THE PROMOTION OF PRESCRIPTION DRUGS: INFLUENCING PHYSICIAN’S CHOICE BEHAVIOUR

Growing interest has been directed to the role pharmaceutical sales representatives play in influencing physician’s choice behavior. To examine this relationship, in-depth interviews were conducted with 11 physicians from Nova Scotia to understand how they perceived the working relationship between themselves and pharmaceutical sales representatives. Three themes emerged consistently suggesting an appreciation/tolerance relationship, the use of several weapons of influence, and physician Irks and Asks. We conclude by identifying policy implications, as well as an agenda for research.

The pharmaceutical trade is a booming business. Global pharmaceutical sales have been on the rise with sales growing 12% in 2001 to over $360 billion, with North American sales making up almost half of this (Mullin, 2002; Kelley, 2002). Roughly 4,000 new pharmaceutical drugs are in development, each attempting to come to market in Canada, all hoping to improve patient quality of life (Rao, 2000). As these new drugs come to the market, competition increases and pharmaceutical companies must work harder to preserve market share.

The purpose of this paper is to examine the role that pharmaceutical sales representatives (PSRs) play in influencing physician’s choice behavior. It is important to examine this relationship because pharmaceutical industry marketing tactics have greatly changed over the last decade. They have become much more aggressive and intense (Strout, 2001; Raton & Ross, 2002) with pharmaceutical companies now devoting more money to the promotion and marketing of their drugs (Wilkes, Bell & Kravitz, 2000).

While this method of marketing is widely used in the pharmaceutical industry, an extended search of various business literature and journals indicates a dearth of research in this particular area. Exceptions include, Andaleeb and Tallman (1996) who surveyed Pennsylvania physicians (n = 95) about their relationship with PSRs. They found physicians reported friendly relationships with representatives but felt they could get needed information from other sources. They also found that the selling approach used by PSRs was not seen by physicians as being manipulative. Further, Gonul, Carter, Petrova, and Srinivasan (2001) completed a recent research study on PSRs in the United States and claimed to be the first attempt at an exploratory study of the effects of personal selling to physicians. Using a panel of physicians (n = 157), the authors investigated how pricing and promotional activities influenced prescription choice behavior. They found physicians have limited price sensitivity concerning their prescribing behaviours, that PSR detailing and samples have mostly an informative effect on physicians, and physicians with a relatively large number of Medicare patients were less influenced by promotions than other physicians.

However, as Canada has different economic structures, medical/healthcare services, political structures and social attitudes (Feather, 1998; Course, 1995; Bodkin & El-Helou, 2001) these findings may not be generalizable to Canadian physician and PSR relationships. Unlike other countries, Canadian pharmaceutical companies are limited in their approach to promotion. For example, pharmaceutical companies are not permitted to advertise their drugs’ names or how they relate to certain ailments and diseases on television, radio or magazines and newspapers. As a result, the key marketing effort in Canada is around relationship selling with sales representative
‘educating’ physicians about their company’s drugs. Accordingly, Canadian pharmaceutical companies devote a significantly large portion of their marketing budget to ‘wooing’ doctors through various means with companies spending an estimated one billion dollars or $20,000 CDN used per Canadian physician (Foss, 2001).

METODOLOGY

Theoretical Framework

This study used a qualitative methodology based on grounded theory (Glasser & Strauss, 1967). All interviews followed the “long interview” format outlined by McCracken (1988). Biographical questions were asked first, followed by a series of ‘grand tour’ questions and ‘planned prompts’ (McCracken, 1988). Grand tour questions allow for the interviewee to tell their own story in their own terms. In order to gather further information, planned prompts are used to gain further reflection from respondents. The final step involved analysis of the data collected. The purpose here is to determine the “categories, relationships, and assumptions that informs the respondent’s view of the world in general and the topic in particular” (McCracken, 1988; pg. 42). Once these themes are developed, interrelationships as well as contradictions are looked for.

