Interactions with the pharmaceutical industry: a survey of family medicine residents in Ontario

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Abstract • Résumé

Objective: To determine the attitudes, knowledge and practices of family medicine residents relating to the pharmaceutical industry and to assess the effectiveness of existing guidelines on appropriate interactions with the pharmaceutical industry.

Design: Survey by mailed questionnaire.

Setting: Ontario.

Participants: All 262 second-year family medicine residents in Ontario (seven centres); 226 (86.3%) responded.

Results: Fifty-two (23.0%) of the residents who responded stated that they had read the CMA policy statement on appropriate interactions between physicians and the pharmaceutical industry. A total of 124 (54.9%) stated that they would attend a private dinner paid for by a pharmaceutical representative; the proportion was not significantly reduced among those who had read the CMA guidelines, which prohibit the acceptance of personal gifts. In all, 186 (82.3%) reported that they would like the opportunity to interact with pharmaceutical representatives in an educational setting, even though several programs now discourage these interactions. Approximately three quarters (172/226 [76.1%]) of the residents indicated that they plan to see pharmaceutical representatives in their future practice. Residents at Centre 2 were significantly more critical of the pharmaceutical industry than those from the other centres. Overall, being aware of, and familiar with, departmental policy or CMA policy on interactions with the pharmaceutical industry did not affect the residents' attitudes or intended future practices.

Conclusion: The presence of guidelines concerning physicians' interactions with the pharmaceutical industry does not appear to have a significant impact on family medicine residents in Ontario.

Objectif : Déterminer les attitudes, les connaissances et les pratiques des résidents en médecine familiale face à l'industrie pharmaceutique et évaluer l'efficacité des directives actuelles sur les relations qui sont de mises avec l'industrie pharmaceutique.

Conception : Sondage par questionnaire postal.

Contexte : Ontario.

Participants : Les 262 résidents de deuxième année en médecine familiale de l'Ontario (sept centres); 226 (86,3 %) ont répondu.

Résultats : Cinquante-deux (23,0 %) des résidents qui ont répondu ont déclaré avoir lu l'énoncé de politique de l'AMC sur les relations appropriées entre les médecins et l'industrie pharmaceutique. Au total, 124 (54,9 %) ont déclaré qu'ils participeraient à un dîner privé payé par un représentant de société pharmaceutique; la proportion n'a pas diminué pour la peine chez ceux qui avaient lu les

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← For prescribing information see page 1344

directives de l'AMC, qui interdisent d'accepter des cadeaux personnels. Au total, 186 (82,3 %) ont signalé qu'ils aimeraient avoir l'occasion de rencontrer des représentants de sociétés pharmaceutiques dans un contexte d'éducation, même si plusieurs programmes découragent maintenant de tels contacts. Environ les trois quarts (172/226 [76,1 %]) des résidents ont indiqué qu'ils envisagent de rencontrer des représentants de sociétés pharmaceutiques dans le cadre de leur pratique future. Les résidents du Centre 2 se sont montrés beaucoup plus sévères à l'égard de l'industrie pharmaceutique que ceux des autres centres. Dans l'ensemble, la connaissance de la politique du département ou de celle de l'AMC sur les relations avec l'industrie pharmaceutique n'a pas joué sur les attitudes des résidents ou leur pratique future prévue.

Conclusion : L'existence de directives sur les relations entre les médecins et l'industrie pharmaceutique ne semble pas avoir d'incidence significative sur les résidents en médecine familiale de l'Ontario.

In Ontario millions of dollars are spent annually on medications. For physicians, the decision of what to prescribe is based on habit, scientific literature, patient preference and the influence of marketing by the pharmaceutical industry.[1-4] The extent of marketing influence has been under scrutiny in recent years.[5-8]

Marketing by the pharmaceutical industry is based on a unique consumer–supplier triad. In this relationship the third party is the physician, who makes the purchasing decisions on behalf of the consumer, the patient.[8] Consequently, physicians have a double responsibility to make well-informed, unbiased choices when prescribing medications. These choices, however, have been shown to be affected by interactions with pharmaceutical representatives,[4,9] acceptance of gifts from drug companies[5,10] and sponsoring by the pharmaceutical industry of continuing medical education (CME) programs[2,11] and research.[3]

Pharmaceutical representatives have a great influence on physicians' prescribing habits.[9] Bower and Burkett[12] surveyed family physicians on their tendency to prescribe generic drugs and their ability to recognize a list of generic and brand-name products. Physicians who rated their reliance on pharmaceutical representatives as low were more likely than those who rated it higher to prescribe generic drugs and more likely to recognize the list of generic drugs. This suggests that a reliance on industry-generated information results in a tendency to prescribe brand names.

