine resident interactions with the pharmaceutical industry. The focus of this discussion is primarily on resident response to gifts, meal-sponsored educational events, and promotional materials.

Apply an Ethical and Professional Framework

It is useful to apply an ethical and professional framework to guide interactions with industry. One simple framework for considering how to respond to offers of gifts is illustrated in **Table 2**; this framework might also be applied to other types of interactions. This matrix, which is based on professional obligations of physicians and current guidelines for physician-industry interactions, serves as a useful template to remind residents of questions to ask when they consider the ethical and professional implications of gifts from the pharmaceutical industry. Thus, for each ethical or professional obligation listed in the matrix, the resident can consider whether accepting a gift supports or compromises that obligation.

Used in this manner, Dr. Carbone could ask herself, for example, whether the gift of an antibiotic guide in scenario 1 (A Few Gifts) is potentially compromising to each of her professional obligations to her patients (ie, competence, integrity, and altruism). An antibiotic guide would likely enhance her competence and integrity and would be unlikely to interfere with her altruism toward her patients. In addition, accepting an antibiotic guide could be consistent with professional guidelines. For example, assuming the guide is up-to-date, patients of Dr. Carbone who receive evidence-based antimicrobial therapy based on the guide are benefiting from her accepting this gift. The gift is clearly not substantial in value and seems free of conditions [1]. However, without knowing more about the content of the guide, it remains unclear whether it is truly unbiased.

By contrast, a day of golf does not support the ethical obligations of physicians or comply with professional guidelines for physician-industry interactions. Clearly, this gift does not enhance resident competence, is not of primary benefit to patients, and is likely valuable judged by accepted standards. Other ethical obligations such as altruism and integrity are clearly in question, as residents enjoy a day of golf without consideration for how their patients may perceive this gift.

In the case of accepting a trip to a national conference, the ethical obligations and professional guidelines are less clear without further information. For instance, while the trip may increase resident competence, there is little assurance beyond resident self-discipline that the gift in this case (ie, the travel) will be strictly limited to attending sessions with no leisure time activities. A trip is most likely of "substantial value," which has been defined as more than $100 by one professional organization [1]. Finally, without more information, it is unclear whether the conference is industry-sponsored or a truly "unbiased legitimate activity" that is without conditions and truly free of educational bias. For example, the use of a trip to attend a national conference of one's professional society with the intent to engage in scholarly activity to enhance medical knowledge would support many of the ethical obligations and professional guidelines. However, attending an industry-sponsored symposium promoting the use of a specific medication at a world-class resort would compromise ethical obligations and not be supported by professional guidelines.

Know Program Policy and Expectations

In addition to understanding the ethical and professional implications of one's actions, it is important to know and perhaps most importantly to *respect* program policy and expectations. In some cases, residency program policy on industry interactions may be nonexistent or unclear. For example, in scenario 3 (A Free Dinner), one intern implies that the mere presence of

Table 2. Ethical and Professional Framework to Assess Gifts from Industry

Professional Obligations and Guideline Recommendations	Antibiotic Guide	Day of Golf	Trip to National Conference
Professional obligations			
Competence	Supported	Compromised	Uncertain
Integrity	Supported	Compromised	Uncertain
Altruism	Supported	Compromised	Uncertain
Guideline recommendations			
Primary benefit to patients	Supported	Compromised	Uncertain
Not of substantial value	Supported	Compromised	Compromised
Unbiased legitimate educational activity	Uncertain	Compromised	Uncertain
No conditions	Uncertain	Uncertain	Uncertain

Adapted with permission from Van Harrison R, Rowley B. Real world cases: practical applications of AMA, ACCME, FDA, and OIC "regulations." Presented at the 14th Annual Conference of the Task Force on CME Provider/Industry Collaboration: Partners in Progress: Serving the Professions and the Public; 2003 Sept 9–11; Chicago, IL.

the poster announcing the industry-sponsored dinner in the house staff area implies that the residency program does not prohibit such an event. However, it is quite possible that the industry representative or another resident posted the announcement and the program leadership is not aware of the event.

Some programs may ask industry representatives to set up displays only outside a conference and restrict representatives from making an oral presentation at the conference. Others may allow a representative to be present or even to make a brief presentation at a conference, a policy that appears to be in place in scenario 2 (Journal Club). The time that a representative is allowed to interact with residents, speak, or be present at an educational conference is often set a priori with program leadership. As a result, a program's administrative staff members often have the first contact with industry representatives, scheduling such times for sponsored lunches and events. Because of these variables, it is especially important for house staff to be aware of program policies and expectations governing interactions with the pharmaceutical industry.

In many cases, program policies exist but may not be evident to faculty or residents [23]. In a recent review of the literature, 35% of internal medicine residency programs and more than 50% of family medicine and emergency medicine residency programs reported having a formal policy; however, individual studies included in this review suggested that more than 70% of residents and nearly 60% of chief residents were unaware of these guidelines [12]. Given this gap in knowledge, residents may be unclear or under false assumptions of what is and is not appropriate. In the absence of any clearly evident program policy, it is important to discuss with program leadership, including senior residents and program directors, their expectations regarding interactions while in training.

