

ORIGINAL ARTICLES

A Comparison of Physicians' and Patients' Attitudes Toward Pharmaceutical Industry Gifts

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OBJECTIVE: To compare physicians' and their patients' attitudes toward pharmaceutical gifts.

DESIGN: Survey of physicians and their patients.

SETTING: Two tertiary-care medical centers, one military and one civilian.

PARTICIPANTS: Two hundred sixty-eight of 392 consecutively surveyed physicians, 100 of 103 randomly selected patients at the military center, and 96 patients in a convenience sample at the civilian center completed the survey.

MEASUREMENTS: Participants rated 10 pharmaceutical gifts on whether they were appropriate for physicians to accept and whether they were likely to influence prescribing. Patients found gifts less appropriate and more influential than did their physicians. About half of the patients were aware of such gifts; of those unaware, 24% responded that this knowledge altered their perception of the medical profession. Asked whether they thought their own physician accepted gifts, 27% said yes, 20% no, and 53% were unsure. For patients, feeling that gifts were inappropriate was best predicted by a belief that gifts might influence prescribing, while for physicians, the best predictor was knowledge of guidelines.

CONCLUSIONS: Patients feel pharmaceutical gifts are more influential and less appropriate than do their physicians. Physicians may want to consider this in deciding whether to accept particular gifts. Broader dissemination of guidelines may be one means of changing physician behavior. At the

same time, future guidelines should further consider the potentially different viewpoints of patients and physicians.

KEY WORDS: ethics; gifts; pharmaceutical industry; pharmaceutical marketing.

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Gifts given by the pharmaceutical industry to physicians are common and controversial.¹⁻⁴ More than \$11 billion is spent by pharmaceutical companies on promotion and marketing each year; \$3 billion is spent on advertising, and \$5 billion for sales representatives.^{5,6} It has been estimated that more than \$8,000 is spent per physician per year.⁷ Despite professional guidelines for this activity, many are still concerned about the ethical implications in these gift relationships.⁸⁻¹² Position 1 of the American College of Physicians (ACP) position paper on physicians and the pharmaceutical industry states:

Gifts, hospitality, or subsidies offered to physicians by the pharmaceutical industry ought not to be accepted if acceptance might influence or appear to others to influence the objectivity of clinical judgment. A useful criterion in determining acceptable activities and relationships is: Would you be willing to have these arrangements generally known?¹³

The ACP guideline suggests that knowledge of how the pharmaceutical industry gifts appear to "others" is needed. Some have suggested that public knowledge of potential conflicts may offer guidance in deciding what is acceptable.¹⁰ Although two studies have examined patient attitudes toward pharmaceutical industry gifts,^{11,12} no study has investigated whether patients and their physicians agree regarding the appropriateness and influence of pharmaceutical industry gifts.

METHODS

We surveyed physicians and their patients at a military and a civilian tertiary-care medical center in Washington, DC. Patients were contacted at primary care clinics, but these centers also provide specialty care and hospital care. Physicians surveyed included both those at the primary care clinics and those at specialty care clinics. The project was approved by the institutional review

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board at each site, and the survey was pilot tested to ensure clarity and understanding.

For each of 10 gifts, patients were asked on a 4-point Likert scale (strongly disagree, disagree, agree, or strongly agree) whether it is appropriate for doctors to accept the gift and whether acceptance would be likely to influence the medicine that the doctors might prescribe. Seven gifts were shown on a display table: pen, mug, pocketknife, small text, large text, medication sample, and educational video, the last two indicated as intended for patient use. For three gifts, pizza lunch, dinner at a fine restaurant, and a trip (each associated with a medical educational conference), the patient read a two-sentence description. We also asked patients if they thought their own doctor accepted gifts, if they thought the cost of these gifts was ultimately passed on to patients, if they were aware of pharmaceutical gifts before the survey, and if their perception of the medical profession was altered by this knowledge. Patients at the military site were enrolled using a random sample, whereas patients at the civilian site represented a convenience sample.

Physician data included years since graduation, specialty, training status, and professional memberships. They also were asked if they were aware of guidelines regarding acceptance of gifts from the drug industry. If affirmative, they were asked to list the source of the guidelines. For each of the same 10 gifts, physicians were asked if they would accept the gift, if acceptance would be likely to influence the medicine doctors might prescribe, and if they would be willing to have such acceptance "generally known." Physicians were provided a brief description of each gift but did not view the display.