Respondents

For this study, a ‘purposeful sample’ (Lincoln & Guba, 1985) of general practitioner physicians with different profiles (e.g. size of community; length of service) were sought out. McCracken (1988) suggests 8 respondents are needed for an adequate respondent pool; for this research 11 physicians were interviewed. As recommended by McCracken (1988), no respondent had prior contact/relationship to the researchers. To find the physicians for the research the annual listing 2001/2002 of the Collage of Physicians and Surgeons of Nova Scotia was used. Sixty-five requests for interviews were faxed out to general practitioners across Nova Scotia with 11 agreeing to be interviewed (17% responds rate). Ten of the physicians were male.1 Respondent’s ages ranged from mid-thirties to late fifties, and length of time in practice spanned from 10 to 33 years. Interviews lasted between 15 and 40 minutes, with the average interview lasting 25 minutes (the 15 minute interview was cut short due to a medical emergency). Physicians willingly discussed their relationship with PSRs and spoke freely and candidly throughout the interview drawing on their own encounters with sales representatives. In all cases the interviews were audio recorded and transcribed resulting in 122 pages of text. Ten of the physicians interviewed had regular detailing encounters with PSRs while one physician had only limited interactions with PSRs. On average, the physicians saw three sales representatives per week. The range of time physicians spent with a PSR was from 5 minutes to an hour. The majority of physicians stated they spent approximately 10 minutes on a PSR call2 typically meeting with PSRs in their office.

RESULTS

In general, physicians had strong opinions about their relationships with pharmaceutical sales representatives, and the role PSRs play in providing information on pharmaceuticals to them.

1 The sample is slightly skewed; at present 70% of current physicians in Nova Scotia are male (CMA, 2003).
2 The apparent willingness of these physicians to spend several minutes in a sales call seems to contrast with the average amount of time an American physician is said to be with a PSR - less than 2 minutes (Health Strategies, 1999).
“I know some physicians refuse to see sales reps but I find that it’s an essential part of our medical industry in a way and we have to know about the products, and so I feel a sort of obligation to see these people.”

“I think they are ‘sales droids’, to make a phrase. They are doing what they’re told to do. That’s their job. That’s how they make their living; you can’t blame them. But I don’t think that means I should take them very seriously either.”

“I’ve always been, in case you can’t tell, very ambivalent towards drug travelers. I’ve literally kicked some out of the office because they were such a pain in the ass, incredibly pushy.”

The data collected from the physicians generated three main themes: their appreciation/tolerance of the PSRs relationship; the ‘weapons’ of influence used; and Irks and Asks that exists from their relationship. As each theme is viewed as significant and meaningful on its own, they are not listed in any particular order. Direct quotations are used in corresponding themes in order to relay the concerns, beliefs and ideas of the physicians in their own words.

**Theme One – Appreciation / Tolerance**

This first theme examines the reasons why physicians meet with PSRs (appreciation) and reasons why they do not meet with some PSRs or limit their exposure (tolerance). Each will be examined in greater detail.

**Appreciation:** Physicians indicated they had six different reasons for meeting with PSRs. Firstly, physicians stated that PSRs played a central role in their professional development although this role was limited to a ‘facilitator’ function. This facilitator role involved sales representatives providing services such as organizing and/or providing financial aid to Continuing Medical Education (CME) events such as bringing speakers to luncheons or to Continuing Health Education (CHE) events where PSRs invite other health practitioners to an educational event (nurses and pharmacists) for professional discussions. Physicians consistently mentioned they highly valued these pharmaceutical company sponsored events.

The second reason for meeting with PSRs was to quickly receive up-to-date information on specific drugs. According to the physicians interviewed, PSRs provided condensed information on their products thus helping them to save time in keeping up-to-date with pharmaceutical developments. Detailing meetings allowed for information to be obtained in a few minutes without spending time searching for specific information themselves (i.e. prescription size and dosage, side effects). Physicians stated that it was a good way of getting a ‘heads up’ on new products such as where the drug fits in a certain class and their side effects. PSRs also brought information on drugs currently being developed and/or in the process of being approved by Health Canada. Physicians stated they would meet longer with a sales representative in situations where they were detailing a new product rather than for a product that had been on the market for a while. The reason for meeting longer on a new product would be to find out information on the complexity of the drug and the relative advantages the product had over its competition. Physicians mentioned that after receiving information from a sales representative they would then begin their own information search on the product.

