

Activities of Pharmaceutical Industry Representatives at a Major Teaching Hospital

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INTRODUCTION

Reported patented and non-patented Canadian drug sales for 1993 totalled \$5.4 billion.¹ Not surprisingly, at least one-half of the pharmaceutical industry promotional budget is directed towards the support of pharmaceutical industry representatives (PIR) whose primary responsibility is to promote drug products through a variety of lobbying or "detailing" activities.²⁻⁵ With about 4,000 PIR in Canada, the average physician can apparently expect to receive about 25 visits per year.⁶ Physicians and pharmacists traditionally use the PIR as a source of information on new products. Although industry does disseminate a significant amount of scientific knowledge, PIR activities can also have a negative impact on cost-effective and rational drug prescribing.^{7,8}

Drug expenditures in our 1000-bed, tertiary hospital totalled approximately \$12 million in 1993. PIR are very active in the promotion of drugs at this institution as a consequence of its size, the diversity of services and the formulary, and because of our major commitment towards the training of medical, pharmacy, nursing, and other paramedical students. As has been described elsewhere,⁹ concern was being expressed in our institution that aggressive drug promotional activities were interfering with patient care activities, formulary management and cost containment efforts. In response to this concern, new policies governing on-site PIR activities were developed and approved by the Vancouver Hospital and Health Sciences Centre (VHHSC) Drugs and Therapeutics Committee and the Medical Advisory Committee and implemented in April 1991. These policies encompass some principles subsequently published by the Canadian Medical Association¹⁰ and were used in the creation of recommendations published by Health and Welfare Canada.¹¹ The policies are designed to better control the activities of PIR while on the hospital site.

Despite the widespread activities of PIR at this and other hospitals, we are unaware of any previously

published reports which characterize the interaction between PIR and health professionals in an acute care, Canadian hospital setting. Since we had recently implemented a new PIR policy at this site, we were particularly interested in achieving a better understanding of the nature of this interaction under the influence of this intervention. The objectives of this study were thus to: 1) characterize the incidence of pharmaceutical industry representative visits at this hospital; 2) assess these visits according to the number of pharmaceutical companies represented, the discipline of the health professionals contacted, the type of promotional activity undertaken, and the drug class being detailed; and 3) determine whether there is any apparent relationship between drug classes detailed and expenditure patterns in the hospital and the country.

METHODS

This study was conducted as a retrospective, observational assessment of PIR activities at VHHSC, a 1,000 bed, tertiary care, referral and teaching hospital.

In March 1991, our Drug and Therapeutics and Medical Advisory Committees approved new policies aimed at controlling the activities of the PIR while on hospital grounds. The new policies require that PIR register upon entering the hospital grounds and wear an identification badge for the duration of their visit. In addition, the

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policies specify the nature of approved promotional activities, which hospital personnel can be detailed, and how the policies will be enforced. The new policies were distributed by mail, and in person, to all PIR conducting business at this hospital. New PIR receive a copy of the policies upon registration.

Under the policy, PIR are required to register in writing at the General Office of the Department of Pharmacy upon arrival and departure from the hospital or any building on the hospital grounds. For this purpose, a PIR Registration Logbook is maintained by office personnel. When registering, a PIR must provide information regarding the date and time of entry and departure from hospital grounds, his/her name, the pharmaceutical company represented, the name of contact person(s) at the hospital, the intent of visit (including identification of the drug(s) to be detailed), a copy of any literature to be distributed, and a signature.

For the purposes of this study, we assessed all recorded visits during the first five months following implementation of the policy.

A PIR visit was defined as a recorded episode in which a representative entered the hospital grounds to meet with hospital personnel for any purpose. The hospital personnel met by these representatives were designated *contact person(s)*. For each visit, an *activity* was identified and classified as: 1) *individual detailing* - the PIR met with hospital personnel for the purpose of promotion of a specific drug or drugs (as identified in the logbook); 2) *hosting an inservice*-the PIR coordinated a group continuing education session (e.g., noon lunch meeting) in which a speaker, video or another vehicle was used to disseminate drug information to hospital personnel; 3) *rounds attendance* - the PIR was present at a general or subspecialty rounds (e.g., grand rounds) but was not responsible for coordinating this event; 4) *miscellaneous*- another activity took place not meeting the previous definitions, and 5) *unknown* - the PIR did not identify the intent of their visit in the logbook (i.e., an incomplete registration). *Visit duration* was considered to be the interval between the sign in and sign out times.

