



Reporting Unfit Drivers: Knowledge, Attitudes, and Practice of BC Physicians

UNIVERSITY OF BRITISH COLUMBIA

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EXECUTIVE SUMMARY

Introduction: Fitness to drive refers to an individual's physical, cognitive, and emotional ability to carry out the complex task of driving. Unfit drivers impose risks on themselves and on other road users. The risk of subsequent crashes is reduced when physicians identify unfit drivers and warn them not to drive. In addition to counselling, physicians are also able to report medically unfit drivers to licensing authorities who may revoke or set conditions on their driver license. It is argued that reporting unfit drivers is a public health obligation, similar to reporting certain communicable diseases. Most Canadian provinces and all territories have mandatory reporting laws in which physicians are required to report patients who may be medically unfit to drive to the licensing authority. However, even with mandatory reporting laws, the rates of reporting are low because many physicians lack knowledge regarding the assessment of driving fitness and their legal obligations around reporting unfit drivers. In addition, some physicians are reluctant to engage in this process at all because of fear of adversely affecting the patient-doctor relationship, potential legal liability, lack of confidence or training in assessing driving fitness, and lack of remuneration.

British Columbia (BC) has a unique law that mandates physician reporting of unfit drivers under certain specific conditions. The BC Motor Vehicle Act, Section 230 mandates that physicians report drivers who meet the following conditions:

“(a) in the opinion of the psychologist, optometrist, medical practitioner or nurse practitioner has a medical condition that makes it dangerous to the patient or to the public for the patient to drive a motor vehicle, and

(b) continues to drive a motor vehicle after being warned of the danger by the psychologist, optometrist, medical practitioner or nurse practitioner.”

Clause 1b means that physicians are mandated to report unfit drivers in cases where the physician knows that the driver continues to drive after having been warned not to. If the physician does not know that the potentially unfit driver continues to drive after being warned, reporting is discretionary.

Objectives:

1. To examine physicians' knowledge of the assessment and reporting of unfit drivers, and of the laws regarding fitness to drive.
2. To understand physicians' attitudes, practice, and perceived barriers towards advising and/or reporting unfit drivers.
3. To seek opinions from BC physicians regarding amendments to the Motor Vehicle Act (i.e. removing clause 1b from section 230).

Methods: We used an online survey to explore physician knowledge of fitness to drive issues and their attitudes and practice with regard to counselling and reporting unfit drivers. We also asked about physician-reported barriers to reporting medically unfit drivers and their idea of incentives that would improve reporting. Finally we asked physicians to provide their opinions regarding amendments to the Motor Vehicle Act (i.e. removing clause 1b from section 230). Email invitations to participate in the survey were sent to all physicians in BC through DoctorsofBC and to all emergency physicians (EPs) in the UBC Department of Emergency Medicine.

Findings: We received responses from 242 physicians (47% EPs, 40% GPs, 13% others). The majority (78%) reported little/no knowledge on determining driver fitness and 94% had little/no training around guidelines, reporting, and laws involving fitness to drive.

Most (88%) agreed that physicians should be obligated to advise medically unfit patients not to drive, and 74% reported that they often warn patients not to drive. The majority of physicians also chart their opinion of patients' fitness to drive (67% do so more than twice per year). Most respondents (70%) indicated that it is "always appropriate" to report definitely unfit drivers whereas only 25% indicated that it is "always appropriate" to report potentially unfit drivers.

However, in practice physicians see far more unfit drivers than they report to licensing authority: 67% of physicians encounter definitely unfit drivers more than twice per year but only 19% report definitely unfit drivers more than twice per year and 34% never report definitely unfit drivers.

Compared to other physicians, EPs reported less knowledge and training about criteria for determining fitness to drive, were more likely to feel that reporting unfit drivers was not their responsibility, and were less likely to report unfit drivers to licensing authorities.

The most common barrier to reporting was not knowing which unfit drivers continue to drive (79% of respondents). Other barriers included lack of time (51%), lack of knowledge of the process, guidelines, or legal requirement for reporting (51%, 50%, 45% respectively), fearing loss of rapport with patients (48%), pressure from patients not to report (34%), lack of remuneration (27%), and pressure from family members not to report (25%).

EPs were significantly less likely than other physicians to cite loss of rapport, pressure from

patients, or pressure from family as barriers, but more likely to cite not being aware of drivers who continue to drive after being warned, lack of knowledge (regarding legal requirements to report, guidelines for determining fitness, and the reporting process), and lack of time.

Factors that would increase reporting unfit drivers included better understanding of criteria for fitness to drive (70%), more information regarding how to report (67%), more information on when to report (65%), and compensation (43%).

Free text comments from respondents identified other barriers/incentives. Reporting might be simplified by telephone hotlines or allowing physician designates to report. Physicians feared legal liability and suggested the need for better medico-legal protection. Loss of patient rapport might be minimized by public education. Failure of response from licensing authorities to a report (long wait times, lack of feedback to physician) was seen as a barrier to reporting.