Understand Marketing Practices and Influences

It is particularly important to approach pharmaceutical industry interactions with an understanding of the common marketing practices employed (including those which are not the focus of this article, such as direct-to-consumer advertising and free sampling of drugs) and the potential influence these practices may have on prescribing behavior. In one poignant example, although 61% of residents in one program felt they were immune to marketing practices, only 16% felt that their colleagues were immune [24]. This phenomenon represents an unwillingness to recognize one's own susceptibility to marketing practices. This is particularly concerning in light of considerable literature that supports the effect of industry marketing on physician behavior. For example, in a recent study, standardized patients who referenced a pharmaceutical product using direct-to-consumer advertising were more likely to receive a prescription than standardized patients who did not [25].

Residency training presents opportunities to critically analyze marketing practices of pharmaceutical representatives [19]. For instance, house staff can engage in a faculty-led discussion after a sales representative's presentation that focuses on an analysis of the advertising techniques and sale mechanisms used.

Critiquing pharmaceutical advertisements in major medical journals using an evidence-based approach can also be an effective learning tool. The Food, Drug, and Cosmetic Act requires that drug advertisements present accurate information with a fair representation of the drug's benefits and risks. Nevertheless, pharmaceutical industry advertisements can be critiqued for the following: 1) minimizing risk, 2) overstating effectiveness, 3) broadening a drug's use, or 4) unsubstantiated claims [26].

Be Fully Informed

Just as one should not make a diagnosis without first accessing and considering all necessary information, one should be equally vigilant in making fully informed prescribing decisions based on unbiased information about all appropriate treatment options. However, because it is difficult to acquire this information at the point of care, residents must often rely on recall of information, although they may not remember whether the source of the information was an attending, a pharmaceutical company representative, a journal article, or a book. Recall of information, particularly legitimacy and source, is complicated and may not be exact. Thus, it is important to actively question the source and legitimacy of information at the time it is presented.

With regard to information provided by industry representatives, this active questioning can take place through a "point-counterpoint" session, whereby a faculty member or staff pharmacist discusses the pharmaceutical product information during a noontime conference that has been attended by industry representatives. Residents also should have ample informal opportunity to ask questions to help them critically appraise the product information provided. For example, in scenario 2 (Journal Club), residents could have asked Mr. Bennett for information omitted from his presentation, such as an analysis of cost, contraindications, and side effects and a comparison to alternative drugs with similar indications.

Another useful skill is to closely examine the validity of the research presented. Residents often learn to assess the quality of studies presented at journal club through critical appraisal of the study design, strength of evidence (ie, effect size), and any limitations (ie, potential confounders). However, it is equally important to understand the source of the article, particularly for industry-sponsored studies that may have used ghost writers [27]. Ghost writing describes the situation when a professional medical writer prepares a manuscript on behalf of a named author, but the writer is not listed as an author [28]. In the pharmaceutical literature, ghost writers are typically hired to write articles about drugs that present select information. A typical protection against ghost writers is the use of full disclosure, including identification of all contributors (as opposed to simply authors), and the naming of a corresponding author responsible for the integrity of the work. To help identify potential ghost written publications, residents can ask themselves whether the authors or the sponsors stand to gain by the message that is being delivered in the article [29].

Conclusion

Resident interactions with the pharmaceutical industry pose many challenges for program directors, regulatory agencies, and most importantly, individual residents. Although a consensus statement and unified policy from organizations is lacking, residents must be prepared to approach these interactions with an understanding of the issues and the ethical and professional principles that should guide their actions. We hope that the illustrative scenarios discussed here raise resident awareness about the ethical and professional implications of industry interactions and that the simple strategies presented provide a foundation from which to approach these interactions.

Address correspondence to: Vineet Arora, MD, MA, 5841 S. Maryland Ave., MC 2007, AMB B217, Chicago, IL 60637 (e-mail: varora@medicine.bsd.uchicago.edu).

Acknowledgment: We are grateful for the contributions of Ms. Jennifer Higa in the preparation of this manuscript.

References

1. American Medical Association. Ethical opinions and guidelines. Gifts to physicians from industry (Opinion E-8.061). Available at www.ama-assn.org/ama/pub/category/4001.html.
2. Coyle SL; Ethics and Human Rights Committee, American College of Physicians-American Society of Internal Medicine. Physician-industry relations. Part 1: individual physicians. Ann Intern Med 2002;136: 396–402.
3. Canadian Medical Association. Physicians and the pharmaceutical industry (update 2001). Available at policybase.cma.ca/policypdf/PD01-10.pdf. Accessed 14 Sept 2005.
4. Accreditation Council for Continuing Medical Education. Standards for commercial support. Available at www.accme.org/dir_docs/doc_upload/68b2902a-fb73-44d1-8725-80a1504e520c_uploaddocument.pdf. Accessed 8 Sept 2005.