Since the policies were vigorously enforced, we assumed that the PIR Registration Logbook was an accurate and complete record of all PIR activities on site during the tenure of the study. If only one contact person was named in this record, we assumed that the PIR met with that person only. We also assumed that the PIR left the hospital grounds immediately upon sign out and that the times recorded in the logbook were an accurate reflection of the visit duration. In the uncommon event that a PIR did not document the intent of their visit and we were familiar with the drug product(s) this individual

detailed, we assumed that the PIR was on site to promote these products.

To evaluate the relationship between PIR activities and drug expenditures, PIR visits were grouped according to American Hospital Formulary System (AHFS) drug class, ranked according to number of visits recorded, and then compared to the drug expenditure rank order according to reported patented drug product revenue¹² and to the VGH drug expenditure for the 1991 fiscal year.

For the purposes of analysis, data from the PIR Registration Logbook were transferred to a relational database program (dBase IV[®] version 1.5, Borland). Since information from the PIR logbook was handwritten, information was subject to legibility. For each PIR visit, we recorded the visitation date, time and duration, PIR name, pharmaceutical company name, discipline and hospital service of the contact persons (for individual detailing), the detailed drug product(s) name, and AHFS class and the activity type. If a visit was associated with more than one activity or drug product, these were also recorded.

Descriptive and inferential statistical analysis was accomplished with the use of SPSS/PC+ for Windows[®], Version 6.0 (SPSS Inc., 1993). Drug data were grouped by AHFS class and disciplines were grouped (physician, pharmacist, nurse or other paramedical personnel) for analysis purposes. Continuous variables were compared with Student's *t*-test or one-way ANOVA with Bonferroni post hoc multiple comparison. Categorical variables were tested with the Chi-Square test and Fisher's exact test (two-tailed). The Spearman rank order coefficient test was used to compare the relative ranking of visits and drug expenditures. The level of significance was set at $p < 0.05$.

RESULTS

During the five-month study period, 845 visits were recorded in the PIR Registration Logbook. This reflected an average of 169 recorded visits per month or 2028 recorded visits per annum.

Fifty-eight companies (55 pharmaceutical companies, three medical device companies) were represented in the logbook. There were no documented visits from generic drug companies. A mean of 14 visits (range 1-72) per company was documented. There was a difference in the incidence of visits across companies ($p < 0.0001$). Sign in and sign out times were available for 803 (95%) of the recorded visits. The mean duration of each visit was 1.8 hours (median 1.2 hours; range 0.08 - 25; 95% confidence interval 1.7 - 1.9). There was a difference in the mean duration of a visit across companies ($p = 0.001$).

Figure 1 characterizes PIR visits according to contact person groups. The discipline of the contact person(s) could be identified in 82% (695/845) of recorded visits. PIR were almost five times more likely to visit a physician than any other health professional in the hospital ($p < 0.0001$). There was no difference in the duration of each visit for physicians (mean 1.79 hours (SD 2.12)),

pharmacists (mean 1.52 hours (SD 1.54)), nurses (mean 1.24 hours (SD 0.73)) or other paramedical personnel (mean 1.0 hours (SD 0.96)) ($p = 0.26$). However, physician contact personnel tended to have the widest range (0.8 hours - 25 hours) of visit duration than other personnel (pharmacist 0.17 - 8.0 hours; nurse 0.08 - 3 hours; other paramedical personnel 0.08 - 2.6 hours). PIR recorded a sum of 1056 hours of visits for physicians versus 160 hours of visits for all other health professionals combined. This represents a seven-fold difference in visitations across these two groups.

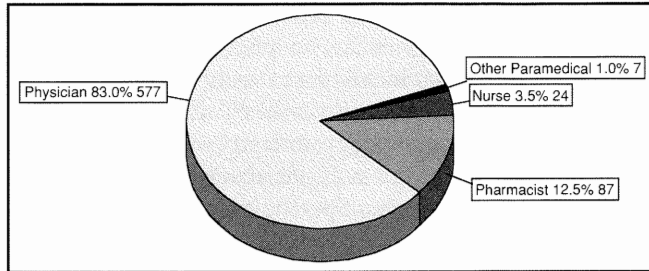


Figure 1: Individual Detailing According to Contact Persons

Figure 2 illustrates the relative distribution of recorded activities conducted by the PIR. Individual detailing accounted for over half of all recorded activities. Attendance at general or subspecialty rounds was the next most commonly documented purpose of a visit (11%) followed by hosting of inservices (8%). Individual detailing combined with involvement with inservice hosting or rounds attendance was observed in 8% of visits. The relative difference in the incidence of activity type was statistically significant ($p < 0.0001$). No specific activity could be established for 12% of visits.