The third reason physicians met with PSRs was to receive free samples. All physicians stated they received and accepted free samples of pharmaceuticals. All but two physicians mentioned that free samples were either one of the most important services that PSRs provided and/or it was their prime motivation in meeting with them.
The fourth reason was the specific product details obtained that were not easily available from other sources. These ‘details’ or ‘little gems of wisdom’ would include such things as the proper time of day the product should be taken, what foods or beverages the drug should be taken with or what should be avoided. While physicians stated this type of information might not be obtained during every sales call, the information could prove to be beneficial in treating patients (i.e., decrease side effects).

The fifth common reason for meeting with PSRs was for social obligation reasons. Some saw it as a social ‘courtesy’ for prescribing the sales representatives’ products. Since physicians were using certain brands of drugs they felt somewhat obliged to meet with that company’s representative.

The last reason for meeting with PSRs was because they were associates. Physicians felt long-term relationships allowed them to become familiar with a representative and knew what to expect from them. They would be able to discover if the sales representative was competent, dependable and honest in the information they were providing and whether they were reliable. The physician and PSR, having this long-term relationship, would be more likely to have open communication. All physicians also mentioned they did have some form of social and/or long-term relationships with particular PSRs who called on them.

**Tolerance:** Physicians spoke of several reasons for not meeting with representatives or for limiting the number of PSRs they saw. In particular, they spoke about the information presented being biased, that there were too many reps, the reps were too aggressive, and the physicians were just too busy. To begin, physicians all had a similar opinion about the information they received from PSRs – the information had a strong reporting bias. This reporting bias was found in both the verbal detailing provided and the handouts given on the drugs being detailed (i.e., company-performed studies, graphs, tables and diagrams). The physicians believed the information provided by sales representatives could not be trusted or taken at face value and therefore was not of much use.

The other main reason for limiting access was that there were too many PSRs wanting appointments, many of whom were detailing the same drug. The physicians highlighted a recent trend towards pharmaceutical companies undertaking “sequential detailing.” Sequential detailing involves two or more representatives detailing to the same physician the same products. These representatives would be either from the same company or be representatives from companies that have formed an alliance to produce and market a pharmaceutical drug.

The last reason for not wanting to see PSRs was that some reps were just too aggressive and the physicians were just too busy. The reps wanted to tell their whole story and the physicians only wanted a “reader’s digest” version.

**Theme Two – The ‘Weapons’ of Influence**

“The kind of marketing they do is kind of more aggressive than it use to be and perhaps a bit more subtle too.”

Four influence techniques and strategies were found in the data that were commonly used by PSRs to sway physician-prescribing patterns. These four techniques and strategies were: pharmaceutical drug price/coverage; free product sampling; reciprocity; and likeability.

**Weapon 1: Price**
“I always [ask about price] with new products... I think price is important. It’s very important.”

Despite pharmaceutical drugs being heavily regulated in Canada which includes having many drugs covered by the government formulary, Nova Scotia physicians appear to have price sensitivity when deciding which drugs to prescribe to their patients. All physicians stated they would inquire about a pharmaceutical’s price and whether it would be covered on ‘script’ or ‘formulary’ during a sales meeting. They cited that price could affect their prescribing habits depending on how much their patient had to pay out of pocket. Physicians stated one of a pharmaceutical’s ‘selling points’ would be if the product was covered under ‘formulary’- in other words that the drug was covered under provincial health care or under certain local companies’ medical plans.

This appears to conflict with Gonul et al. (2001) finding that American physicians lacked price sensitivity or had only limited price sensitivity when it came to dispensing and/or prescribing pharmaceuticals to their patients. The reason why price was viewed as an important factor to Nova Scotia physicians may be in part due to the perception that their patients have difficulty purchasing pharmaceuticals due to financial challenges; the price of the drug may determine whether or not they would be able to afford to take the pharmaceutical.