5. American Medical Student Association. Principles regarding pharmaceuticals and medical devices. Available at www.amsa.org/hp/pharmpolicy.cfm. Accessed 8 Sept 2005.
6. Pharmaceutical Research and Manufacturers of America. PhRMA code on interactions with healthcare professionals. Available at www.phrma.org/publications/policy/2004-01-19.391.pdf. Accessed 8 Sept 2005.
7. Lichstein PR, Turner RC, O'Brien K. Impact of pharmaceutical company representatives on internal medicine residency programs. A survey of residency program directors. Arch Intern Med 1992;152:1009–13.
8. Wazana A. Physicians and the pharmaceutical industry: is a gift ever just a gift? JAMA 2000;283:373–80.
9. Watkins RS, Kimberly J Jr. What residents don't know about physician-pharmaceutical industry interactions. Acad Med 2004;79:432–7.
10. Wazana A, Granich A, Primeau F, et al. Using the literature in developing McGill's guidelines for interactions between residents and the pharmaceutical industry. Acad Med 2004;79:1033–40.
11. Development of residency program guidelines for interaction with the pharmaceutical industry. Education Council, Residency Training Programme in Internal Medicine, Department of Medicine, McMaster University, Hamilton, Ont. CMAJ 1993;149:405–8.
12. Zipkin DA, Steinman MA. Interactions between pharmaceutical representatives and doctors in training: a thematic review. J Gen Intern Med 2005;20:777–86.
13. Accreditation Council for Graduate Medical Education. Principles to guide the relationship between graduate medical education and industry. Available at www.acgme.org/acWebsite/positionPapers/pp_GMEGuide.pdf. Accessed 8 Sept 2005.
14. Brett AS, Burr W, Moloo J. Are gifts from pharmaceutical companies ethically problematic? A survey of physicians. Arch Intern Med 2003;163:2213–8.
15. Dana J, Loewenstein G. A social science perspective on gifts to physicians from industry. JAMA 2003;290:252–5.
16. McKinney WP, Schiedermayer DL, Lurie N, et al. Attitudes of internal medicine faculty and residents toward professional interaction with pharmaceutical sales representatives. JAMA 1990;264:1693–7.
17. Jung P. No free lunch. A young doctor's take on why residents' souls should matter more than their stomachs. Health Aff (Millwood) 2002;21:226–31.
18. Chin T. Drug firms score by paying doctors for time. American Medical News. Available at www.vaccinationnews.com/DailyNews/May2002/DrugFirmsScore.htm#rbar_add. Accessed 13 Sept 2005.
19. Shaughnessy AF, Slawson DC, Bennett JH. Teaching information mastery: evaluating information provided by pharmaceutical representatives. Fam Med 1995;27:581–5.
20. Hafferty FW. Beyond curriculum reform: confronting medicine's hidden curriculum. Acad Med 1998;73:403–7.
21. Accreditation Council for Continuing Medical Education. Commercial support and disclosure. Available at www.accme.org/index.cfm/fa/Policy.policy/Policy_id/9456ae6f-61b5-4e80-a330-7d85d5e68421.cfm. Accessed 8 Sept 2005.
22. Steinbrook R. Commercial support and continuing medical education. N Engl J Med 2005;352:534–5.
23. Varley CK, Jibson MD, McCarthy M, Benjamin S. A survey of the interactions between psychiatry residency programs and the pharmaceutical industry. Acad Psychiatry 2005;29:40–6.
24. Steinman MA, Shlipak MG, McPhee SJ. Of principles and pens: attitudes and practices of medicine housestaff toward pharmaceutical industry promotions. Am J Med 2001;110:551–7.
25. Kravitz RL, Epstein RM, Feldman MD, et al. Influence of patients' requests for direct-to-consumer advertised antidepressants: a randomized controlled trial. JAMA 2005;293:1995–2002.
26. Schmidt J. Where drug advertisements often cross the lines. USA Today. Available at www.usatoday.com/money/industries/health/drugs/2005-05-31-drugs-ads-side_x.htm. Accessed 13 Sept 2005.
27. Flanagin A, Carey LA, Fontanarosa PB, et al. Prevalence of articles with honorary authors and ghost authors in peer-reviewed medical journals. JAMA 1998;280:222–4.
28. Jacobs A, Carpenter J, Donnelly J, et al. The involvement of professional medical writers in medical publications: results of a Delphi study. Curr Med Res Opin 2005;21:311–6.
29. Jewesson P. Ghostwriters in the sky [editorial]. J Inform Pharmacother 2003;13:1–4. Available at: www.informedpharmacotherapy.com/Issue13/Editorial/editorial13.htm. Accessed 9 Sept 2005.

How to cite this article:
Arora V, Schneider JA, Borden WB, Humphrey HJ. Approach to routine interactions with industry: a primer for residents. Semin Med Pract 2005;8:55–63. Available at www.turner-white.com.