Survey data were processed and analyzed using SPSS-PC, version 4.0. For descriptive analysis we collapsed the Likert scale to the dichotomous variables of agree and disagree to simplify discussion and presentation of our findings. We performed χ^2 analysis to compare categorical frequency data. Overall appropriateness was scored by summing responses for all 10 gifts (possible score from 10 to 40, higher score signifying an attitude that gifts are more appropriate for doctors to accept). Similarly, overall influence was scored (possible score from 10 to 40, higher score signifying an attitude that gifts are more influential on prescribing). The reliability of the Likert scale to provide a summative rating of appropriateness and influence for patients and physicians was computed (Cronback's $\alpha \geq 0.90$ for each except physicians' appropriateness = 0.75). Student's *t* tests were done to compare means, and multivariate linear regression was performed to identify predictors of appropriateness.

RESULTS

Patient and Physician Characteristics

One hundred and ninety-six patients completed the survey: 100 patients from the random sample at the mili-

tary center (96% response rate) and 96 patients from the convenience sample at the civilian center. Patient demographics are shown in Table 1. Two hundred sixty-eight physicians returned the survey (68% response rate): 192 from the military site and 76 from the civilian site (79% and 50% response rates, respectively). Fifty-three percent were in training, 76% were from internal medicine or its subspecialties, 10% from psychiatry, 13% from surgical services, and 1% other.

Patient and Physician Comparisons

Patient and physician responses regarding individual gifts are compared in Table 2. Except for the medication sample, patients considered each individual gift more influential on prescribing than did their physicians. Comparisons on appropriateness were variable. Using overall scores, patients found gifts less appropriate ($p < .001$) and more influential ($p < .001$) than did their physicians.

Patient Attitudes

Approximately half (54%) of patients were aware that pharmaceutical industry gifts were given to physicians. For those who were unaware, 24% responded that this knowledge altered their perception of the profession. When asked if they thought their own doctor accepted gifts, 27% responded yes, 20% no, and 53% were unsure. One third felt that the cost of these gifts was ultimately passed on to patients, 39% believed not, and 28% were unsure. There was a trend for those who had completed high school to believe the cost of the gifts was passed on to patients compared with those who had not ($p = .07$). Thirty-six percent of patients felt that acceptance of any gift obligates a physician to prescribe products from that company.

Patients who felt their own doctor accepted gifts found gifts more appropriate than patients who felt their doctor did not ($p = .001$). Those patients whose perception of the medical profession changed after viewing the

Table 1. Patient Characteristics

Characteristic	Military Site	Civilian Site
Mean age (range), years	61 (21–89)	60 (24–90)
Gender, %		
Female	65	67
Male	35	33
Level of education,* %		
Less than high school	10	54
College graduate	29	3.2
Mean prescription medications, <i>n</i>	3.2	3.2
Percentage with doctor they see regularly	77	84

* $p < .0001$

Table 2. Percentage of Respondents in Agreement*

Gifts	Gift Not Appropriate			Gift Influential		
	Patients	Physicians	p Value	Patients	Physicians	p Value
Trip	59	75	.0004	56	42	.0017
Dinner	47	33	.004	48	24	<.0001
Pocketknife	38	49	.02	28	12	.0001
Lunch	23	10	.0002	29	12	<.0001
Mug	23	18	.24	31	8	<.0001
Drug sample	22	26	.33	42	55	.006
Large text	20	29	.02	38	10	<.0001
Pen	19	4	<.0001	31	8	<.0001
Video	18	12	.04	38	22	.0002
Small text	16	17	.82	37	9	<.0001

*See Methods section for survey questions and gift descriptions.

gift display found gifts less appropriate ($p = .05$) and more influential ($p = .03$) than did those whose perception had not changed. On multivariate analysis, the most significant predictor of an overall attitude that gifts were not appropriate was the patient's belief that gifts would influence prescribing ($R^2 = .09$, $p < .0001$); the military site was a less significant predictor ($R^2 = .06$, $p < .001$). Age, education, gender, number of medications, having a regular doctor, feeling their doctor accepted gifts, feeling the cost of these gifts was passed on to patients, having not filled a prescription because it was too expensive, and being aware of these gifts before the study were not independently associated.

Physician Attitudes

Sixty-two percent of physicians were aware of at least one guideline on accepting gifts from the pharmaceutical industry. Staff physicians (73% vs 51%, $p = .0002$) and military physicians (71% vs 39%, $p < .0001$) were more likely to be aware of guidelines. The latter difference may be due to the knowledge of federal guidelines (45% listed this as a source of guidelines at the military site vs 1% at the civilian site). For those who designated themselves members of the AMA or ACP, only 12% and 11% listed their respective organization as a source of guidelines. In multivariate analysis, only physician knowledge of guidelines predicted an overall attitude of gifts being less appropriate ($R^2 = .03$, $p = .006$). The site, years since graduation, and being in training were not independently associated.