**Weapon 2: Sampling as a “Foot in the Door”**

“Obviously the more samples they leave here the more inclined I may be to pick that one and use it... Sometimes I’ll just look in my sample cabinet and grab whatever I can, and if it’s sometimes not the preferred product but it’s what I have available and it’s going to help out that patient I’ll use it.

While attitudes towards clinical uses of pharmaceutical sampling have been conflicted (Chew et al., 2000), there was a general positive view as to the role of free pharmaceutical samples by this group of physicians. All of them stated they accepted free samples, that sample drop-offs during a sales meeting were common, and that it was an important and/or valuable service that PSRs provide.

When asked if access to free samples would lead them to dispense a drug that differed from their preferred choice, all physicians said there were situations where this would occur, provided the sample brand would be in some way comparable to their preferred choice. However, eight physicians stated they would only provide a sample brand over their preferred choice if there were only a marginal difference between the two. The main reasoning provided as to why a sample would be given over their preferred method of treatment was that a free sample to patients was a way to avoid financial costs or risks to the patient. This finding concurs with that of Chew et al. (2000) that sampling is used to help defray patient costs. The other three physicians mentioned a ‘struggle’ between trying to provide the best care for their patient while at the same time being sensitive to their financial situation. These physicians stated there would be cases where they would dispense a sample brand that may not be as effective, but due to a limited selection of sample brands and the patient’s financial condition, the patient would not otherwise purchase their preferred choice. Physicians also indicated that once they started treating a patient with a drug, and the results were acceptable, they rarely switched them to another drug. This was due to switching treatment risks (Gonul et al., 2001) and possible placebo effects that may occur to the patient if the sample was disrupted. It would appear that sampling works as a “foot in the door” technique for getting physicians to try a pharmaceuticals drug.

**Weapon 3: Reciprocity – The old give and take**
“They’ll sponsor events and help finance things – dinners and meetings. I think it works both ways. I think it would be unreasonable to expect them to fund some event we wanted and not allow them to have at least a sales pitch.”

The physicians were quick to recognize the concept of reciprocity and how it plays into the relationship between physicians and PSRs. A majority of physicians stated one of their motivations in meeting with PSRs was because they would sponsor CME events. While physicians did not explicitly state that a type of ‘creditor ideology’ existed between themselves and sales representatives, they indicated would spend longer periods or meet more frequently with PSRs who provided them such things as more samples, CME events or luncheons. The rule of reciprocity appears to apply to the PSR and physician relationship (Cialdini, 1988; Carlson et al., 2000; Gouldner, 1960). Physicians are willing to provide their time in sales meetings with PSRs at least in part for the returns sales representatives bring, such as free product samples and arranging CME events.

It is important to note one physician did appear to exhibit a form of reciprocation wariness in relationships with sales representatives. The physician appeared to be suspicious as to the motive behind the ‘gift’ (Eisenberger et al., 1988) sales representatives brought, such as CME events and promotional luncheons. While, one physician also directly commented on the debate about whether these types of gifts would cause a physician to change their prescribing patterns. The physician argued that this ‘bribing’ for prescriptions to be written, through such things as promotional dinners, was overdone and exaggerated (c.f. Raton & Ross, 2002).

“There are a lot of studies done by members in the medical community out there that say that physicians are influenced by what they are given but I feel that’s patronizing and a put-down. To get to medical school you have to be intelligent and well-educated; general practitioners especially have to be people persons and I feel so you get pretty good at feeling out who a person is and what they’re saying. In other words I say give us some credit for our intelligence here. We’re quite free to listen and discard information . . . I am insulted to a certain extent by my own peers telling me this is how I’ll react to salesmen.”

However as Orlowski and Wateska (1992) found, physicians are not immune to the concept of reciprocity. The authors tracked the usage reports of 2 drugs in local pharmacies after 20 physicians were sponsored to attend continuing medical education seminars sponsored by the companies producing the drugs. After the seminars, usage of the drugs described increased compared to their previous prescriptions and also compared to the national average during the same period. Most compelling of their findings was that all but one physician denied that the seminars influenced their behavior.

**Weapon 4: Likeability**

“You build friendships with most drug reps and most of them are pretty nice people actually . . .”