Chren, Landefeld and Murray[6] argued that the acceptance of a gift leads to an obligation on behalf of the recipient. Orlowski and Wateska[10] looked at the impact on prescribing habits of all-expense-paid trips to attend industry-sponsored symposia in vacation areas. Although the physicians who attended the symposia did not believe that their prescribing habits would change, prescribing of the marketed drugs was significantly greater in the year after than in the year before the symposia. Bowman and Pearle[11] studied drug prescribing rates before and 6 months after three different commercially sponsored CME courses; in each case the products of the sponsoring company were preferred.

The need for standards that would outline the appropriate interaction of physicians and the pharmaceutical industry has been discussed.[6] In Canada such standards were outlined by the CMA in 1992.[13] Several educational programs, including the internal medicine program at McMaster University, Hamilton, Ont.,[14] and the Faculty of Medicine at Queen's University, Kingston, Ont.,[15] subsequently developed specific guidelines for residents.

We surveyed family medicine residents in Ontario to determine their attitudes, knowledge and practices in relation to the pharmaceutical industry and to assess the effectiveness of current guidelines on appropriate interactions with the pharmaceutical industry.

Methods

A questionnaire was distributed to all 262 second-year family medicine residents in the seven Ontario programs between Oct. 1, 1994, and Feb. 28, 1995. A pilot study of the questionnaire had been conducted, involving 10 of the 29 first-year family medicine residents at Queen's University. Second-year residents were identified through the offices of the program directors. Six weeks after the first mailing a duplicate copy of the questionnaire was sent to nonresponders; a third copy was sent to nonresponders after another 6 weeks.

Information was obtained on attitudes, knowledge and practices related to residents' interactions with pharmaceutical companies and their representatives. Some of the questions were discrete (requiring Yes or No answers), and others required respondents to use a 5-point Likert-type scale to determine whether they agreed with the statements (1 = strongly agree, 5 = strongly disagree). Information on the residents' age, sex and residency program was also obtained.

The study was approved by the Ethics Review Board of Queen's University.

We analysed the results using EpiInfo, version 6 (USD, Inc., Stone Mountain, Ga.). The mean responses were tabulated for each question and frequency distributions of responses generated. We used the Mantel–Haenszel χ^2 test for group comparisons; a p value of less than 0.05 was considered significant.

Results

Questionnaires were returned by 226 of the residents

(116 men, 110 women), for a response rate of 86.3%. The response rates at the seven centres are detailed in Table 1. The mean age of the respondents was 28 years (extremes 24 and 41 years).

The responses to the questions about knowledge, attitudes and practices relating to interactions with the pharmaceutical industry are outlined in Table 2. Most (186 [82.3%]) of the respondents agreed that residents should be able to interact with pharmaceutical representatives in an educational setting where faculty members are present. Over half felt that literature provided by pharmaceutical representatives is useful (132 [58.4%]) and stated that they would attend a private dinner with a representative paid for by the company (124 [54.9%]). Just over one third (81 [35.8%]) felt that gifts from representatives to physicians lead to higher drug costs for patients.

Most (172 [76.1%]) of the respondents stated that they plan to see pharmaceutical representatives in their future practice. About half (116 [51.3%]) said that they currently have one or more interactions (including individual and group interactions) with such representatives each month. Of these residents 92 (79.3%) stated that they plan to see pharmaceutical representatives in their future practice. Of the 110 residents who reported currently having fewer than one interaction per month 80 (72.7%) stated that they plan to see representatives in their future practice.

The respondents were divided on whether pharmaceutical representatives influence their prescribing habits (76 [33.6%] agreed, 52 [23.0%] were uncertain, and 98 [43.4%] disagreed). In terms of current habits 161 (71.2%) responded that they generally use generic drug namess rather than brand names when prescribing. In total, 209 (92.5%) agreed that the content of CME activities should be set by physician organizers rather than by the pharmaceutical company sponsoring the event.

Fifty-two respondents (23.0%) had read the CMA guidelines on appropriate interactions between physicians and pharmaceutical representatives. Six of the seven centres had a written policy or referred in writing to established guidelines such as the CMA guidelines; one centre had no policy or written referral. Of the residents 60 (26.5%) replied that their program had a written policy or referral. Almost two thirds (137 [60.6%]) of the respondents agreed that residency programs should include sessions on interactions between physicians and pharmaceutical representatives.