The physicians who participated in this survey had mixed views about removing clause 1b from the BC motor vehicle act so that it would be mandatory to report all medically unfit drivers regardless of whether or not they had previously been warned. Just over half agreed with removing this clause but 24% disagreed, including 9% who strongly disagreed. Physicians who agreed with removing this clause cited public safety, increased clarity around when reporting is required, improved compliance with reporting, and the belief that removing this clause would take the onus off the physician because they could inform medically unfit drivers that, as physicians, they are legally obligated to file a report. Reasons for disagreement with removing this clause included concerns about increased workload for physicians, uncertainty about determining fitness to drive, the feeling that reporting was usually unnecessary because most patients would voluntarily comply with

warnings against driving, fear of damaging physician-patient rapport, fear of litigation if they failed to report, and the belief that it was not the physician's role to act as police in reporting their patients.

Recommendations:

1. Provide training and resources.

Physicians require training and easy access to reference material to help them identify medically unfit drivers and to clarify reporting requirements and the process for reporting. Continuing medical education courses on fitness to drive should be offered to physicians who see medically unfit drivers in their practice. Course content should include an approach for identifying unfit and potentially unfit drivers as well as a clear explanation of the rationale, legal requirements, and process for reporting potentially unfit drivers. Courses should be supplemented with high quality reference material that can be easily accessed in real time and includes a high level summary as well as detailed information on identifying unfit drivers as well as a step by step guide for reporting these drivers. In the long term, content on driver fitness should be introduced during medical school and included as part of residency training.

2. Minimize physician workload.

The reporting process should be made as simple as possible and should allow multiple methods for making a report to account for different physician preference and work habits. This should expand the current method of faxing reports to also include the option to send reports by email or online. Consideration should be given for reporting by a telephone hotline. Physician designates should be allowed to report, especially in emergency departments or

hospitals where social workers and other ancillary staff are available. Consideration should also be given to providing remuneration for reporting.

3. Improve the post-reporting response.

Physicians should receive rapid confirmation when reports are received and should be informed of the result of the report. Privacy issues that currently prevent this feedback should be addressed. In addition, the actual assessment of patients after a report is filed should occur in a timely fashion in order to remove unfit drivers from the road as quickly as possible. In cases where the patient regains fitness to drive, there should be a process to rapidly reinstate the driver license.

4. Protection for physicians.

Concern over legal liability for breaching doctor – patient confidentiality is a barrier to reporting. Regardless of whether or not reporting of all medical unfit drivers is made mandatory (see discussion about clause 1b below), the law should be amended so that physicians who report potentially unfit drivers in good faith are not incurring medico-legal risk. Alternatively, if legal analysis shows that the existing “good faith” provision in the law protects physicians from medico-legal risk, then those protections should be clarified and the information shared with physicians. In addition, to protect physicians who file reports from backlash from patients or their families, public education campaigns should highlight the public health importance of removing medically unfit drivers from the roads and on physician duties around reporting.

5. Consultations re Amending the BC Motor Vehicle Act.

Our survey suggests that removing clause 1b from section 230 of the motor vehicle act will reduce ambiguity around physician duty to report unfit drivers and will likely increase reporting.

Thus it seems reasonable to remove clause 230 from the motor vehicle act. However there are several important considerations before this is done. Given the strong opinions that this topic generates and the very real concerns about damage to the doctor-patient relationship, it is important to further engage physicians (particularly rural physicians who were poorly represented in this survey) and physician groups (Doctors of BC, and the College of Physicians and Surgeons of BC) prior to any changes in the law.

6. Best Practice Guidelines for Reporting.

In addition to better training / knowledge of how to assess fitness to drive and how to file a report, physicians require guidelines around the reporting requirements in different clinical contexts. Some factors, identified in this survey, to be considered include:

Temporary Conditions: Physicians need to know that they are not expected to report conditions associated with temporary loss of fitness to drive (such as after an injury or following a medical procedure). In these cases, we suggest that the patient be warned not to drive for a defined period of time (as indicated by the medical situation) and the warning documented in the medical chart. However a report to the licensing agency is not required.

New Diagnoses. Assuming that physicians who report in good faith are protected from medico-legal risk (recommendation 4), it makes sense that physicians who make a new diagnosis of a

condition that renders a patient unfit to drive should report this to licensing authorities. For example, an emergency physician who sees a patient after a *first* seizure should report that condition.

Chronic Conditions. Chronic conditions that make a patient unfit to drive should be reported by the physician(s) who follow the patient for that condition. It may not be necessary or reasonable to expect that physicians report all medically unfit drivers who they see for unrelated conditions or for a complication of a chronic condition that is managed long-term by another physician. Thus, for example, family physicians or neurologists who treat epileptic patients on a long-term basis would be expected to report the condition, but a cardiologist who sees an epileptic patient for angina would not be expected to report that the patient is epileptic. Similarly, the emergency physician who sees a known epileptic (who is followed by another physician) after a seizure would not be expected to make a report unless it is believed that the patient's condition has changed.

Drivers seen after a crash. Drivers who are treated for injuries after a crash warrant an assessment of their fitness to drive – especially if the crash circumstances suggest that the driver contributed to the crash. Unfit drivers who have been involved in a crash should be reported by the physicians involved in their care.