Consumers have been found more likely to respond favorably to salespeople we know or like (Cialdini, 1988). Ten of the 11 physicians mentioned that they had a friendly social relationship with at least a few PSRs. The physician who did not generally meet with PSRs mentioned that the motivation to meet particular representatives was for social interaction rather than product detailing. Three physicians mentioned they would be willing to meet with those PSRs they had a social and/or long-term relationship with in situations where they would not otherwise meet representatives due to time conflicts, among other reasons. The lengths of these meetings were not necessarily longer due to a longer discussion of the sales representatives’ product; part of the
discussion would be social conversation. Whether or not this lead to increase sales for those PSRs who had social and/or long-term relationships with physicians is unclear, however, these representatives would be able to have longer cumulative detailing encounters with the physician.

There were conflicting opinions as to whether demographic differences between the physicians and the PSRs could impact a sales call. Three physicians stated they found age differences to impact a detailing encounter. The older PSRs were viewed as possessing, on average, a higher level of education in pharmaceuticals. It is necessary to note that physicians mentioned in the past, pharmaceutical companies traditionally hired representatives who had pharmacology backgrounds and were traditionally male. Digging deeper into the data it did not appear that it was the sales representative’s gender or age that influenced the sales call so much as their level of education and experience in the pharmaceutical industry.

Theme Three – Irks and Asks

Irk – Data mining: While the interview questions did not inquire about this practice directly, two physicians brought up the practice of data mining by pharmaceutical companies on physicians prescribing patterns. There was a strong negative opinion of the process of pharmaceutical data mining. There was concern over the issue that the information provided by IMS Health is not always accurate and by not having access to this information themselves physicians feel they would not be on equal footing with the sales representative. There was also a sense that this information should be treated as confidential, and this information would simply be used as a means of driving up sales.

Irk – Repetition: As noted before all physicians stated they have noticed the trend of pharmaceutical companies being involved in sequential detailing and adding more representatives to their sales force trying to keep the company’s products at the top of their mind. The physicians also noted that the majority of detailing encounters focus on products they have at least heard of or were already familiar with. While ‘reminders’ on certain aspects of products was viewed as being important to some physicians, keeping them informed on new developments, new drugs coming out and/or new indications on drugs currently marketed appeared to be a more important service. Physicians also appeared to be greatly annoyed when presented with information (i.e., tables, graphs) that they had already been exposed to, numerous times.

Irk – Turnover: Physicians observed a recent trend in the industry of higher PSR turnover. This was problematic because they saw themselves as continually having to “inform” new representatives as to how they would like to be approached. They also found it increasingly difficult to build up their trust levels with PSRs as they might only be there for a year or two.

Ask – Third-party research: Physicians were keen to read research undertaken on the performance of a variety of classes of drugs. However, they found that most of the studies they were presented with by PSRs were industry sponsored. They valued research that had been undertaken with no-strings attached and welcomed more third-party research being presented.

DISCUSSION

This section examines implications from the research, including managerial and policy implications. Overall, the results of this research suggest that there is a delicate relationship between PSRs and physicians. Physicians see the PSR as an important source of information, yet they feel they are biased in their presentation. Samples were important to physicians and they indicated having them available did influence their decision-making. Financial support provided
for continuing medical education seminars was important yet they did not feel these influenced their choice behaviour. Physicians also have friendly relations with the PSRs and did not distrust them, yet they did not view them as a critical part of their practice.

**Pharmaceutical Management Implications**

There are seven management implications that may be drawn from this study. First, all physicians demonstrated price sensitivity when deciding which drug to prescribe to a patient. Consequently, detailing with a focus on low price of a drug as its main differentiating feature may be effective in Nova Scotia. Therefore it is recommended pharmaceutical companies detailing in these areas review their personal selling strategies to ensure that in locations where the price of their product is lower than the competition, sufficient promotional resources be devoted to this. This is especially true for situations where the drug is not covered, or only partly covered through a medical plan and the patient would incur out of pocket expenses in receiving treatment with a particular brand of drug. Perhaps in locations where pharmaceutical drug coverage is higher, price sensitivity of physicians may be lower.

