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SPECIAL ARTICLE

Characteristics and rates of disciplinary findings amongst anesthesiologists by professional colleges in Canada

Caractéristiques et fréquence des jugements disciplinaires rendus par les collèges professionnels au Canada à l'endroit d'anesthésiologistes

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Abstract

Purpose *Previous studies discussing the risk of medical misconduct amongst anesthesiologists differ in their conclusions. In Canada, there is a paucity of data regarding demographic information, disciplinary findings, and penalties received by anesthesiologists. The aim of this study was to identify potential characteristics for discipline within the specialty of anesthesiology by ascertaining disciplinary findings and types of penalties received by anesthesiologists and comparing these with cases of disciplinary action against other Canadian physicians.*

Methods *Using a retrospective cohort design, we constructed a database of all Canadian physicians disciplined by their respective provincial and territorial regulatory colleges between 2000-2011. We collected and compared physician demographic information, types of disciplinary findings, and penalties received by anesthesiologists and other physicians during that time period.*

Results *Between 2000-2011, various physicians were disciplined 721 times in Canada. Nine anesthesiologists were found guilty of 11 (1.5%) disciplinary findings. One anesthesiologist was disciplined three separate times. All anesthesiologists subject to discipline were males, ten (90.9%) were independent practitioners, and almost two-thirds (63.6%) were international medical graduates. The most common types of disciplinary findings were related to*

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standard of care issues, inappropriate prescribing, and fraudulent behaviour. Anesthesiologists appeared less likely than other physicians to be disciplined for sexual misconduct and unprofessional behaviour.

Conclusion *Anesthesiologists in Canada have been subject to low rates of disciplinary action. Specifically, there have been low rates of sexual misconduct and unprofessional behaviour. Interventions to reduce disciplinary findings in anesthesiology could be directed toward bolstering education relating to standard of care issues, prescribing practices, and fraudulent behaviour.*

Résumé

Objectif *Les études précédentes portant sur le risque de faute médicale parmi les anesthésiologistes diffèrent dans leurs conclusions. Au Canada, il n'existe que peu de données quant aux données démographiques, aux mesures disciplinaires et aux sanctions reçues par les anesthésiologistes. L'objectif de cette étude était d'essayer d'identifier les caractéristiques potentielles requérant des mesures disciplinaires au sein de notre spécialité en vérifiant les infractions disciplinaires et les types de sanctions encourues par les anesthésiologistes et en les comparant aux cas de mesures disciplinaires contre d'autres médecins canadiens.*

Méthode *À l'aide d'une méthodologie de cohorte rétrospective, nous avons construit une base de données de tous les médecins canadiens ayant fait l'objet de mesures disciplinaires de la part leur ordre professionnel provincial ou territorial entre 2000 et 2011. Nous avons colligé et comparé les données démographiques des médecins, les types de jugements disciplinaires et les sanctions encourues par les anesthésiologistes et les autres médecins au cours de cette période.*

Résultats *Entre 2000 et 2011, divers médecins ont fait l'objet de mesures disciplinaires 721 fois au Canada. Neuf anesthésiologistes ont été déclarés coupables de 11 (1,5 %) infractions disciplinaires. Un anesthésiologiste a fait l'objet de trois mesures disciplinaires distinctes. Tous les anesthésiologistes ayant fait l'objet de mesures disciplinaires étaient des hommes, dix (90,9 %) des praticiens indépendants, et près des deux tiers (63,6 %) étaient des diplômés hors du Canada et des États-Unis. Les jugements les plus fréquents étaient liés à des questions de normes de soins, de prescription inadaptée et de comportement frauduleux. Les anesthésiologistes semblaient être moins enclins que les autres médecins à faire l'objet de mesures disciplinaires en raison de mauvaise conduite sexuelle ou de comportement non professionnel.*

Conclusion *Au Canada, les anesthésiologistes font l'objet de taux faibles de mesures disciplinaires. Plus spécifiquement, les taux de mauvaise conduite sexuelle et de comportement non professionnel sont bas. Les interventions visant à réduire les infractions disciplinaires en anesthésiologie pourraient se concentrer sur une amélioration de la formation liée aux questions de normes de soins, de pratiques de prescription et de comportement frauduleux.*

In Canada, physicians enjoy the privilege and right to self-regulation. The College of Physicians and Surgeons (CPS) in each province and territory is the regulatory authority responsible for regulating the practice of medicine and serving the public interest. As such, the CPS is responsible for investigating complaints against physicians within its jurisdiction. If a physician is found guilty of misconduct after a formalized complaint and hearing process, the physician is subject to disciplinary action by the respective CPS.