INTRODUCTION

Operating a motor vehicle is a complex task that requires perceptual, cognitive, and motor skills. Drivers must see and hear potential hazards (perception), interpret their meaning and choose a correct course of action (cognition), and execute the action correctly (motor).¹ Fitness to drive refers to an individual's physical, cognitive, and emotional ability to carry out the complex task of driving. Psychomotor impairment can result from chronic medical conditions, temporary incapacitation (e.g. seizure or sudden loss of consciousness), injury, psychiatric illness, cognitive decline, or any combination.^{2, 3} These conditions occur in all age groups but are most common in the elderly. Many predict a large increase in the number of unfit drivers as the population continues to age.^{4, 5}

Medically unfit drivers impose risks (injuries and fatalities) on themselves and on other road users. It is argued that reporting unfit drivers is a

public health obligation, similar to reporting certain communicable diseases.^{6, 7} Redelmeier demonstrated that the risk of subsequent crashes is reduced when physicians identify unfit drivers and warn them not to drive.^{7, 8} In addition to counselling, physicians are also able to report medically unfit drivers to licensing authorities who may revoke or set conditions on their driver license. Physicians often have knowledge of their patients' medical history and functional limitations but, even so, recognition of medically unfit drivers can be difficult. At risk drivers often lack insight into warning signs of cognitive impairment or declining health and may overestimate their driving skills and not report problems to their physicians. Unfortunately, this lack of insight also prevents them from taking precautions to prevent MVCs. At the same time, valid and reliable screening and assessment tools for physicians to identify unfit drivers are lacking.⁹

Previous studies have shown that many medical professionals lack knowledge regarding the



Most primary care physicians agreed that assessing fitness to drive of older patients is an important issue, but only 30% felt confident in their ability to do so.

assessment of driving fitness and their legal obligations around reporting unfit drivers.¹⁰⁻¹² A survey of Canadian family physicians indicated that most (79%) feel that assessing fitness to drive of older patients is an important issue in their practice, but only a third (30%) feel confident in their ability to do so.¹³ Although a Swiss survey indicated that family physicians value discretionary reporting of unfit drivers,¹⁴ the attitudes of other medical specialties is relatively unknown. Additionally, studies in other Canadian provinces have indicated that physicians^{10, 13, 15} and psychologists¹⁶ have knowledge gaps regarding the assessment, determination of fitness to drive, and reporting of unfit drivers. However, physician knowledge, attitudes, practice patterns, and perceived barriers to reporting of unfit drivers has not been studied in BC.

Many jurisdictions have policies for medical warnings to unfit drivers in which physicians are expected or required to report patients who may be medically unfit to drive to the licensing authority.^{14, 17-20} Most Canadian provinces and all territories have mandatory reporting laws.²⁰ Physicians in provinces with mandatory reporting laws are over twice as likely as those in other provinces to report unfit drivers.¹³ However, Redelmeier found that, even with Ontario's mandatory reporting laws, the majority of drivers with reportable conditions who presented to a Toronto trauma centre had not been reported to licensing authorities prior to the crash.¹⁹ Rates of reporting are low for several reasons. Many physicians are unaware of reporting requirements and of the precise criteria for defining unfit drivers. In addition, some physicians are reluctant to engage in this process at all because of fear of adversely affecting the patient-doctor relationship, potential legal liability, and lack of confidence or training in assessing driving fitness, and lack of remuneration.^{11, 13, 14, 19}

British Columbia (BC) has a unique law that mandates physician reporting of unfit drivers under certain specific conditions. The BC Motor Vehicle Act, Section 230 mandates that physicians report drivers who meet the following conditions:

“(a) in the opinion of the psychologist, optometrist, medical practitioner or nurse practitioner has a medical condition that makes it dangerous to the patient or to the public for the patient to drive a motor vehicle, and

(b) continues to drive a motor vehicle after being warned of the danger by the psychologist, optometrist, medical practitioner or nurse practitioner.”²¹

Clause 1b means that physicians are mandated to report unfit drivers in cases where the physician knows that the driver continues to drive after having been warned not to. If the physician does not know that the potentially unfit driver continues to drive after being warned, reporting is discretionary. Although physicians who report drivers under section 230 are protected by a “good faith” clause, there is concern that physicians could be accused of violating doctor-patient confidentiality if they report patients in cases where they are not legally obligated to do so. Clause 1b allows drivers to voluntarily comply with warnings against driving from their physician and potentially reduces administrative burden. On the other hand, clause 1b is problematic because patients' driving activities are not always known by their physicians and may not be volunteered by patients. Additionally, many physicians do not have multiple points of contact with a specific patient despite having knowledge of a potentially devastating diagnosis that could adversely affect driving ability. This is especially true for emergency physicians and specialists who often make new diagnoses (e.g. hypoglycemic episode, seizure, etc) but do not

usually have follow-up with the patient. Family physicians who subsequently take care of these patients may not have knowledge of whether driving was discussed, or whether the patient was warned not to drive. It was hypothesized that the specific requirements in clause 1b limit reporting of unfit drivers in BC. A revision to the law that removes clause 1b from section 230 was passed in 2010 but not brought into force. Under the revised legislation, physicians would be obligated to report potentially unfit drivers regardless of whether or not the driver continues to drive. Because reporting would then be a legal obligation, physicians who report unfit drivers would be protected from legal sanctions for breaching doctor-patient confidentiality.