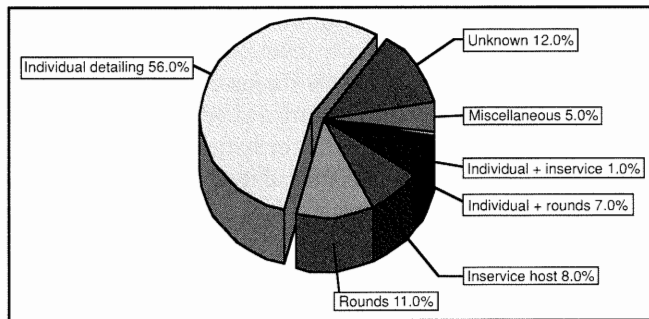


Figure 2: PIR Visits According to Activities Conducted

Figure 3 shows the distribution of activities according to drug class. Of the 845 recorded PIR visits, 517 (61%) involved the detailing of a specific drug product. Of these visits, cardiovascular drugs were the most commonly detailed drug class, representing 33% of all drug product-specific visits. Antibiotics were the next most frequently promoted drug class (23%) followed by central nervous system drugs (18%), hormones (8%), gastrointestinal drugs (5%), and other drugs (13%). The difference between incidence of visits by drug class was statistically significant ($p < 0.0001$).

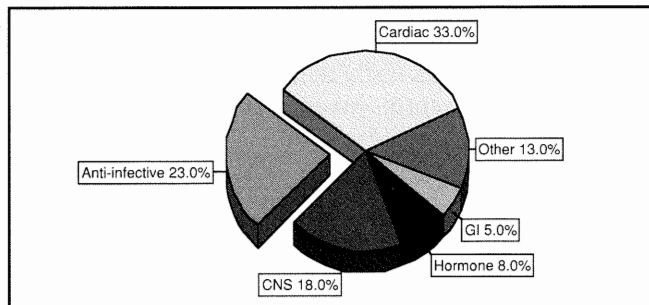


Figure 3: PIR Activities According to AHFS Drug Class Detailed During Visits Which Were Known to be Drug-Related

The PIR visit duration for cardiovascular drugs (mean 1.79 hours (SD 2.12)) was longer than that for central nervous system drugs (mean 1.52 hours (SD 1.54)), and the other drug category (mean 1.24 hours (SD 0.73)) (mean 1.0 hours (SD 0.96)) ($p = 0.0024$). No other differences across drug classes were observed. PIR recorded a sum of 367 hours of visits for cardiovascular drugs, 206 hours of visits for antibiotics, 125 hours for central nervous system drugs, and 169 hours for all other drugs combined. Thus, more PIR devoted more time to the promotion of cardiovascular and anti-biotic drugs than all other classes combined.

Table I: Drug Class Rank by PIR Visits to VGH, Canadian Revenue, and VGH Drug Budget Expenditure

	Patented drug revenue (\$ million) ¹	VGH expenditures (\$ thousand) ²	PIR visits (% of total)
Cardiac drugs	325	412	33
Anti-infectives	307	3274	23
GI drugs	254	313	5
CNS drugs	163	987	18
Hormones	88	223	8

1 Patented Medicine Prices Review Board for the year ending Dec 31, 1991

2 Vancouver Hospital and Health Sciences Centre drug expenditures for fiscal year 1991

Table I illustrates the relative rank order of drug class by expenditure and PIR visits. Cardiac drugs and anti-infectives represented the two most costly drug classes and comprised over half of all PIR visits during the study. When comparing the drug class rank order of visits to Canadian and hospital drug expenditures, there

was a similar rank order trend. However, a statistically significant relationship could not be established ($p=0.566$ VHHSC, $p=0.261$ Canadian).

DISCUSSION

This study provided us with a useful overview of the characteristics of PIR activities at our hospital immediately after the implementation of new policies governing their activities. It was apparent from our results that a large number of pharmaceutical companies are expending a significant amount of personnel and resources to conduct various activities aimed at increasing drug sales. To our knowledge, this is the first published report of such activities in a large Canadian teaching hospital. Although we believe the results of the present study could generally be extrapolated to other similar institutions, we are unable to make direct comparisons.