Physicians in training found gifts more appropriate ($p = .013$) and more influential ($p = .013$) than did staff physicians. For the subset of physicians who said they would accept a particular gift, more than 90% were willing to have it "generally known" for all 10 gifts. Less than 10% of these physicians felt the gift might influence prescribing except in the cases of the dinner (16%), the video (19%), the trip (24%), and the medication sample (59%).

DISCUSSION

Patients are more likely than their physicians to believe that acceptance of pharmaceutical gifts may influence prescribing behavior. In our study patient-physician differences concerning the influence of gifts were present even for gifts that existing guidelines consider acceptable (pen, textbooks, and meals associated with educational conferences).^{13,14} Overall, patients tended to find gifts less appropriate than did their physicians, though findings varied among gifts.

The best predictor of a patient feeling gifts were inappropriate was the belief that gifts might influence prescribing. Yet, the percentage of patients in our study finding gifts influential may be less than that of other populations. In one study, 70% of the patients believed gifts sometimes or frequently influence prescribing.¹² If this is the case, perceptions of appropriateness may differ even more among patients and physicians in other settings.

Our findings may have implications for the public image of the medical profession. Twenty-four percent of those patients who were unaware of such gifts and 18% of all patients indicated that their perception of the medical profession changed. Because they found gifts less appropriate and more influential, their perceptions most likely became more negative.

We found that more than 90% of physicians accepting a gift follow the "willing to have it generally known" criteria (i.e., indicated they were willing to have it generally known), even though most are unaware of it as a guideline. If this standard is to help physicians appraise patient attitudes, it most likely overestimates the appropriateness of the gifts as viewed by patients. Physicians may not be cognizant of their patients' disapproval of some of these gifts.

Strengths of our study include directly comparing both patient and physician attitudes, sampling two different health care systems, and visually displaying the gifts. However, our study has several limitations. The patients from the civilian center were a convenience, rather than random,

sample. Nevertheless, they reflect the demographic population of the clinic from which they were drawn. A third of physicians did not respond to the survey. We cannot exclude the possibility that they may represent a group who feel pharmaceutical gifts are either more or less appropriate than those who responded. The use of a military facility, with additional federal guidelines on accepting gifts from industry, might also lessen the magnitude of differences in appropriateness between patients and physicians.

Despite these limitations, our study strongly suggests that patients consider pharmaceutical gifts more influential and less appropriate than do their physicians. Physicians may want to consider this in choosing their interactions with pharmaceutical companies. Although guidelines appear to alter how physicians feel about these gifts, guidelines from professional medical organizations are not well known. Future guidelines may be more successful with better dissemination and should further consider the potentially different viewpoints of patients and their providers.

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REFERENCES

1. Lexchin J. Interactions between physicians and the pharmaceutical industry: what does the literature say? *Can Med Assoc J*. 1993;149:1401-7.
2. Lurie N, Rich EC, Simpson DE, et al. Pharmaceutical representatives in academic medical centers: interaction with faculty and housestaff. *J Gen Intern Med*. 1990;5:240-3.
3. 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.
4. Reeder M, Dougherty J, White LJ. Pharmaceutical representatives and emergency medicine residents: a national survey. *Ann Emerg Med*. 1993;22:1593-6.
5. Woosley RL. Centers for education and research in therapeutics. *Clin Pharmacol Ther*. 1994;55:249-55.
6. Wolfe SM. Why do American drug companies spend more than \$12 billion a year pushing drugs? Is it education or promotion? *J Gen Intern Med*. 1996;11:637-9.
7. Randall T. Kennedy hearings say no more free lunch—or much else—from drug firms. *JAMA*. 1991;265:440-2.
8. Waud DR. Pharmaceutical promotions—a free lunch? *N Engl J Med*. 1992;327:351-3.
9. Margolis LH. The ethics of accepting gifts from pharmaceutical companies. *Pediatrics*. 1991;88:1233-7.
10. Chren MM, Landefeld CS, Murray TH. Doctors, drug companies, and gifts. *JAMA*. 1989;262:3448-51.
11. Mainous AG, Hueston WJ, Rich EC. Patient perceptions of physician acceptance of gifts from the pharmaceutical industry. *Arch Fam Med*. 1995;4:335-9.
12. Blake RL, Early EK. Patient's attitudes about gifts to physicians from pharmaceutical companies. *J Am Board Fam Pract*. 1995; 8:457-64.
13. American College of Physicians. Physicians and the pharmaceutical industry. *Ann Intern Med*. 1990;112:624-6.
14. Council on Ethical and Judicial Affairs of the American Medical Association. Gifts to physicians from industry. *JAMA*. 1991;265: 501.