Table 1: Response rates among family medicine residents in Ontario to survey on interactions with the pharmaceutical industry

Centre	No. of residents	No. (and %) who responded	% of all respondents *n* = 226
1	36	31 (86.1)	13.7
2	13	12 (92.3)	5.3
3	35	31 (88.6)	13.7
4	102	90 (88.2)	39.8
5	28	26 (92.9)	11.5
6	36	28 (77.8)	12.4
7	12	8 (66.7)	3.5

Demographic differences

The male residents were more likely than the female residents to respond that they would attend a private dinner with a pharmaceutical representative paid for by the company (73 [62.9%] v. 52 [47.3%]; $p = 0.02$). The CMA guidelines had been read by 20 (18.2%) of the women and 32 (27.6%) of the men; this difference was not statistically significant.

Comparisons by centre are presented in Table 3. Most of the residents at Centres 1 and 2 (67.7% and 91.7% respectively) were aware that their program had a written policy or a written referral to established guidelines, as compared with 21.1% or less in the other five centres ($p < 0.0001$). Only in Centres 2 and 7 had half or more of the residents read the CMA guidelines; in addition, residents in these two centres were the least likely to agree that literature provided by pharmaceutical representatives was useful. The residents at Centre 2 were the least likely to attend a private dinner with a pharmaceutical representative paid for by the company or to plan to see a representative in future practice.

Program policies

Six of the seven programs had a written policy on interactions with the pharmaceutical industry or had a referral in writing to established guidelines. However, only Centres 1 and 2 were reported to hold a formal session for residents on their policy. Residents at these two centres seemed to have a greater awareness of their institution's policy than the other residents (Table 3). However, being aware of the policy and having read the CMA guidelines did not seem to affect whether residents would accept a gift from a pharmaceutical representative (as indicated by the proportion of residents who stated that they would agree to go to dinner with a representative) or whether they would plan to see representatives in their future practices.

Discussion

As revealed by our survey, most family practice residents in Ontario are not familiar with the CMA guidelines regarding interactions between physicians and the pharmaceutical industry. This unfamiliarity is probably attributable to inadequate teaching of these guidelines in residency programs and a feeling among residents that the guidelines are not important.

Residents' actions appear to oppose those recommended in the CMA guidelines. Most of the residents in our survey stated that, if given the opportunity, they would attend a private dinner with a pharmaceutical representative paid for by the company. If this behaviour constitutes the acceptance of a gift, then it is prohibited by the CMA guidelines, which state that "practising physicians should not accept personal gifts from the pharmaceutical industry or similar bodies."

Does reading guidelines change behaviour? This did not seem to make a difference in our survey in terms of behaviour or intentions between those who had read the CMA guidelines and those who had not.

Residents appear to have a strong desire to interact

Table 2: Responses to statements and questions on attitudes, knowledge and practices relating to interactions with the pharmaceutical industry

Statement	Response and Likert score; no. (and %) of residents: Strongly agree (1)	Agree (2)	Uncertain (3)	Disagree (4)	Strongly disagree (5)	Mean Likert score
Literature provided by pharmaceutical representatives (PRs) is useful	11 (4.9)	121 (53.5)	47 (20.8)	42 (18.6)	5 (2.2)	2.56
Interactions with PRs influence your prescribing habits	2 (0.9)	74 (32.7)	52 (23.0)	86 (38.1)	12 (5.3)	3.14
More teaching in medical school is needed on relationship between the pharmaceutical industry and physicians	14 (6.2)	89 (39.4)	43 (19.0)	75 (33.2)	5 (2.2)	2.86
Residency programs should include sessions on interactions between physicians and PRs	17 (7.5)	120 (53.1)	35 (15.5)	51 (22.6)	3 (1.3)	2.57
Decisions on content of continuing medical education (CME) activities should be made by physician, not by sponsoring company	138 (61.1)	71 (31.4)	9 (4.0)	6 (2.7)	2 (0.9)	1.51
PRs should be permitted to interact with residents in an educational setting where faculty members are present	41 (18.1)	145 (64.2)	22 (9.7)	17 (7.5)	1 (0.4)	2.10
Gifts from PRs to physicians lead to higher drug costs for patients	23 (10.2)	58 (25.7)	90 (39.8)	48 (21.2)	7 (3.1)	2.81
Pharmaceutical companies should prove cost-effectiveness as well as effectiveness and safety of a drug before it is approved	45 (19.9)	105 (46.5)	40 (17.7)	33 (14.6)	3 (1.3)	2.31