Little information is available regarding the nature of medical misconduct amongst anesthesiologists in Canada, and in previous studies from other countries, there is differing data about misconduct amongst anesthesiologists. A study from California indicates that anesthesiologists are subject to the highest rate of discipline amongst specialists,[1] whereas a separate study from Australia and New Zealand indicates that anesthesiologists have the lowest disciplinary rate.[2] Although these studies may represent the wide spectrum of disciplinary rates encountered internationally, they provide insufficient information about disciplinary findings amongst Canadian anesthesiologists.

Publicly available CPS case summaries of disciplinary findings amongst physicians hold valuable information regarding medical misconduct in Canada. Although discipline does not necessarily mean misconduct, especially in cases regarding standard of care issues or in certain jurisdictions in Canada, it can be used as a surrogate measure for misconduct and medical unprofessionalism. As a result of compiling these CPS case summaries into a database, we determined that family physicians, psychiatrists, and surgeons were subject to the highest disciplinary rates in Canada.[3] Anesthesiologists, on the other hand, composed approximately 2% of physicians facing discipline while accounting for 4% of the total physician workforce.[3]

Despite a low disciplinary rate in Canada, further analysis is needed to identify and understand factors involved in discipline within the specialty of anesthesiology. By comparing this group of specialists with other physicians in Canada, we hope to identify any major characteristics of this cohort and determine areas within medical practice that require closer attention within this speciality. This may help reduce medical misconduct amongst Canadian anesthesiologists and future cases subject to discipline.

Methods

Database construction

Upon receiving ethics approval from the St. Michael's Research Ethics Board on August 31, 2010, we constructed a database of all Canadian physicians subject to discipline from January 1, 2000 to December 31, 2011. We identified physicians subject to discipline by reviewing all available online monthly publications on discipline from each provincial and territorial CPS. Demographic information collected for each physician included: sex; type of practice licence (independent practice *vs* educational licence [resident trainees and fellows]); Canadian *vs* international medical graduate (IMG) (defined by graduation from a Canadian *vs* an international medical school); and medical specialty. Specialties were grouped into two categories: 1) anesthesiologists and 2) all other physicians. We calculated total years of practice as the total number of years from obtaining a medical degree up until the disciplinary action. Information unavailable through the discipline summaries was obtained from provincial licensing website databases, the Canadian Medical Directory for the years from 1970-2011, or via e-mail correspondence to the Colleges of Physicians and Surgeons themselves. Online data for years prior to 2007 were not available for New Brunswick, Prince Edward Island, and Newfoundland and Labrador. Furthermore, online data for years prior to 2002 were not available for Alberta. The same methodology has been documented in our previous publications where we examined disciplinary findings amongst other physician groups from 2000-2009.[3,4]

Each disciplinary action was reviewed and grouped according to the following categories: conviction of a crime; fraudulent behaviour/prevarication; inappropriate prescribing; mental illness; failure to meet a standard of care; the physician's use of drugs or alcohol; sexual misconduct; unprofessional conduct; unlicensed activity/breech of registration terms; miscellaneous findings; and unknown/unclear findings. Miscellaneous findings were mainly breaches of confidentiality, improper disclosure to patients, and improper handling or maintenance of medical records. Two investigators were responsible for independently coding for violation and penalties. We resolved any disagreements through co-author meetings, discussion, and eventual consensus.

Disciplinary penalties faced by physicians were grouped into the following categories: licence revocation; licence surrender; suspension; licence restriction; mandated retraining/education/course/assessment; mandated psychological counselling and/or rehabilitation; formal reprimand; fine/cost repayment; and other actions.

The total number of physicians and resident trainees in the years under investigation was obtained from the Canadian Institute of Health Information and Canadian Post-M.D. Education Registry (CAPER).[5,6] Using this information, we calculated the average number of anesthesiologists and non-anesthesiologists in Canada during 2000-2011.