The objectives of this study are:

1. To examine physicians' knowledge of the assessment and reporting of unfit drivers, and of the laws regarding fitness to drive.
2. To understand physicians' attitudes, practice and/or reporting unfit drivers.
3. To seek opinions from BC physicians regarding amendments to the Motor Vehicle Act (i.e. removing clause 1b from section 230)

METHODS

A cross-sectional online questionnaire was developed based on a review of literature and guided by 3 broad themes: (i) knowledge, (ii) attitudes and (iii) current practice of physicians regarding unfit driver counselling and reporting.^{22, 23} The survey comprised 31 multiple choice or Likert scale questions in 5 sections: 8 questions on demographics, 5 questions on

knowledge pertaining to fitness to drive assessment and laws in reporting unfit drivers, 7 questions related to attitudes in reporting and counselling, 10 questions related to practice, and 1 question related to the proposed amendment to Section 230 of the BC Motor Vehicle Act. Several questions also included optional free text sections where respondents could elaborate on their responses or provide their thoughts on assessing and reporting unfit drivers.

Demographic questions included gender, age, specialty, years in practice, primary working environment, percent of patients living in a rural community, percent of patients over 65, and frequency of patient visits related to MVCs. "Knowledge" questions probed self-reported knowledge of fitness to drive criteria and education/training regarding guidelines, reporting, and laws relating to unfit drivers. "Attitude" questions probed physician opinions regarding the appropriateness of professional duties related to assessing fitness to drive, reporting unfit drivers, and their perceived obligation to advise patients to refrain from driving if deemed unfit. "Practice" questions probed frequencies of encounters with unfit drivers, and usual practice around counseling patients and families, charting, reporting, and calling police. In addition, the survey asked what resources physicians use to determine a patient's fitness to drive, as well as perceived barriers to reporting unfit drivers and factors that would potentially increase reporting rates. A copy of the complete survey is included in Appendix 1.

An online survey was developed using a UBC survey tool (Fluid Survey). The survey was reviewed by RoadSafetyBC and Doctors of BC for content validity. Additionally, 5 physicians interested in the issue tested the survey for face validity and user-friendliness. The survey was distributed to all practicing physicians in BC who were members of Doctors of BC via their

communications office, representing approximately 11,500 physicians. An invitation email, sent in December 2015, described the purpose of the study and included a web link to the online survey site. Physicians never involved in evaluating driver fitness were asked not to complete the survey. We were particularly interested in the opinion of emergency physicians since they often see medically unfit patients who have been involved in a crash. Thus, an additional invitation was sent to emergency physicians through the UBC Department of Emergency Medicine. Informed consent was implied by completion of the survey after advancing past the introduction page. All responses were kept anonymous and confidential and stored securely on a UBC survey server. This study was approved by the UBC research ethics board.

DATA ANALYSIS

The online survey platform collated all responses into a Microsoft Excel spreadsheet. The responses to each question were summarized as counts and percentages. Chi-squared tests were used to compare differences between groups. Responses of emergency physicians were compared to those of family physicians and of other specialists. Responses were also compared by age of respondents, primary working environment, and medical practice patient demographics (percentage elderly patients, percentage rural patients).

THEMATIC ANALYSIS

Responses that contained free text comments were separated and blinded by removing other survey responses so that only the comments were visible. Then, five researchers separately read through all comments and identified themes that emerged for each question. The research team then met, compared coding for themes, and came to a consensus regarding themes and

their meaning. After this meeting, the same five researchers went through all comments again and coded each response for the agreed upon themes relevant to that response. The five sets of coding were compared and differences were discussed by the entire study team to create a final consensus set of coding for each theme. The frequency that each theme appeared in the comments was then summarized as counts and percentages and Chi-squared tests were done to compare counts of each theme across demographic variables and physician groups.

RESULTS

DEMOGRAPHICS

Overall, we received responses from 242 of the 11,500 physicians in BC (2%), 113 responses were from emergency physicians (25.9% of the 437 EPs in the UBC Department of Emergency Medicine) (**Table 1**). Of all responses, 88 (37%) were from female physicians and 153 (63%) from male physicians. A third of respondents (34%) were between 50 and 59 years old, only 2% were under 30, and 3% were older than 70 years of age. There was a wide range in years of experience among respondents ranging from < 6 years to over 45 years. Emergency Medicine was the most common specialty (47%) followed by Family Practice (40%) and other specialties (13%). Working environments closely followed specialties, with the emergency department being the most common (46%), followed by a family practice office (35%), hospital (8%), specialty clinic (8%) and walk-in clinic (3%). Most physicians did not treat many patients who lived in a rural setting. Overall, 62% of respondents indicated that <5% of their patients reside in a rural community, while only 8% of respondents

indicated that >75% of their patients lived rurally. Most respondents (60%) stated that 5-50% of their practice consisted of patients over 65 years old, whereas only 5% had a practice with >75% of their patients aged over 65 years. Most

Not surprisingly, emergency physicians reported seeing the most patients with visits related to MVCs. Most emergency physicians (106/113 = 94%) saw MVC-related visits at least once per week and the remainder (7/113 = 6%) saw at

Table 1: Demographics and practice profiles of all survey respondents (n = 242).