Second, the availability of samples did appear to influence a physician’s choice behaviour, even in some situations where the sample offered was not the physician’s preferred choice. In order to perhaps provide immediate relief of symptoms or reduce a patient’s financial risk a physician would dispense a sample brand, if their preferred choice were not available. The majority of patients also mentioned that, barring any complications or adverse effects, they would continue the patient on the sample brand rather then returning back to their preferred choice, assuming the patient was still in need of drug therapy. It is important to note however that while a physician may dispense the sample over his/her preferred choice, the sample had to be somewhat comparable if not ‘just as good’ to the preferred choice of treatment. It would therefore be beneficial for a PSR to only leave samples if they knew there were only a limited number of samples of the physician’s preferred choice in his/her sample cupboard and there were only slight differences in the composition of the company’s drug to its leading competitor.

Third, as noted before, physicians stated there was a trend in the medical community of sequential detailing, and stated the worst detailing encounters were those where too much information was being presented and the detailing was mainly repetitive in nature (only presenting rehashed information). Promotional activities should therefore be carefully examined in terms of frequency of sales calls to a particular physician, length of time in a single sales meeting, quantity of in-house and third-party research presented, quantity of free samples left by sales representatives and number of Continuing Medical Education events offered so that a company can optimize the effectiveness of their direct selling efforts with their costs. It is important for companies to recognize that beyond a certain level, personal selling can be counterproductive. This is apparent in situations where the amount of cumulative detailing minutes spent with a physician is so long that a physician becomes annoyed with the information being detailed to him/her, and stops listening to the information being presented.

Fourth, PSRs with considerations to both time and marketing funds should devote resources perceived as being important to physicians. The physicians in this study, with the exception of one, expressed the value of pharmaceutical company sponsored CME events and that CME events were one of the most important services that PSRs provided. Regular inquiries as to what services physicians desire or deem valuable would allow PSRs to better respond to their needs and fill potential ‘gaps’ in their services (areas in which the physician is not satisfied – i.e., a CME on cardiovascular disease and treatments).
Fifth, physicians showed a preference for certain PSR service offerings. Findings indicate the presentation of in-house research should be limited during a sales meeting, with a greater emphasis placed on third-party research. Third-party research may allow information to be more readily internalized by physicians due to the perceived higher quality compared to in-house research. This also applies to the CME events organized and/or sponsored by pharmaceutical companies. There was greater acceptance, for the majority of physicians, in the information presented by speakers, who are typically medical specialists, as compared to the information presented by sales representatives alone. In contrast, the inclusion of pharmacology and scientific education programs recognized by the medical community, as part of sales training may allow for sales representatives to be looked upon as more knowledgeable and therefore a more reliable information provider.

Finally, there is the high cost of recruiting, training and supporting new PSRs for a pharmaceutical company to consider. If PSR turnover is high, the company incurs both high financial and time costs for their sales force. Pharmaceutical sales representatives require a broad knowledge of chemistry and physiology pertaining to the drug in which they are detailing, requiring more product training than sales representatives in other industries would. By focusing on recruiting and maintaining career PSRs, companies can save financial and time costs in recruiting. In staying with a particular company, PSRs would have increased knowledge of the company’s pharmaceutical drugs and the aliment or disease it is used to treat. The PSR would therefore be viewed as more competent.

**Government Policy Implications**

The study brings to light issues of interest and concern for policy makers as well. The pharmaceutical industry is one of the most heavily regulated industries in Canada; and as such the government plays a key role as to how pharmaceutical companies market their products and what pharmaceutical drugs are covered under formulary. Physicians mentioned the importance of, or addressing the issue of, having a drug covered by formulary when deciding which drug to prescribe to a patient. It is apparent the government plays a major role in the drug choices available to physicians when deciding which drug to dispense/prescribe to the patient. Due to a patient’s financial situation, medication may be prescribed on the basis of whether or not the patient would have to pay out of pocket to receive treatment.

