Do Gifts From the Pharmaceutical Industry Affect Trust in Physicians?

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BACKGROUND AND OBJECTIVES: Gifts to physicians from the pharmaceutical industry are receiving increased scrutiny, but no previous research has evaluated the effect of such gifts on trust. The goal of this study is to determine patient awareness of interactions between physicians and the pharmaceutical industry and to learn whether those interactions impact trust and the doctor-patient relationship.

METHODS: A cross-sectional, self-administered 61-item survey was administered in five outpatient clinic waiting rooms at a US medical center in 2008. A total of 220 consecutive English-speaking adults were invited to participate. Main outcome measures included: (1) Awareness of physician relationship with the pharmaceutical industry, (2) Attitudes about physician acceptance of gifts, (3) Perceived impact of gifts on trust in physicians, and (4) Effect of gifts on intent to adhere to physician recommendations.

RESULTS: A total of 192 individuals participated (87% response rate). While most were unaware of particular interactions between physicians and the pharmaceutical industry (12% to 60%, depending on activity), approximately half (51%) wanted to know if their physician accepted gifts >$100. A majority indicated they would have less trust in their physician if they learned he or she: accepted gifts >$100 (59%) or went on industry-sponsored trips (58%) or sporting events (54%). Further, 25% said they would be less likely to take a prescribed medication if their physician had recently accepted a gift in return for listening to a pharmaceutical representative’s presentation about that drug.

CONCLUSIONS: Accepting gifts from the pharmaceutical industry has implications for the doctor-patient relationship. Doing so can undermine trust and affect patients’ intent to adhere to medical recommendations.

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In recent years, there has been growing scrutiny of the relationship between pharmaceutical representatives and medical professionals. While the practice known as “detailing” (a marketing technique used by pharmaceutical companies to educate physicians about the vendor’s products in an attempt to influence physicians’ prescribing behavior) is widespread, the appropriateness of providing gifts to physicians (such as meals, trinkets, or other tokens of appreciation) has been questioned. The pharmaceutical industry implemented a voluntary code of conduct in 2002 (updated in 2009 to exclude gifts and some meals), and medical specialty organizations have established guidelines for limiting gifts (Table 1), but critics have called for even greater restrictions, and legislators have taken an interest in the issue. Additionally, the Association of American Medical Colleges (AAMC) and the Institute of Medicine (IOM) recently issued reports calling for prohibition of all gifts from industry in academic medical centers, and many leading teaching hospitals have begun to implement such policies.

Even with mounting attention to this issue, physicians remain deeply divided in their views about the impact of gift-giving. In the public sphere, this issue has been portrayed as a matter of conflict of interest. But to date, most research on this topic has focused on physicians’ attitudes about industry influence and its impact on prescribing behaviors, with only a few recent articles devoted to the views of other important stakeholders—patients. Surprisingly, little is known about patients’
attitudes about industry gift-giving to physicians. In one US study, investigators found that the “public is generally uninformed about personal gifts from pharmaceutical companies,” but patients also believe that such gifts are both more influential and less appropriate than do physicians. Another found that patients viewed gifts of trivial value as acceptable but disapproved when they had significant monetary value or little benefit to patients.

Fundamentally, this issue can be framed in terms of trust in the medical profession, which is important for a variety of reasons. First, though trust is the foundation of the doctor-patient relationship, public trust in the medical profession has been declining in recent years. Second, it is widely assumed that doctors’ receipt of gifts undermines trust, though this assumption has not been studied outside the research setting. Third, as trust in professions declines, external regulation of professionals inevitably rises, a trend that is likely to continue unless medical institutions take the initiative in formulating policies to manage interactions between physicians and industry. For these reasons, we sought to examine whether patients’ trust in their physicians was related to their acceptance of gifts and exploring the knowledge and attitudes of patients about the relationship between the medical profession and the pharmaceutical industry.

**Methods**

**Study Population and Setting**

We conducted a cross-sectional survey of patients in waiting rooms of five outpatient clinics at a mid-Atlantic academic medical center, a facility where faculty hold continuity clinics, and residents and students train. Eligible participants included all English-speaking adults (≥18 years old) in the waiting areas of five clinics (Primary Care (two), Dermatology, Orthopedics, and Ophthalmology). Consecutive individuals were approached during half-day blocks in February and March of 2008 and invited to complete the survey, until the recruitment goal of 200 was achieved. At the time of the study, there was no institutional policy in place to limit access of pharmaceutical representatives to the participating clinics and physicians. As such, “drug lunches,” trinkets, and logoed materials were typically present at the various clinic sites.

