RESEARCH PAPER

Conflicts of Interest of Canadian Medical School Deans: A Cross-Sectional Study

Les conflits d'intérêts des doyens des facultés de médecine du Canada : une étude transversale

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Abstract

Background: Medical school deans wield considerable influence over research, clinical and educational missions at their institutions. This study investigates conflict of interest (COI) of Canadian medical school deans.

Method: The websites of all 17 Canadian medical schools were searched for any mention of relationships between deans and pharmaceutical or medical device companies.

Results: No COIs were discovered for 11 of the deans. Six had COIs, including participating in research funded by pharmaceutical companies and received consulting and speaker fees.

Discussion: A minority of deans had COIs with healthcare industry companies. Whether deans' COIs affect policies at the medical schools they lead should be the subject of further investigation.

Résumé

Contexte : Les doyens des facultés de médecine exercent une influence considérable sur les missions de recherche, cliniques et éducatives de leurs établissements. Cette étude porte sur les conflits d'intérêts des doyens des facultés de médecine du Canada.

Méthode : Les sites Web des 17 facultés de médecine du Canada ont fait l'objet d'une recherche pour toute mention des relations entre les doyens et les sociétés pharmaceutiques ou les entreprises de dispositifs médicaux.
Résultats : Aucun conflit d'intérêts n'a été ainsi découvert pour 11 des doyens. Six d'entre eux présentaient une situation de conflits d'intérêts, notamment la participation à des recherches financées par des sociétés pharmaceutiques et la perception d'honoraires pour des consultations ou des conférences.
Discussion : Une minorité de doyens présentent une situation de conflits d'intérêts en lien avec des entreprises du secteur de la santé. La question de savoir si les conflits d'intérêts des doyens influent sur les politiques des facultés de médecine qu'ils dirigent devrait faire l'objet d'une enquête plus approfondie.

Introduction

Medical school deans wield considerable influence over all aspects of the institutions that they lead, including research, clinical and educational missions. By virtue of their authority, their actions (or non-actions) can play a significant direct and indirect role in defining the relationships between their institutions and companies in healthcare industries, primarily pharmaceutical and medical device companies; in teaching activities; and in the research done by faculty in their schools.

Relationships between deans and for-profit healthcare industries constitute a conflict of interest (COI), where a COI is defined as "a risk that [an individual's] professional judgment or actions regarding a primary interest … will be unduly influenced by a secondary interest (such as financial gain)" (IOM 2009: 6). The critical issue is whether COIs will consciously or subconsciously bias the decisions that the deans take, given that the missions of medical schools and industries are substantially different (Table 1). The lack of disclosure of COIs can create the impression that decisions or actions were based on the COI, whether that conclusion is accurate or not, and ultimately erode public confidence in an institution.

TABLE 1. Differences in the missions of medical schools and for-profit healthcare industry companies

Mission of medical schools	Mission of for-profit healthcare industry companies
Conduct research to understand the mechanisms of disease and human functioning	Develop new products that will generate profits for the company
Train students to become doctors who will care for patients	Encourage students to think about carrying out research on the company's promising products once they are in independent practice
Promote evidence-based medicine and independent critical judgement by students	Develop marketing strategies to improve sales and profits

Source: Adapted from Lo 2010.

Previous research from 2011 has shown a wide range in the strength of COI policies at Canadian medical schools (Shnier et al. 2013). In each policy, 12 items were examined, including those on accepting gifts from industry, restrictions on participation in industry-funded speaking relationships and speakers' bureaus, restrictions on on-site education activities and disclosure of COIs by faculty. Only five of 17 schools had a score of greater than 50%, and when individual item scores from all schools were combined, the highest mean score was 0.9 out of 2 (Shnier et al. 2013). These scores suggest that there may be a lack of control about how industry activities affect the functioning of medical schools.

COIs between people in leadership positions in medical schools and industries have been researched to some extent in the US (Anderson et al. 2014, 2015; Campbell et al. 2007; Freshwater and Freshwater 2011), but examination of this issue in other countries, including Canada, is non-existent. This study is a first step in investigating the COIs of Canadian medical school deans as one factor that may contribute to the relationship between the schools and healthcare industries. In addition, it looks at whether the COIs are publicly disclosed.