Question	Response; no. (and %) of residents: Yes	No	Uncertain
Have you read the CMA guidelines on appropriate interaction between physicians and PRs?	52 (23.0)	168 (74.3)	6 (2.7)
Do you generally use generic names rather than brand names when prescribing?	61 (71.2)	53 (23.5)	12 (5.3)
If given the opportunity, would you attend a private dinner with a PR that was paid for by a pharmaceutical company?	24 (54.9)	57 (25.2)	45 (19.9)
Do you accept patient education items from PRs?	205 (90.7)	10 (4.4)	11 (4.9)
Does your residency program have a policy on appropriate interaction between residents and PRs?	60 (26.5)	75 (33.2)	91 (40.3)
Do you plan to see PRs in your office in future practice?	172 (76.1)	12 (5.3)	42 (18.6)

with pharmaceutical representatives. This would help to explain why the passive administration of guidelines has not had a significant impact on physician behaviour.[16] Many of the residents in our survey stated that they find the information provided by the pharmaceutical industry to be useful and believe that company representatives should be allowed to interact with them in educational settings. Moreover, most of the residents who reported currently having limited interaction with representatives still intended to see them in their future practice.

Residents did, however, demonstrate an awareness that the pharmaceutical industry can have an adverse effect on prescribing habits. Over 90% agreed that CME content should be set by physician organizers and not by the sponsoring company. In contrast to previous studies in which physicians have denied the influence of marketing,[9] the physicians in our study were divided on whether pharmaceutical representatives influence their prescribing habits.

Residents from Centre 2 differed significantly from the other residents: fewer stated that literature from pharmaceutical representatives is useful, that they would dine with a representative at the expense of the company and that they planned to see representatives in their future practice. These differences may be explained by the fact that an increased proportion of the residents at Centre 2 had read the CMA guidelines and were aware that their centre had a policy. Although the program at Centre 2 was not the only one to offer its residents an educational session on how to interact with the pharmaceutical industry, it was the only one to disallow lunches sponsored by drug companies at its formal teaching sessions. Awareness of policies and guidelines does not seem to lead to behavioural change; however, formal discussion of the issues and role-modelling by faculty members may increase residents' compliance.

Conclusions

The literature suggests that although physicians believe that their prescribing habits are not influenced by the pharmaceutical industry, it is clear that they are.[1–4] The presence of guidelines concerning physicians' interactions with the pharmaceutical industry does not seem to change the behaviour of family medicine residents. Whether residency programs should adopt a paternalistic stance on this issue through the enforcement of policy[17] or whether policies should be revised to reflect more closely actual attitudes and behaviour is unclear. However, increased discussion of these issues with residents may lead to an increased awareness and hopefully to more informed decision-making regarding the pharmaceutical industry and interactions with its representatives.

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Table 3: Comparison of responses by centre

Response	Centre; no. (and %) of residents who answered positively*						
	1 *n = 31*	2 *n = 12*	3 *n = 31*	4 *n = 90*	5 *n = 26*	6 *n = 28*	7 *n = 8*
Literature provided by PRs is useful	21 (67.7)	3 (25.0)†	14 (45.2)	50 (55.6)	19 (73.1)	23 (82.1)	2 (25.0)†
I have read the CMA guidelines on appropriate interaction between physicians and PRs	10 (32.3)	7 (58.3)†	7 (22.6)	18 (20.0)	3 (11.5)	6 (21.4)	4 (50.0)†
If given the opportunity, I would attend a private dinner with a PR that was paid for by a pharmaceutical company	18 (58.1)	1 (8.3)†	14 (45.2)	55 (61.1)	10 (38.5)	22 (78.6)	4 (50.0)
My residency program has a policy on appropriate interaction between residents and PRs	21 (67.7)†	11 (91.7)†	4 (12.9)	19 (21.1)	0 (0)	5 (17.9)	0 (0)
I plan to see PRs in my office in future practice	25 (80.6)	6 (50.0)†	21 (67.7)	73 (81.1)	19 (73.1)	20 (71.4)	8 (100.0)

*Residents who responded Yes, Agree or Strongly agree are included here.
†$p < 0.05$ for comparison with residents in programs at the other centres.