**Survey Instrument**

The survey consisted of 61 multiple choice and Likert-style items developed after reviewing the literature on trust and the doctor-patient relationship and attitudes toward industry gifts to physicians and other health care providers. Several items were adapted from existing measures, and the remaining ones were created by the investigators. These were then pilot tested for face and content validity with a convenience sample of patients, physicians, and the general public, then modified in response to feedback. Questions addressed: (1) patients’ awareness of their physicians’ relationship with industry, (2) patients’ attitudes about physicians’ acceptance of gifts, (3) the perceived impact of gifting on patients’ trust in their physician, and (4) the effect of gifting on patients’ intent to adhere to medical recommendations. Trust was measured in several ways. For a global assessment of trust in the physician, we adapted validated scales from Thom et al and O’Malley et al to create the following 5-point scale: “All things considered, how much do you trust: (1) your health care provider to put your needs above all other considerations when making recommendations to you? and (2) the medical profession in general to put your needs above all other considerations when making recommendations to you?” (1=Not at all, 5=Completely). To measure the impact on trust of specific gift-related activities such as trips, small gifts, pens, etc, we developed a different 5-point scale for patients to indicate the extent to which each activity increased or decreased trust in their health care provider (1=Much higher trust, 5=Must lower trust).

Demographic information, including the presence and duration of a relationship with a health care provider, was also obtained. The estimated Flesch-Kincaid reading level of the survey was grade 6.

The institutional Human Subjects Protection Office determined that this study did not require formal Institutional Review Board review because it met criteria for exemption according to the HHS Code of Federal Regulations Title 45, Part 46.101(b)(2).

**Data Collection**

A four-year medical student (BJ) explained the purpose of the survey and obtained verbal consent from potential participants. The survey was self-administered, with the student being available to clarify or answer questions about logistical issues. Each participant received a Hershey’s chocolate bar upon completion of the survey.

**Data Analysis**

Data was double entered into a database, and analyses were carried out using SAS statistical software, version 9.1.3 (SAS Institute, Cary, NC). Descriptive statistics were computed for each item using means for
continuous variables and percentages for categorical variables. Variables measuring agreement via a 5-point scale (1=strongly disagree, 5=strongly agree) were collapsed into three categories: disagree, neither agree nor disagree, agree. Variables measuring patients’ increase or decrease in trust via a 5-point scale (1=much higher trust, 5=much lower trust) were also collapsed into three categories: higher trust, no change, lower trust. Variables measuring trust in one’s health care provider to put patients’ needs above other considerations via a 5-point scale (1=not at all, 5=completely) were collapsed into two categories: distrust and trust, where distrust = responses 1 and 2, and trust = responses 3, 4, and 5. We then used logistic regression to address the association of demographic characteristics and variables relating to the presence of drug companies in the provider’s office with a patient’s trust in his or her physician.

Results
A total of 220 individuals were approached, and 200 participated. Reasons for non-participation included inadequate time (n=1), visual impairment (n=3), lack of interest (n=12), and no reason given (n=4). Of those who participated, 192 completed the survey, for a response rate of 87%.

Participant Characteristics
Respondents’ ages ranged from 18–89 years (mean age 53), and they were predominantly female (61%), white (91%), and well educated (46% with a college degree or higher). The vast majority (89%) had one individual they considered as their regular health care provider (HCP). Of these, 58% indicated that the individual had been their HCP for >5 years. More than three-quarters of respondents were currently taking prescription medications (81%) (Table 2).

Knowledge of Industry Activity and Gifts
Respondents’ general awareness of drug industry activity in the medical offices and waiting rooms was reasonably high. As shown in Table 3, most said they knew whether or not there were drug company advertisements (68% said ads were present or absent), items with logos on them (69%), sales reps (48%), and patient education materials (62%) in the exam room, waiting room, or office. However, only 25% indicated they knew whether office staff ate industry-sponsored meals.

In contrast, respondents had low awareness of most of the described gift-related practices of their physicians (Figure 1). Fewer than one fourth knew whether or not their physician accepted large gifts (12%), attended industry-sponsored social activities (16%), went on industry-sponsored trips (17%), accepted small gifts (16%), gave lectures (20%), conducted research for drug companies (23%), or accepted industry-sponsored meals (22%).