Demographics	Count (%)	Practice Characteristics	Count (%)
Gender		Specialty	
Female	88 (36.4)	Emergency Medicine	113 (46.7)
Male	153 (63.2)	Family Practice	97 (40.1)
Age		Geriatrics	3 (1.2)
<30	4 (1.7)	Internal and subspecialties	8 (3.3)
30-39	44 (18.2)	Neurology	6 (2.5)
40-49	57 (23.6)	Ophthalmology	5 (2.1)
50-59	82 (33.9)	Other	2 (0.8)
60-69	48 (19.8)	Psychiatry	6 (2.5)
>70	7 (2.9)	Surgery and subspecialties	2 (0.8)
Years in Practice		Primary Working Environment	
<6	36 (14.9)	Emergency Department	110 (45.5)
6-10	24 (9.9)	Family Practice Office	85 (35.1)
11-15	35 (14.5)	Hospital	20 (8.3)
16-20	29 (12)	Specialty Clinic (ex. ophthalmology)	20 (8.3)
21-25	28 (11.6)	Walk-in Clinic	6 (2.5)
26-30	40 (16.5)	Blank	1 (0.4)
31-35	31 (12.8)	Percentage of patients living in rural setting	
36-40	11 (4.5)	< 5%	150 (62)
Blank	1 (0.4)	5-50%	61 (25.2)
		51-75%	12 (5)
		> 75%	19 (7.9)
		Percent of Patients over 65 years old	
		< 5%	5 (2.1)
		5-50%	146 (60.1)
		51-75%	78 (32.2)
		> 75%	13 (5.4)

physicians (62%) indicated that they see patients for visits related to MVCs either very frequently (>2 times per week; 38%) or frequently (at least once per week; 24%).

least one MVC-related visit per month. Conversely, almost half of GPs (47/97 = 48%) saw more than 1 MVC-related visit per month but less than one per week (**Table 2**). Only 14% of physicians, mostly specialists other than

Table 2. Comparison of frequency of motor vehicle crash cases seen by different specialties.

Frequency of patient visits related to motor vehicle crashes	Count (%)			
	All (n=242)	GPs (n=97)	EPs (n=113)	Other Specialty (n=32)
Very frequently (> 2 per week)	92 (38.0)	11 (11.3)	78 (69.0)	3 (9.4)
Frequently (at least 1 per week)	58 (24.0)	26 (26.8)	28 (24.8)	4 (12.5)
Sometimes (at least 1 per month)	59 (24.4)	47 (48.5)	7 (6.2)	5 (15.6)
Rarely (<1 per month)	25 (10.3)	12 (12.4)	0	13 (40.6)
Never	8 (3.3)	1 (1.0)	0	7 (21.9)

emergency physicians or general practitioners, had fewer than one MVC-related visit per month.

KNOWLEDGE OF DRIVER FITNESS AND REPORTING

The majority of respondents reported little knowledge or training in determining driver fitness or on the laws in BC on reporting unfit drivers. Most (72%) indicated that they knew the criteria that define a person as unfit to drive “a little.” Only 22% stated they knew it “very well,”

while 6% stated they didn’t know the criteria at all. The vast majority (94%) of physicians reported receiving either “no training at all” (47-55%) or only “a little training” (40% - 48%) around guidelines, reporting, and laws involving fitness to drive (**Table 3**). When knowledge was compared by specialty, emergency physicians (EPs) reported the least amount of knowledge and training regarding fitness to drive (**Table 4 and Figure 1**). Only 13% of EPs indicated they knew the criteria to determine fitness to drive “very well,” compared with 27% of GPs and 38%

Table 3: Self-reported education or training in fitness to drive issues.

Knowledge component	Amount of education/training Count (percentage)		
	No Training	A Little Training	Considerable Training
Laws mandating physicians to report unfit drivers	120 (49.6%)	111 (45.9%)	11 (4.5%)
Guidelines for determining fitness to drive	113 (46.7%)	116 (47.9%)	13 (5.4%)
Steps involved in voluntary reporting of unfit drivers	134 (55.4%)	97 (40.1%)	11 (4.5%)
Steps involved in mandatory reporting of unfit drivers	128 (52.9%)	103 (42.6%)	11 (4.5%)

of other specialties. Specialists reported receiving more education and training regarding laws, guidelines, and reporting unfit drivers compared to GPs and EPs. Physicians with less than 5 years in practice reported less knowledge around criteria to determine fitness to drive (8%

“very well”) versus those with greater than 5 or greater than 10 years in practice (21% and 24%, respectively). There were no major differences in self-reported knowledge or education/training between respondent groups who saw different numbers of rural patients.

Table 4: Comparison of reported physician knowledge, education, and training regarding patient fitness to drive across different specialties.