Second, as physicians mentioned, free samples and/or CMEs are important services pharmaceutical companies provide. Samples and compassionate programs allow for patients in certain financial situations to get access to medication that would not otherwise be an option. Free samples appear to perform a social benefit for Nova Scotians – patients may receive optimal care without having to rely on government social assistance in receiving this treatment. Continuing Medical Education events were also a method used by physicians to keep up-to-date with the latest developments in pharmaceuticals and assist in their professional development by listening and having discussions with highly regarded medical specialists. Both sampling and CMEs appear to play a positive and informative role, and therefore should not be eliminated.

Third, it is important for policy makers to remain continuously aware of the influence ‘weapons’ that are being used by the pharmaceutical community to affect a physician’s choice behaviour. The results of the study indicate that there are cases where access to samples would cause a physician to pick a pharmaceutical drug different from their original preferred choice. The likelihood of influence has to be considered. Existing policies in Canada tend to focus on and limit cash incentives, services, or items that have financial value, while they overlook the more subtle forms of interaction that may be more likely to influence a physician's judgment. Personal contacts, sponsoring education seminars, and free samples can be stronger influencers than gifts.
as their influence can be more difficult to discern. These factors need to be taken into account when policies regulating the interaction between physicians and PSRs are invoked.

Finally, although beyond the scope of this study, it is valuable to draw attention to the process of data mining. Data mining allows pharmaceutical companies to better understand a physician’s client base. For example, physicians who have primarily geriatric patients would perhaps be interested in medications for Alzheimer’s, heart and stroke disease, and arthritis. Pharmaceutical sales representatives could determine if a certain physician would have use for the product. The question arises however of whether or not this is private and confidential information or if it is public information that pharmaceutical companies have a right to access. From those physicians who discussed the data-mining process, they believed this information was confidential and pharmaceutical companies should not be allowed access to it. This is an issue of public concern and should be addressed.

LIMITATIONS, FUTURE RESEARCH AND CONCLUSIONS

There are a few limitations to these findings. First, physicians were only chosen from Nova Scotia. As of February of 2003, Nova Scotia’s unemployment level was at 9.7%, one of the highest rates in Canada; the national average unemployment rate is 7.7%. The average income of a person working in Nova Scotia is also lower than the national average. In 2001, the average income for a working person in Nova Scotia was $26,632.00, compared to the national average $31,757 (Statistics Canada, www.statcan.ca). Perhaps in areas where unemployment rates are lower and/or the average income is higher there may be a difference as to the price sensitivity of physicians. Second, physician respondents were predominately male. This may have resulted in gender bias as to the responses. Third, this study focused on general practitioners. Comparatively, there may be a difference as to the relationship between ‘specialty’ sales representatives who detail to certified medical specialists.

The goal of this research was to explore the relationship between physicians and pharmaceutical sales representatives. It became apparent during the course of the research that the relationship is complex and rarely black and white. The results from this study raise several questions that may be addressed in future research. First, further research should be undertaken in other areas in Canada to assess the consistency of these results. Second, as price or coverage sensitivity of physicians when deciding which drug to prescribe to a patient were found from this research a deeper investigation of these issues is warranted. Third, as Chew et al. (2000) found that younger American physicians, those who had only practiced for a limited amount of time, had a higher propensity to dispense free samples than older physicians, this should be examined within the Canadian context. The age range of this study was not broad enough to provide insight to whether or not the same holds true for Canadian physicians. Fourth, the impact of gender and age differences between physicians and PSRs could be examined for their impact. Fifth, PSRs educational training and their ability to influence physician’s choice behaviour should be explored. For example, would a physician hold greater faith in a sales representative who had an education in pharmaceuticals (biology, chemistry) as opposed to sales representative who has an arts or business background? Sixth, third-party research study support for a product versus in-house research should be tested for its ability to enhance drug quality perception. Third-party research may be viewed as being ‘more reliable’ and therefore trust worthier than in-house reached which may be perceived as being biased information on a pharmaceutical drug. And finally, the concept of reciprocity within the PSR and physician relationship should be looked at more deeply. This appears to be the area where physicians are most vulnerable to undue influence.
BIBLIOGRAPHY