Do Patients Care About Gifts?
While most respondents did not know if their doctor participated in the described activities, their desire to know depended on the nature of the interaction. For three of the eight described activities (accepting gifts > $100 in value, attending drug company-sponsored social activities, and going on trips paid for by drug companies), more participants indicated that they “don’t know but would want to know” than “don’t know and don’t care” (Figure 1). The activity that the highest percentage cared about was whether their physician accepted gifts > $100 in value (51% wanted to know). However, for the other five activities, a higher percentage indicated they didn’t care.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Percent</th>
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<tr>
<td>Mean age (range) = 53 (18–89)</td>
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<tr>
<td>18–49 years</td>
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<td>50–64 years</td>
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<td>&gt;81 years</td>
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<td>Non-white</td>
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<td>Education</td>
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<tr>
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<tr>
<td>Received free medication samples in past year</td>
<td>34</td>
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<tr>
<td>Currently use prescription medications</td>
<td>81</td>
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* n=192
Impact on Trust in Physicians

In general, participants trusted their own physician to put patient needs above all other considerations when making recommendations (mean 4.4 (4.3, 4.6), where 1=no trust and 5=complete trust), but they had somewhat lower trust that others in the profession would do so (mean 3.9 (3.8, 4.1). In a logistic regression analysis, trust in one’s physician was not generally affected by office practices such as having drug ads, trinkets, or logoed patient educational materials in the waiting room, nor by office staff eating industry-sponsored lunches. There was also no apparent relationship between overall trust in one’s physician and variables including age, gender, race, education, income, or receipt of free medication samples from the health care provider.

In contrast to the limited impact of office activities on patient trust in their physician, trust was affected by physicians’ particular behaviors. In response to the question “if you learned that your health care provider did any of the following [9 activities], what impact would that have on your trust in him or her?” we found that: 1) trust seldom increased (<15% of time), 2) it often was unchanged (38-89% of time), and 3) it commonly decreased (up to 59% of time). Figure 2 shows the effect on trust of various physician activities. Among the nine listed activities, those for which the highest percentage of respondents indicated that their trust would be lower were: accepting gifts >$100 in value (59% indicated this would lower their trust), attending industry-sponsored trips (58%) and sporting events (54%), holding stock in companies producing medications prescribed by the physician (49%), and accepting gifts of <$100 value (47%). The remaining four activities (lectures, meals, research, pens/notepads) did not affect trust for the majority of respondents.

Attitudes About Gifts

In an effort to learn more about patients’ attitudes toward the common physician practice of accepting small gifts or meals for listening to industry-sponsored presentations, we asked respondents how much they agreed or disagreed with a series of statements about this activity (Figure 3). While approximately half agreed that gifts or meals influence physician prescribing behaviors, 43% indicated it was OK as long as gifts had little monetary value, and 41% indicated it was not problematic. On the other hand, 31% indicated the practice was wrong/unethical, and 27% indicated that meals made patients wait too long.

We next asked individuals to rate how proper or improper they thought it was for doctors (in comparison to a variety of other professionals) to
accept these small gifts or meals (Table 4). Overall, respondents felt it was improper for any of the listed professionals to accept gifts (mean 4.1 (4.0, 4.3), where 1=OK/Not a Problem, 3=Neutral, 5=Wrong/Unethical). However, they felt it was “less wrong” for doctors to accept gifts from drug company representatives (mean 3.7 (3.5, 3.9)) than it was for judges to accept gifts from lawyers (mean 4.5 (4.4, 4.7)), sports referees from players whose games they officiate (mean 4.5 (4.3, 4.7)), and politicians from lobbyists (mean 4.3 (4.1, 4.5)).

Concern about the appropriateness of accepting small gifts or meals had practical implications regarding patients’ intention to adhere to medical recommendations; 43% of participants believed that physicians who accepted small gifts in return for listening to an industry presentation on a particular medication would be more likely to prescribe that medication. Accordingly, 24% said they would be less likely to take the prescribed medication if the physician had recently accepted a gift in return for listening to such a presentation.

**Discussion**

Do patients know and care about the relationship between physicians and the pharmaceutical industry? Our data are consistent with other research showing that most patients are generally unaware of the nature of the relationship between physicians and industry, but adds to this literature by showing which specific activities may undermine trust and which do not. In this regard, we found that (1) a minority of respondents wanted to know whether their doctor accepts gifts and (2) as the value of the gift increased, the percentage indicating it would negatively impact trust in their physician increased. In other words, patients care more about some gifts than others. Small gifts such as note pads and pens have a negligible effect on trust, but gifts of larger value (those >$100, trips, sporting events, etc) are more likely to lower patients’ trust in their health care provider.