Method

The websites of all 17 Canadian medical schools were searched for the names of the deans, their biographical information, date of appointment, any mention of relationships with pharmaceutical or medical device companies, research by the deans that was funded by companies from those industries and COIs with companies from those industries. Searches for the same information about the deans and pharmaceutical and medical device companies were undertaken by entering the name of the dean and the phrase "dean x faculty of medicine" into a Google search. The first 20 sites were examined for any mention of relationships with healthcare companies. A search of PubMed between January 2012 and September 2023 scanned for any publications listing the dean as an author. These publications were read to look for funding sources for the research and any declared COIs (only a maximum of the five most recent publications for each dean are listed in Appendix 1, available online at www.longwoods.com/content/27349). Mergent Intellect was searched using the dean's name to look for whether a dean held an executive or board position at any healthcare-related company (Mergent Intellect n.d.). Mergent is a publicly accessible, web-based application offering business data for a collection of over 1.6 million private and public Canadian corporations. Finally, the websites of the medical schools were searched for the presence of COI policies, including whether COI declarations by faculty, including deans, were publicly available.

Bélisle-Pipon et al. (2018) developed a five-point ordinal ranking scale based on declared COIs to assess individuals' independence from industry, ranging from zero interaction = 0 (100% independent of industry) to employed by a pharmaceutical company or a pharmaceutical organization-representing industry = 5 (0% independent of industry) (Table 2). The scale was developed by examining the COIs declared by members of the Quebec's immunization

expert advisory committee on vaccines, grouping those COIs into eight broad types describing different types of payments that the experts received from industry and then using those eight types to modify a previous scale based on COIs of experts associated with the agri-food industry (Newton et al. 2016). No other similar scale exists for grading individuals' relationships with the pharmaceutical industry. The deans' COIs were ranked based on this scale. If their activities resulted in more than one score, then the highest score was used.

TABLE 2. Level of independence from industry

Ranking	Description of conflict of interest
0	Zero interaction (100% independent of industry)
1	Reimbursement of travel or registration fees for a congress from a private company
2	Research funding from a private company Research funding awarded to an affiliated institution or organization
3	Honoraria for lectures or presentations
4	Honoraria as a consultant Member of the board of directors Has investment in the capital of a private enterprise
5	Employed by a pharmaceutical company or an organization representing industry (0% independent of industry)

Source: Bélisle-Pipon et al. 2018.

Only publicly available information was gathered based on the principle that transparency around relationships with industry should be public knowledge (Rosenthal and Mello 2013).

All information was entered into an Excel spreadsheet. All data were gathered between September 9 and 10, 2023, by a single individual. Ethics approval was not required since all the data were public. The methods are reported according to the STROBE reporting guidelines (https://www.equator-network.org/wp-content/uploads/2015/10/STROBE_checklist_v4_cross-sectional.pdf).

Results

Deans were appointed between July 2014 and September 2023 (two were interim appointments). Six of the deans were women. Table 3 (available online at longwoods.com/content/27349) summarizes the COI information gathered from all four sources, the requirement for public disclosure and the ranking of independence from industry. No COIs were discovered for 11 of the deans. The full data are available in Appendix 1.

COI information on biographical webpages

The dean of Dalhousie University was a founding member and former chair of a research group focused on clotting disorders. He is still listed as a member of the research group. It is not clear whether this is a non-profit or for-profit enterprise, but its current website lists seven industry partners. The dean of McMaster University had been the leader of

an industry-sponsored research collaborative before his appointment. The dean of the University of British Columbia (UBC)'s Faculty of Medicine is a non-executive director of a contract-based research organization that provides consulting and outsourced development and commercialization services to pharmaceutical, biotechnology, medical device and government and public health organizations.

COI information from Google searches

The UBC dean who was associated with the contract-based research organization was also a co-founder of a drug development company that went into liquidation in 2019.

COI information from PubMed

Four deans participated in research funded by pharmaceutical companies. Three deans declared COIs with multiple pharmaceutical companies within the past three years. These COIs consisted of consulting and speaker fees as well as payments for manuscript writing and educational events and receiving funding for research. The names of the companies that the deans had a COI with were only available from their declarations in their publications. The payment amounts were not disclosed. No publications could be found for one dean.

COI information from Mergent Intellect

No dean was a company executive or held a board position.

Requirement for public disclosure of COI information

All the medical schools had policies requiring faculty to report COIs, but none of the policies stated whether the information in the disclosures was publicly available or could be requested.

Ranking of independence from industry

Four of the deans received a rank of four out of five for dependence on industry based on one or more of the following criteria: receiving honoraria as a consultant and/or having investments in the capital of a private enterprise. Two other deans had a ranking of two due to receipt of research funding from industry.