Statistics

Physician characteristics and the disciplinary findings and penalties for anesthesiologists and all other physicians were summarized separately using descriptive statistics. Due to the small number of events and the lack of independence of the outcome (a physician could have multiple investigations and disciplinary findings) no inferential analyses were undertaken.

Results

During the years 2000-2011, there were 721 disciplinary findings following disciplinary investigations in Canada; 11 of these findings were committed by nine anesthesiologists. Eight anesthesiologists were subject to a single disciplinary investigation and one anesthesiologist was disciplined three times, accounting for 1.5% of the total number of disciplinary investigations. This particular anesthesiologist worked in a chronic pain clinic and was disciplined initially for lack of knowledge, skill, and judgement in prescribing narcotics and controlled substances to his patients. Subsequent findings related to his lack of adherence to the College's restriction in his practice. Amongst other physicians, 62 physicians were disciplined more than once, which accounted for 143 (19.8%) of the total disciplinary findings.

All 11 anesthesiology cases subject to discipline involved males, 10 (90.9%) involved independent practitioners, and almost two-thirds of the cases ($n = 7$, 63.6%) involved IMGs. Amongst other physician offenses, 653 (92.0%) were committed by males, almost all were independent practitioners (98.7%), a small group (1.3%) were post-graduate physicians, and more than one-third were committed by IMGs. The mean (standard deviation, SD) number of years of practice before finding was 31.9 (12.9) yr amongst anesthesiologists and 29.2 (11) yr amongst other physicians (Table 1).

Twenty-one different disciplinary findings occurred amongst the 11 disciplinary cases committed by nine anesthesiologists. The most common findings committed by anesthesiologists were standard of care issues, inappropriate prescribing, and fraudulent behaviour. A standard of care issue resulted from evident or assessed lack of skill, judgement, or knowledge. Only two anesthesiologists had standard of care issues as their sole

violation. Fraudulent behaviour included acts such as prevarication on licensing forms, lying to the CPS, defrauding health insurance plans, forging signatures, and misleading patients on benefits of services rendered. Anesthesiologists appeared to have lower rates of sexual misconduct and unprofessional behaviour than other physicians (Table 2).

The most common types of penalties imposed on anesthesiologists were fine/cost, formal reprimand, and restriction on practice. One anesthesiologist's licence was revoked for sexual misconduct. Even so, compared with the general physician population, anesthesiologists appeared to receive fewer fine/cost penalties, formal reprimands, and licence suspensions (Table 3).

Discussion

Our results indicate that anesthesiologists have a low rate of violations compared with other physicians. The most common disciplinary findings amongst anesthesiologists were standard of care issues, inappropriate prescribing, and fraudulent behaviours. Almost all disciplined anesthesiologists were male and in independent practice. Two-thirds of these physicians were IMGs. In addition, anesthesiologists were infrequently disciplined for sexual misconduct and unprofessional behaviour. Similarly, they appeared to receive fewer fines, formal reprimands, and practice restrictions when compared with other physicians.

In our previous work, the most common specialties subject to disciplinary action in Canada were family medicine and psychiatry.[3] It has been postulated that these specialties face a greater risk of discipline because they practice mainly in isolation, have frequent patient interactions, and can develop intense physician-patient relationships.[7] Such intimate relationships can potentially blur physical and sexual boundaries, which may account for the fact that psychiatrists and family physicians are more likely to receive discipline for sexual improprieties and boundary issues.[4,8]

Apart from the subspecialty of chronic pain medicine, the nature of the relationship between an anesthesiologist and patient is much different and may account for the observed disciplinary rates. The patient usually meets the anesthesiologist on the day of the surgery, and the interaction revolves around information gathering and education. After surgery, the anesthesiologist and patient part ways unless there is an indication for follow-up. This limited relationship may enforce boundaries for both parties and potentially reduce opportunities for unprofessional behaviour.

Furthermore, the practice style of anesthesiologists may also account for the reduced disciplinary rate. Most anesthesiologists work in large teams composed of surgeons, surgical assistants, nurses, and residents (if at a teaching hospital). As a result, during the anesthetic care of a patient, it is unlikely that a patient is left alone with an anesthesiologist. Having other members of the surgical care team constantly present provides collegial enforcement of standards of professionalism.