Although most respondents indicated that small gifts such as pens and meals would have no effect on their trust, for those whose trust would be affected, a much higher percentage indicated that trust would decrease rather than increase. This was consistent across all activities listed in our survey, except for the negligible effect of pens and notepads. This finding is important because trust is the foundation on which the doctor-patient relationship relies, and the overall harm that can result when trust is negatively impacted—even when it involves a minority of patients—can far outweigh any benefit that results from having no change in trust. Even for an
activity perceived least negatively (industry-sponsored research), almost twice as many indicated that their trust would decrease (27%) as increase (15%). For a trusting population such as the one reported here, any decline in trust is potentially troubling. As such, health care providers should take notice.

Reasons for objecting to large gifts and overt conflicts of interest seem obvious, but on what grounds were smaller gifts and meals opposed? While we cannot say with certainty why some opposed these gifts, the most frequently cited reason was that such activities could influence physician prescribing (49% agreed with this). Although it is conceivable that people could view such influence as positive (rather than negative), a growing social science literature suggests that even gifts of trivial value can affect physician behavior.\textsuperscript{33,34} One might speculate that some patients worry that their physician might be inappropriately influenced by these gifts rather than by scientific evidence; however, only 31% of respondents felt that small gifts or meals were wrong/unethical, and respondents seemed less concerned about the propriety of physicians receiving gifts compared to judges, referees, and politicians doing so. This speaks to the possibility that not everyone sees industry influence as negative or perhaps that patients still perceive their physicians as “not for sale.”

A related issue is whether industry’s small gifts to physicians affect patients’ intent to adhere to their physician’s recommendations. To the extent that the receipt of gifts is perceived as problematic, this could raise doubts about the reliability of physicians’ counsel. Indeed, in our survey, nearly half of respondents felt their physician would be more likely to prescribe a medication after receiving a small gift in return for listening to a presentation by a pharmaceutical representative, and one fourth indicated they would be less likely to take that prescribed medication as a result. In light of the potential impact on patient care, further investigation into this phenomenon is warranted.

\textbf{Limitations}

Like all research, this study has limitations. The survey involved hypothetical questions, and as such relied on participants speculating and recalling. We attempted to deal with this limitation by focusing on patients’ attitudes, which by definition can be neither right nor wrong. Nevertheless, participants’ preconceived trust/distrust in their physician and/or health care system may have influenced whether they perceived that gifts would affect their physician’s behavior. Since we did not screen for high or low trust in advance, we have no control over their preexisting attitudes. We also have little information about nonparticipants, so it is difficult to know whether those who declined were different from those who completed the survey. Additionally, the survey was conducted at a single academic medical center in suburban Pennsylvania, among individuals who were predominately older, female, Caucasian, well educated, and relatively affluent. Generalizability to other populations (such as those at nonacademic centers, or urban-dwelling minorities who lack access to health care) may be limited. That said, because most participants in our sample had ongoing relationships with a physician, we could speculate that the studied population may be more trusting of their health care provider than is the general population. Future research could focus on alternative settings such as private practice (where gift-giving is less beholden to institutional guidelines and regulations) and also on examining the implications on trust of patients’ education, gender, and socioeconomic status.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|c|}
\hline
How proper do you think it is for each of the following to accept meals or small gifts from those listed? & Not a problem & Neutral & Wrong/unethical \\
& (1) & (2) & (4) & (5) \\
\hline
Judges (from lawyers whose case they are hearing) & 5 & 3 & 5 & 8 & 79 \\
Professional sports referees (from players whose games they officiate) & 4 & 4 & 9 & 7 & 77 \\
Politicians (from lobbyists) & 4 & 6 & 11 & 10 & 69 \\
Doctors (from drug company representatives) & 10 & 10 & 20 & 15 & 44 \\
Business people (from clients) & 13 & 15 & 22 & 13 & 38 \\
\hline
\end{tabular}
\caption{Attitudes About Various Professionals Accepting Gifts or Meals*}
\end{table}

\textsuperscript{1} OK/Not a Problem, \textsuperscript{3} Neutral, \textsuperscript{5} Wrong/Unethical

* Percent with each response
Conclusions
When physicians accept gifts from industry, this has implications for the doctor-patient relationship and for the management of physician-industry relations. While many patients neither know nor care about physicians’ interactions with industry, for those patients who do care, gifts—particularly ones of higher monetary value—have the potential to undermine one of the most fundamental aspects of the doctor-patient relationship: trust. As we educate physicians about their unique role in patients’ lives, both teachers and learners should be aware of the potential impact that accepting gifts may have on the doctor-patient relationship.

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Drs Green and Masters were responsible for the overall design and implementation of this project and were the primary authors of this paper. They had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Drs James and Simmons implemented the survey protocol and provided critical feedback on the manuscript, and Mr Lehman provided statistical support and analysis.

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