Discussion

Six of the 17 deans had COIs with a healthcare industry company and for three of those deans, their relationships – including payments for various activities from multiple companies and the names of those companies – were only discovered through their declarations in publications. In the absence of any requirement by medical schools for public disclosure of COIs, finding detailed COI information, therefore, requires extensive searching. Four of the deans were ranked four on a scale of 0–5 for their dependence on industry, where zero is completely independent and five is completely dependent.

No dean held a leadership position (executive or board member) in a Canadian healthcare company. In this respect, the Canadian situation is different from that in the US. Out of 161 deans investigated in a study in 2009, nine were directors of 13 public companies, with two deans being directors of two companies and one dean being a director of four companies (Freshwater and Freshwater 2011). In another study, 19 of 47 pharmaceutical companies had at least one board member who concurrently held a leadership position at an academic medical centre (Anderson et al. 2014). Directors of 180 US healthcare companies were affiliated with 85 non-profit academic institutions, including 19 of the top 20 medical schools funded by the National Institutes of Health. Included among the directors were eight medical school deans or presidents (Anderson et al. 2015).

Medical school deans and COIs

Medical school deans cannot be expected to micromanage their institutions, but their leadership should set the overall tenor for their schools, including how to deal with the COIs that will inevitably arise in undergraduate and postgraduate teaching, the relationship with pharmaceutical companies and research. Over the years, the attitude of Canadian deans to COIs has been variable. According to Martin Hollenberg, the dean of medicine at UBC in the early 1990s, in the past, industry funding was viewed as a threat to the autonomy of universities but "the view is much more positive now" and the relationship was seen as "a true partnership with very high standards" (Rich 1992). At a meeting in 1992, he advocated for the formation of a joint university-pharmaceutical industry council to coordinate future planning about medical research in Canada (Rich 1992). A similar attitude came from John Kelton, the dean of McMaster's Faculty of Health Sciences in the mid-2000s. Although the university required full-time faculty members to declare their consultancy work for industry once a year, some McMaster researchers indicated that they were not required to reveal their pharmaceutical company connections to the university for things such as honoraria, speaking fees or consultancies. Kelton seemed to adopt a laissez faire attitude toward disclosures. When asked by a reporter from the *Hamilton Spectator* about relationships between faculty at the medical school and industry, his response was that "the university has never tried to keep track of faculty members' relationships [and] McMaster has no plans to change the way things are done" (Buist et al. 2005: A1). In 2015, Richard Reznick, the then dean of Queen's University, commented that when he became dean, "[t]he pendulum, with respect to industry-academic relationships had swung far to the left [i.e., were too restrictive], communications were not open, relationships were fractured" (Reznick 2015). His response was to recruit the previous chief executive officer of the Canadian subsidiary of GlaxoSmithKline to "proactively buil[d] relationships with senior executives of pharmaceutical and medical device companies" (Reznick 2015).

At the other end of the spectrum, the Temerty Faculty of Medicine at the University of Toronto released a set of guidelines for the ethical conduct of research in 1994. According to the guidelines, "Clinical researchers must not permit their clinical practices to be swayed by

such [industry] support and they must be free to think independently, to conduct research freely and to publish negative as well as positive results promptly" (Dahlin 1994: 9).

These attitudes about COIs are reflected in how they have impacted undergraduate teaching, the introduction of industry-funded research centres in medical schools and rules around how research is managed in them. Three separate studies of COI policies at Canadian medical schools done around 2010 all concluded that, in general, policies were relatively weak or, in many cases, non-existent (Beyaert et al. 2013; Mathieu 2012; Shnier et al. 2013). A 2019 survey by *Global News* seemed to indicate that some medical schools had strengthened their policies, but there was no formal scoring of their rigour (Hensley and Young 2019).

Undergraduate teaching

The relationship between the University of Toronto and Purdue Pharma was a highly public issue (Persaud 2014; News Staff 2010). Starting in 2000, the university has been giving a one-week course on pain management to all its health science students. Between 2002 and 2006, the course was funded by $117,000 in unrestricted educational grants from four pharmaceutical companies, including Purdue Pharma, makers of OxyContin (extended-release oxycodone). Up until 2010, students were given a book on pain management that was funded by Purdue (Jovey 2002). Roman Jovey, the editor of the book and an unpaid guest lecturer for the course, was on the speakers' bureau for Purdue.

At the University of Toronto, the Amgen Foundation is currently funding undergraduate medical and pharmacy students for 10-week hands-on research placements, a program that is enthusiastically supported by the university's vice-president of research and innovation (Temerty Faculty of Medicine, University of Toronto 2019).