Although the percentage of IMGs in the anesthesiology population is not known, IMGs accounted for almost two-thirds of disciplined anesthesiology cases, and similar results are found elsewhere in the literature.[9,10] The conclusion from these studies suggests that physicians trained abroad attract more complaints to medical boards and adverse disciplinary findings than those trained nationally. The

Table 1 The characteristics of disciplinary cases amongst anesthesiologists and other physicians in Canada during 2000-2011

Characteristic	Disciplinary cases amongst anesthesiologists $n = 11$		Disciplinary cases amongst non-anesthesiologists $n = 710$	
	Frequency	%	Frequency	%
Sex				
Female	0	0.0%	57	8.0%
Male	11	100.0%	653	92.0%
Licence type				
Independent	10	90.9%	701	98.7%
Resident trainee	1	9.1%	9	1.3%
Location of medical school				
International medical graduate	7	63.6%	240	33.8%
Canada	4	36.4%	470	66.2%
Total Number of Repeat Findings (%)	3	27.2%	143	19.8%
Number of years of practice before finding (SD)	31. 9 (12.9)		29.2 (11)	

SD = standard deviation

Table 2 The types of disciplinary findings amongst anesthesiologists and other physicians in Canada during 2000-2011

Types of findings	Disciplinary findings of anesthesiologists ($n = 11$)*			Disciplinary findings of non-anesthesiologists ($n = 710$)*		
	n	Percent disciplined	Percent of all anesthesiologists	*n*	Percent disciplined	Percent of all non-anesthesiologists*
Conviction of a crime	0	0.0%	0.00%	36	5.1%	0.05%
Fraudulent Behaviour/prevarication	3	27.3%	0.09%	94	13.2%	0.13%
Inappropriate prescribing	4	36.4%	0.12%	96	13.5%	0.13%
Miscellaneous findings	3	27.3%	0.09%	123	17.3%	0.17%
Mental illness	0	0.0%	0.00%	3	0.4%	0.00%
Self use of drugs and alcohol	1	9.1%	0.03%	21	3.0%	0.03%
Sexual misconduct	1	9.1%	0.03%	191	26.9%	0.27%
Standard of care issue	5	45.5%	0.15%	210	29.6%	0.29%
Unclear findings	1	9.1%	0.03%	19	2.7%	0.03%
Unlicensed activity	2	18.2%	0.06%	66	9.3%	0.09%
Unprofessional conduct	1	9.1%	0.03%	160	22.5%	0.22%
	11		3283	710		71788

*The total number of physicians subject to discipline in each category is based on investigation-based tallies. The total physician percentage is based on a calculated field of data compiled from the Canadian Institute for Health Information (CIHI) and the Canadian Post-M.D. Education Registry (CAPER), i.e., the average number of physicians, including both independent practitioners and resident physicians, during 2000-2011[7,8]

Table 3 Types of penalties imposed in disciplinary cases amongst anesthesiologists and other physicians in Canada during 2000-2011

Types of penalties imposed	Anesthesiologists who committed violations ($n = 11$)*			Non-anesthesiologists who committed violations ($n = 710$)*		
	n	Percent of violators	Percent of all anesthesiologists	*n*	Percent of violators	Percent of all non-anesthesiologists*
Fine/cost	7	63.6%	0.21%	496	69.9%	0.69%
Formal reprimand	5	45.5%	0.15%	318	44.8%	0.44%
Other action	0	0.0%	0.00%	43	6.1%	0.06%
Psychotherapy/counselling/substance abuse program	0	0.0%	0.00%	70	9.9%	0.10%
Practice restriction	5	45.5%	0.15%	209	29.4%	0.29%
Retraining/course/assessment required	3	27.3%	0.09%	179	25.2%	0.25%
Revocation	1	9.1%	0.03%	104	14.6%	0.14%
Voluntary surrender (licence)	2	18.2%	0.06%	35	4.9%	0.05%
Suspension	1	9.1%	0.03%	345	48.6%	0.48%
	11		3283	710		71788