	Proportion (95% CI) (%)			P-value
	GPs (n = 97)	EPs (n = 113)	Other (n = 32)	
Self-reported knowledge of criteria to determine fitness to drive				
Know very well	26.8 (19.0, 36.4)	13.3 (8.2, 20.8)	37.5 (22.9, 54.7)	0.0044
Amount of education and training received regarding (% considerable):				
Laws mandating physician reporting of unfit drivers	3.1 (1.1, 8.7)	4.4 (1.9, 9.9)	9.4 (3.2, 24.2)	0.3336
Guidelines regarding determining patient fitness to drive	6.2 (2.9, 12.8)	2.7 (0.9, 7.5)	12.5 (5.0, 28.1)	0.0835
Steps involved in voluntary reporting of unfit drivers	5.2 (2.2, 11.5)	3.5 (1.4, 8.7)	6.2 (1.7, 20.1)	0.7555
Steps involved in mandatory reporting of unfit drivers	5.2 (2.2, 11.5)	3.5 (1.4, 8.7)	6.2 (1.7, 20.1)	0.7555

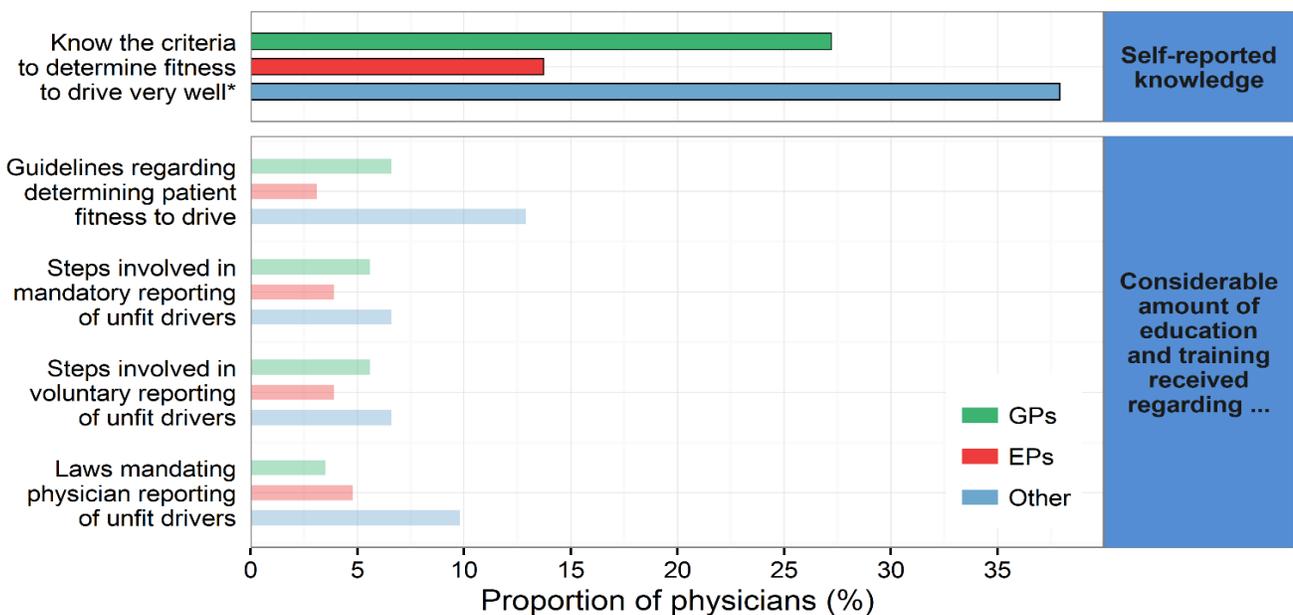


Figure 1. Knowledge and education around fitness to drive reported by survey participants according to specialty. Solid bars indicate statistically significant differences between specialties.

ATTITUDES TOWARDS ADVISING AND REPORTING UNFIT DRIVERS

A total of 88% of physicians either agreed (45%) or strongly agreed (43%) with the idea that physicians should be “obligated to advise patients not to drive if they have a medical condition that renders them unfit to drive.” Only 4% of physicians disagreed with this obligation, while 8% were neutral on the subject (Table 5). Comparing by specialty, most GPs and EPs (90% and 90%, respectively) agree, versus only 75% of other specialists (Table 5). There were no major patterns seen when compared by number of years in practice, or proportion of rural patients seen. Similarly, the majority (80%) of physicians felt it was always appropriate to counsel patients not to drive if they are unfit. Only 2% stated that this was not their responsibility.

Respondents were less decisive about informing family members of a patient’s fitness to drive. Most (61%) said it was “sometimes appropriate,” while 10% felt it wasn’t their responsibility. Most respondents (73%) felt that charting their opinion about a patient’s fitness to drive was “always appropriate.” A quarter (25%) felt it was “always appropriate” to report potentially unfit drivers and another 57% said it was “sometimes appropriate. Most respondents (70%) indicated that it is “always appropriate” to report definitely unfit drivers, while 19% stated it was “sometimes appropriate” and only 10% stated that it was not their responsibility. Only 36% of respondents stated it was “always appropriate” to call the police if a patient is a threat to other road users, 41% stated this was “sometimes appropriate” and 23% believed it was never appropriate.

There were differences between specialties regarding counselling patients, informing family or reporting. (Table 6) EPs and other specialists are more likely to feel that informing family members of a patient’s fitness to drive is not their responsibility (12%, 16% respectively) compared with only 7% of family physicians. Similarly, 6% of other specialists feel charting a patient’s fitness to drive is not their responsibility, slightly more than EPs (4%) or GPs (2%). Family



Several physicians cited excessive paperwork as a barrier to reporting medically unfit drivers. Remuneration for paperwork burden was suggested as a potentially effective incentive for reporting.

physicians feel more responsibility for reporting unfit drivers than EPs and other specialists: 31% of EPs and 16% of other specialists feel reporting *potentially* unfit drivers is not their responsibility compared with only 5% of GPs. Similarly, 18% of EPs and 9% of other specialists stated that reporting *definitely* unfit drivers is not their responsibility compared to only 2% of GPs. Additionally, 24.8% of EPs and 37.5% of other specialists feel calling the police if a patient is a threat to other road users is not their responsibility compared with 16.5% of GPs (Table 6 and Figure 2).