Individual detailing of physicians represented the most common activity conducted by the PIR. Of interest however was the number of visits to the hospital which were devoted to the attendance at or hosting of an internal continuing education event. Rounds attendance alone accounted for almost one in every five visits. In almost half of these visits, the representative identified that individual detailing was also undertaken. Thus, rounds appears to a good method of making contact with an individual practitioner for the purpose of follow-up, one-to-one detailing. Almost one in every ten visits to the hospital was devoted to the hosting of an inservice. This finding reveals the magnitude of so-called "drug lunches" that were sponsored by industry in this hospital at the time of the study. While some would argue that the industry has a right to participate in educational affairs offered by a public institution, the authors believe that these representatives attend these events for marketing reasons, not for academic advancement. Since a primary goal of the pharmaceutical industry is making a profit, attendance at internal educational events must be considered a good "return on investment", otherwise this group would not be able to justify this activity. Since we believe that industry sponsorship of internal educational affairs can constitute a conflict of interest and potentially breach patient, health care worker and institutional confidentiality, the Department of Pharmacy at VHHSC has discontinued the practice of permitting pharmaceutical industry representatives to sponsor or attend our departmental rounds and internal continuing education programs. We have; however, scheduled 15-minute industry update sessions every two weeks to give representatives an opportunity to present information regarding new drug products to pharmacists. We believe these sessions are useful for pharmacists to ensure that they are familiar with how industry is promoting their products.

Pharmaceutical industry representatives tended to target physicians more than any other health professionals in the hospital. This is not a surprising finding when one considers that physicians are responsible for the actual prescribing of drugs, despite the multidisciplinary approach to patient care, formulary management and drug policy making in this institution. Pharmacists were the second most commonly lobbied members of the health care team. In view of their considerable influence on the prescribing of drugs in this hospital, this was not unexpected. The actual incidence of visits with pharmacists was low; however, and this was likely due to a number of factors. By unwritten policy, industry representatives are not permitted to detail staff pharmacists in this hospital during working hours. Specific pharmacists (e.g., administrative and clinical pharmacotherapeutics specialists) do meet with industry representatives on occasion to discuss drug issues; however, most (including the senior author) no longer make this a routine practice. It is also possible that low reporting of visits occurred because representatives occasionally meet with pharmacists during a visit which has been documented as having a different purpose (i.e., meeting a physician).


It is interesting to note that only innovative pharmaceutical companies were represented in the five months of documented visits that we analyzed. We were aware of some generic company representative visits which were not recorded in the logbook. These involved direct interactions with members of the pharmacy department for distribution and purchasing-related issues. However, it is apparent that generic drug companies are not expending resources on physician visit-based promotion of their products. It is also apparent from this study that generic drug companies are not as active at this hospital as direct supporters of internal continuing education.

It was not surprising that cardiac drugs and anti-infective agents were the most commonly detailed drug classes in this institution. Anti-infectives are the single largest contributor to our annual drug expenditures at this site.¹³ In addition, there are more anti-infective agent choices available than any other drug class in Canada, thus the competition is significant.¹ The second largest contributor to our annual drug expenditures are immunosuppressive drugs (approximately \$3 million). As some pharmaceutical companies have the monopoly on these drugs (e.g., cyclosporine), promotion would seem unnecessary. Cardiac drugs are obviously widely used in this hospital, although their relative contribution to the annual expenditures is only a tenth of the magnitude of anti-infectives. Nevertheless, their use is widespread and, in many cases, chronic. Promotion within the hospital will no doubt influence prescribing within and outside of the institution. Since this class constitutes

the major source of patent drug revenue in Canada, we have to expect it to demand the greatest attention.

There were limitations to the study. We relied on the logbook as our only source of information regarding PIR activities. It is possible that representatives were meeting with health care personnel at this hospital without registering and thus an underreporting of activities may have ensued. We believe; however, that this would occur only infrequently as hospital staff were quite diligent at ensuring compliance with the policies. In some cases, the duration of the visit was unexpectedly long and this may have been due to the representative performing multiple activities or neglecting to return the tag and signing out in a timely matter. Unfortunately, information recorded in the logbook was not specific enough to allow us to differentiate between these events. The study was also conducted immediately following implementation of new policies. It is therefore possible that compliance with the policies and the general nature of activities could change with time. We calculated an average incidence of registered visits of 150 per month for both 1992 and 1993; therefore, we believe that the data accurately reflect the majority of activities conducted at this hospital at the time of the study.

In summary, this study represents the first published report of PIR activities in a large, Canadian teaching hospital. Recognition of the magnitude and nature of these practices will assist us in understanding this phenomenon and may help in determining how best to

manage the interaction between industry and health care workers in the institutional setting. 

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