Faculties of medicine have the primary responsibility for training medical students and play a major role in training house staff. Medical students and trainees who are exposed to policies that restrict interactions with the pharmaceutical industry are less reliant on information from companies once they are engaged in independent practice than those who attended institutions with no policies (Epstein et al. 2013; King et al. 2013; McCormick et al. 2001).

Pharmaceutical industry-sponsored research centres

When Sanofi-Aventis gave money to Queen's University in 2007 for a new obesity centre, Robert Ross, the Queen's University researcher who headed the obesity centre, said the money was coming to the university through an unrestricted educational grant and that "We have no accountability [to the company] … We make no reports. We have no advice to give them or them us … They do not sit on our council. They no not advise us on any issue" (Tripp 2007). Ross was a speaker for, on the advisory board of and received consulting fees from Sanofi-Aventis.

Novo Nordisk, the maker of semaglutide (Ozempic, Wegovy), an injectable drug for type 2 diabetes and obesity, is contributing $20 million (matched by $20 million from the University of Toronto) over a 10-year period for the establishment of the Novo Nordisk Network for Healthy Populations (U of T News 2021). The network is a partnership between the Dalla Lana School of Public Health, the Temerty Faculty of Medicine and the University of Toronto Mississauga and will "aim to find solutions that address the root cause of rising type 2 diabetes and other serious chronic diseases" (U of T News 2021). In 2022, Novo Nordisk was suspended from the industry association in the UK because of violating the industry code of marketing in its promotion of another drug for diabetes and weight loss (*AUTH/3525/6/21*).

Management of research

A mid-2000 survey of Canadian medical schools enquired about the presence of institutional policies on a series of topics relating to research, including royalties from the sale of the investigational product that is the subject of the research; equity interest or an entitlement to equity of any value in a non-publicly traded sponsor of human subjects research at the institution; ownership interest or an entitlement to equity in a publicly traded sponsor of human subjects research at the institution; and whether institutional officials with direct responsibility for human subjects research could hold a significant financial interest in a commercial research sponsor or investigational product. Only a minority of schools had policies on any of these issues (Rochon et al. 2010).

Systematic reviews have found that research sponsored by pharmaceutical companies is more likely to end in positive results and conclusions compared with sponsorship from any other source (Lundh et al. 2017), and the same conclusion applies to trials led by researchers who have a COI with the industry (Ahn et al. 2017). Since faculty members within medical schools are often the primary investigators in research funded by pharmaceutical companies, strong leadership in developing policies about how the research is conducted is needed to help ensure that the trials yield unbiased information.

Recommendations

In an editorial in the *Canadian Medical Association Journal* in 2010, Paul Hébert, the editor-in-chief, argued that medical school faculty should make a full public disclosure of the income generated from pharmaceutical companies in order to avoid a situation where revelations of undisclosed COIs could create public mistrust in the medical profession and its institutions (Hébert et al. 2010). That call has, so far, gone unheeded.

The US Institute of Medicine (now the National Academy of Medicine) recommended that the chairs and co-chairs of clinical practice guidelines (CPG) committees should be completely free of COIs because of their influence over the entire process of guideline development (IOM 2011). Medical school deans are in an even more authoritative position than

CPG chairs, and the same policy should apply to them and ideally more generally to all medical school faculty. In addition, Canada should follow the lead of the US (Rosenthal and Mello 2013) and some European countries (Ozieranski et al. 2021) and make disclosure of any transfer of value between industry and healthcare professionals a requirement. Ontario was poised to implement that kind of requirement until the 2018 election of a Progressive Conservative government stopped that initiative (Owens 2019).

Limitations

More extensive Google and publication searches may have uncovered further COIs, changing the ranking of the deans on the scale of independence from industry. Information was only gathered by a single individual and may have resulted in relevant information being missed. However, both these limitations would have decreased the number of COIs identified. The scale ranking independence from industry only has face validity and how the scores translate into actions and decisions by individuals has not been investigated. This study did not investigate how the various levels of COI independence of the deans translated into policies and actions at different medical schools. The results are not generalizable to other healthcare settings or healthcare professionals.

There is no evidence that the relevant deans were directly responsible for any of the three COI situations described earlier or even approved of them, but they occurred under their watch. Practices at medical schools may have changed in the interim since the various events occurred.

Conclusion

A minority of Canadian medical school deans have COIs with healthcare companies and most of those COIs are not found on their institutional biographical pages or through Google searches; they were only available after searching declarations in their publications. The COIs of the deans should be easily found and publicly available. Whether deans' COIs affect policies at the medical schools that they lead should be the subject of further investigation. Ideally, deans should not have any COI.

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