Table 5: Response to the question: Which of the following PROFESSIONAL DUTIES, with regard to fitness to drive, do you feel are appropriate for your specific practice?

Professional Duty	Appropriateness for respondent's practice		
	Not my responsibility	Sometimes appropriate	Always appropriate
Counselling patients not to drive if they are unfit to drive:	4 (1.7%)	45 (18.6%)	193 (79.8%)
Informing family members about patient's fitness to drive:	25 (10.3%)	148 (61.2%)	69 (28.5%)
Charting your opinion of the patient's fitness to drive in the medical record	8 (3.3%)	57 (23.6%)	177 (73.1%)
Reporting potentially unfit drivers to RoadSafetyBC	45 (18.6%)	137 (56.6%)	60 (24.8%)
Reporting definitely unfit drivers to RoadSafetyBC	25 (10.3%)	47 (19.4%)	170 (70.2%)
Calling the police if the patient is a threat to other road users	56 (23.1%)	100 (41.3%)	86 (35.5%)

Table 6: Comparison of physician attitudes and opinions regarding professional duties related to fitness to drive across different specialties

	Proportion (95% CI) (%)			P-value
	GPs (n = 97)	EPs (n = 113)	Other (n = 32)	
Percentage of Physicians who feel that the following duties are <i>not</i> their responsibility				
Counselling patients not to drive if unfit	1.0 (0.2, 5.6)	1.8 (0.5, 6.2)	3.1 (0.6, 15.7)	0.7164
Informing family members about patient's fitness to drive	7.2 (3.5, 14.2)	11.5 (6.8, 18.7)	15.6 (6.9, 31.8)	0.341
Charting opinion of patient's fitness to drive	2.1 (0.6, 7.2)	3.5 (1.4, 8.7)	6.2 (1.7, 20.1)	0.5075
Reporting potentially unfit drivers	5.2 (2.2, 11.5)	31.0 (23.2, 40.0)	15.6 (6.9, 31.8)	<0.0001
Reporting definitely unfit drivers	2.1 (0.6, 7.2)	17.7 (11.8, 25.8)	9.4 (3.2, 24.2)	0.0010
Calling police if patient is threat to other road users	16.5 (10.4, 25.1)	24.8 (17.7, 33.5)	37.5 (22.9, 54.7)	0.0431
Physicians should be obligated to advise unfit patients not to drive				
Percent who agree	89.6 (81.9, 94.2)	90.3 (83.4, 94.5)	75.0 (57.9, 86.7)	0.0528

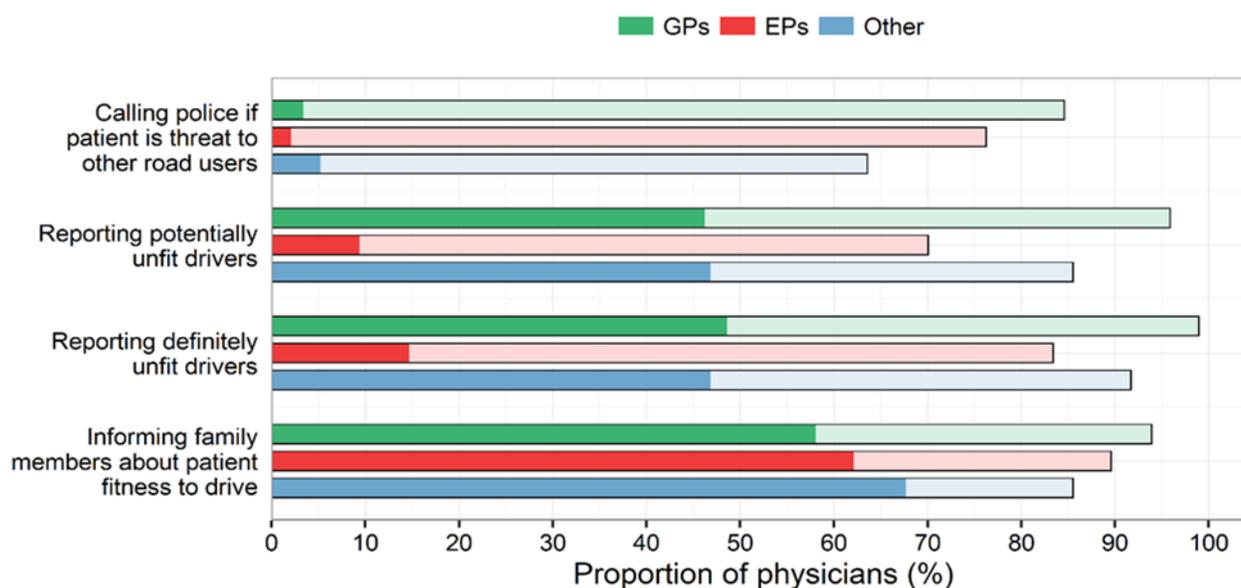


Figure 2. Comparison of physician attitudes towards counselling and reporting unfit drivers versus practice according to specialty. The light colours represent the percentage of physicians who say that a task is sometimes or always appropriate, the dark colours represent the percentage of physicians who actually perform the task more than twice a year.