*The total number of physicians disciplined in each category is based on investigation-based tallies. The total physician percentage is based on a calculated field of data compiled from the Canadian Institute for Health Information (CIHI) and the Canadian Post-M.D. Education Registry (CAPER), i.e., the average number of physicians, including both independent practitioners and resident physicians, during 2000-2011[7,8]

literature also suggests that IMGs are subject to more disciplinary action due to factors related to competency, quality of care, and communication.[11] IMGs may be less familiar with cultural language idioms, nuances, subtle non-verbal cues, and cultural appropriateness.[12] Focus groups composed of IMGs, program directors, and allied healthcare professionals advocated improvement in communication and English language skills amongst the top recommendations for IMGs working in Canada.[13]

Communication alone has been identified as the single most important factor in determining whether a patient pursues a complaint or claim against a physician.[14-16] Low scores in the Medical Council of Canada clinical skills examination have been associated with future complaints against a physician.[17] The study indicated that a standard deviation decrease of two in the communications score was associated with a 38% increase in the rate of complaints.[17] Improvement in

physician-patient communication may be an important intervention for all types of physicians.

Our data indicates that anesthesiologists may not be more likely than other physicians to be disciplined for substance abuse. Addiction remains a major issue in anesthesia[18] and this low rate of discipline found in our study is most likely confounded by an alternate management of physicians with addictions. Most provincial medical authorities have addiction programs with arrangements with disciplinary bodies that keep identities of physicians confidential while they are enrolled.[19,20] If treatment is successful and no relapses or harm to patients occur due to their illness, the physician will not be disciplined for substance abuse. This may explain the discrepancy between the rate of physician substance abuse and the rate of discipline for substance abuse. Nonetheless, it is still imperative that tight monitoring systems, close regulations, and educational programs are employed for all physicians to prevent and limit workplace substance abuse.

Our study can serve to direct effective interventions to prevent disciplinary cases against anesthesiologists. Educational programs or workshops that address issues of standards of care, communication concerns, fraudulent behaviour, and inappropriate prescribing practices may be worthwhile. These programs could fit into pre-existing residency programs or continuing medical education courses. Continuing education courses may be important as older physicians tend to be disciplined more frequently than younger newly licensed physicians.[3,9] Although most disciplinary findings involved anesthesiologists who attended medical school abroad, studies have indicated that physicians facing discipline were more likely to have problems during medical school (odds ratio 2.15; 95% confidence interval 1.15 to 4.02; $P = 0.02$),[21] which suggests that early identification and remediation may also be effective interventions. Finally, more resources should be directed towards transitioning and integrating IMGs into the Canadian workplace through cultural and communication training.

One of the main limitations of this study includes utilizing disciplinary data as surrogates of professional misconduct. As a result, the data set underestimates the total amount of physician misconduct as it captures only physicians found guilty after a disciplinary investigation. Our data fails to gather information on misconduct that is never reported, complaints that are remediated prior to reaching a disciplinary committee, and complaints that are never made public (i.e., resort to other civil proceedings). In addition, we were not able to capture instances where physicians may voluntarily surrender their licence to avoid disciplinary proceedings. Yet, our database is the only available aggregate information of medical disciplinary information in Canada to date. Another major limitation of our data is not capturing disciplinary action in the Canadian territories (Yukon, Nunavut, and Northwest Territories) and in certain other provinces. We also excluded findings where the physician's name was not published, as we were unable to gather characteristic data on these physicians. These physicians accounted for only 25 (3.4%) of the total number of physicians disciplined, and in our view, this would not substantially change the resulting proportions.

Due to the small number of anesthesiologists facing discipline, standard methods for calculating the point estimate and confidence intervals were not appropriate; hence, no inferential analyses were undertaken.[22] Furthermore, we recognize the conceptual difficulty with utilizing independent physician numbers as a denominator to calculate national percentages with non-independent investigation-based tallies. Nevertheless, we regard this calculation as a reasonable estimate of the relative national percentage of physicians facing discipline in each category.[4] Lastly, in our opinion, our suggestions for specific areas of intervention can only prompt further investigation because of the sparse nature of the data set.

Our findings reveal that the overall proportion of anesthesiologists in Canada who are subject to discipline by regulatory authorities is quite low and not more frequent than other physicians. Also, anesthesiologists appear to be disciplined less frequently than other physicians for sexual misconduct and unprofessional behaviour. Interventions aimed at educating physicians with respect to standards of care, prescribing practices, and fraudulent behaviour may further reduce disciplinary findings in anesthesiology and in other areas of medicine.

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Conflicts of interest None declared.

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