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Nov. 8, 1996: Society of Teachers of Family Medicine Fall Session (cosponsored by the Association of American Medical Colleges)

San Francisco

Ray Rosetta, meetings and programs director, Society of Teachers of Family Medicine, 8880 Ward Pkwy., PO Box 8729, Kansas City MO 64114; tel 816 333-9700 or 800 274-2237, ext. 4512; fax 816 333-3884; admstaff@stfm.org; website: http://stfm.org

Du 8 au 11 nov. 1996 : 3e congrès de la Féderation française de médecine générale

Strasbourg, France

Site web : http://myweb.worldnet.fr/~amgit54/congresMG/homepage.html

Nov. 13–15, 1996: 3rd International Conference on Information Technologies in Occupational Safety and Health Information, Training and Education

Brussels, Belgium

Association nationale pour la prévention des accidents du travail, rue Gachardstraat 88 B4, 1050 Brussels, Belgium; tel 32 2 648-0337, fax 32 2 648-6867; Information. Technologies@Anpat-Nvva.be

Nov. 14–16, 1996: Coming Together to Meet the Challenges of Fetal Alcohol Syndrome/ Neonatal Alcohol Syndrome — Identifying Issues and Finding Solutions

Vancouver

FAS/NAS Conference, Interprofessional Continuing Education, University of British Columbia, Room 105, 2194 Health Sciences Mall, Vancouver BC V6T 1Z3; tel 604 822-2626, fax 604 822-4835; path@unixg.ubc.ca

Nov. 14–16, 1996: Ontario College of Family Physicians 34th Annual Scientific Meeting

Toronto

Ontario College of Family Physicians, 2630 Skymark Ave., Mississauga ON L4W 5A4; tel 905 629-1600, fax 905 629-4810

Nov. 14–17, 1996: American Pain Society 15th Annual Scientific Meeting — Pain and Disease: Causes, Consequences and Solutions

Washington

American Pain Society, 4700 W Lake Ave., Glenview IL 60025-1485; tel 847 375-4715, fax 847 375-4777; aps@dial.cic.net

Nov. 15–16, 1996: Translating Physics into Clinical Practice

Toronto

Continuing Education, Faculty of Medicine, University of Toronto, Rm. 121, 150 College St., Toronto ON M5S 1A8; tel 416 978-2719, fax 416 978-2200

Nov. 15–17, 1996: Rational–Emotive Behaviour Therapy intensive training program

Toronto

Study credits available.

Dr. Sam Klarreich, tel 416 861-0716

Nov. 15–20, 1996: 1st Symposium of Latin American Researchers in Biomedical Sciences

San Juan, Puerto Rico

Dr. Jose V. Torres, president, Planning Committee (SILCIBIO), Department of Medical Microbiology and Immunology, School of Medicine, University of California, Davis CA 95616; tel 916 752-3157; jvtorres@ucdavis.edu

Nov. 17–21, 1996: Managing Change — Management Skills Workshop I (sponsored by the American College of Physician Executives, the Society of Teachers of Family Medicine, the Association of Departments of Family Medicine, the Society of Teachers of Family Medicine Foundation and the American Academy of Family Physicians)

San Antonio, Tex.

Ray Rosetta, meetings and programs director, Society of Teachers of Family Medicine, 8880 Ward Pkwy., PO Box 8729, Kansas City MO 64114; tel 816 333-9700 or 800 274-2237, ext. 4512; fax 816 333-3884; admstaff@stfm.org; website: http://stfm.org

Nov. 20–23, 1996: MEDICA '96 — World Forum for Doctor's Surgeries and Hospitals: 28th International Trade Fair with Congress

Düsseldorf, Germany

Canadian German Chamber of Industry and Commerce, Inc., 1410–480 University Ave., Toronto ON M5G 1V2; tel 416 598-1524, fax 416 598-1840

Nov. 21–23, 1996: Supporting Women, Supporting Ourselves — a Conference on Reproductive Psychiatry (cosponsored by St. Paul's Hospital Reproductive Psychiatry Program and BC Women's Reproductive Psychiatry Program)

Vancouver

British Columbia Reproductive Care Program, 207–1909 W Broadway, Vancouver BC V6J 1Z3; tel 604 737-7270, fax 604 737-2517

Nov. 24–27, 1996: 1st International Conference on Health and Culture in Adolescence (organized by the Israel Society for Adolescent Health)

Jerusalem, Israel

Dr. E. Chigier, chairman, organizing committee, Dan Knassim Ltd., PO Box 1931, Ramat-Gan 52118, Israel; tel 972 3 613-3340, fax 972 3 613-3341

Nov. 25–28, 1996: C-PIC '96 — Canada's Pharmaceutical Industry Conference

Toronto

Keynote speaker: Hon. Jim Wilson

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