ATTITUDES TOWARDS REPORTING -- THEMATIC ANALYSIS:

Respondents who said it was “sometimes appropriate” to either counsel patients, inform family members, chart their opinion of driving fitness, report potentially or definitely unfit drivers, or call the police were asked to comment on situations when it *would* be appropriate to do those things. Overall, 122 physicians (50% of all respondents) made comments in this section and 5 themes emerged from those comments: 1) Confidentiality, 2) Noncompliance, 3) Clinical Context, 4) Specific Diagnoses, and 5) Clear Risk. These comments came from all physician subgroups with no statistically significant difference in themes according to specialty, years in practice, proportion of rural patients in practice, or proportion of elderly patients in practice.

1) Confidentiality: This refers to the doctor-patient confidentiality and privacy issues. The need to protect patient confidentiality/privacy would influence their decisions around speaking to family or reporting the patient to licensing authorities. Thirty-two physicians

(26%) commented on the importance of protecting patient confidentiality.

2) Noncompliance: Reporting is more important if the patient continues to drive after being warned not to, or says they will continue to drive. Thirty-three physicians (27%) commented that patient non-compliance with warnings against driving would influence their decisions on reporting.

3) Clinical Context: Reporting decisions are influenced by whether or not the visit is relevant to driving. Nine physicians (7%) commented that reporting would be more likely if the appropriate clinical context was present (e.g. after a car crash).

4) Specific Diagnoses: Certain diagnoses, if present, would make the physician more likely to report the patient. Twenty physicians (16%) listed diagnoses that they considered reportable.

5) Clear Risk: If the patient presents a clear/immediate risk of harming themselves or others then reporting is more important. Sixteen physicians (13%) commented that reporting would be more appropriate in cases where the driver presented a clear risk to others.

PHYSICIAN PRACTICE

Respondents were asked about their rates of encountering, counselling, charting on, and reporting unfit drivers. Most physicians (67%) encountered a patient who is definitely unfit to drive more than twice a year, and 30% of respondents encountered more than 10 unfit drivers per year (**Table 7**). Only 1% never encounter patients who are definitely unfit to drive. Most physicians (74%) also reported that they often warn patients not to drive (more than twice per year). Many (33%) provide warnings more than 10 times a year and only 1 respondent never counselled patients against driving. The majority of physicians also chart their opinion of patients' fitness to drive, with 67% indicating they do this more than twice per year. Only 3% stated they never chart their opinion of fitness to drive. Respondents inform family members that a patient is unfit to drive less often than they provide warnings to patients or record the warning in the medical record. Nevertheless, 88% of respondents report informing the patient's family that the patient is unfit to drive at least once per year. As shown in **Table 7**, physicians see far more unfit drivers than they report to licensing authorities. For example, although over two thirds of physicians encounter more than two unfit drivers per year, only 17%

Table 7: Summary of respondents' practices relating to fitness to drive. Rates are per year.

Practice	Number of times per year				
	Blank	Never	1-2 times	3-10 times	>10 times
Encountered a patient who is definitely unfit to drive	2 (0.8%)	3 (1.2%)	76 (31.4%)	90 (37.2%)	71 (29.3%)
Counseled a patient not to drive	2 (0.8%)	1 (0.4%)	61 (25.2%)	99 (40.9%)	79 (32.6%)
Informed family members about patient's fitness	2 (0.8%)	28 (11.6%)	101 (41.7%)	74 (30.6%)	37 (15.3%)
Charted opinion of the patient's fitness to drive	2 (0.8%)	7 (2.9%)	71 (29.3%)	91 (37.6%)	71 (29.3%)
Reported potentially unfit drivers to RoadSafetyBC	2 (0.8%)	113 (46.7%)	87 (36.0%)	31 (12.8%)	9 (3.7%)
Reported definitely unfit drivers to RoadSafetyBC	2 (0.8%)	82 (33.9%)	111 (45.9%)	36 (14.9%)	11 (4.5%)
Called police if the patient is a threat to other road users	3 (1.2%)	189 (78.1%)	46 (19.0%)	4 (1.7%)	0 (0.0%)

report potentially unfit drivers to RoadSafetyBC more than twice per year and 47% never report potentially unfit drivers. Slightly more respondents (19%) indicated they report definitely unfit drivers more than twice per year, but 34% still indicated they never report definitely unfit drivers. Most respondents (78%) indicated that they never called police for patients who are a threat to other road users.

Of respondents who indicated they encountered definitely unfit drivers more than twice a year, the majority from all specialty groups warned unfit drivers against driving and charted this in the medical record. However, emergency physicians were less likely to counsel patients not to drive, chart their opinion of patients' fitness to drive, or report potentially or definitely unfit drivers when compared with GPs or other specialists (**Table 8**). Eight percent of EPs seldom counsel unfit

drivers (i.e did so less often than twice a year), compared to only 5% of GPs and 0% of other specialists. Similarly, 21% of EPs seldom chart their opinion of unfit drivers compared to 12% of GPs and 0% of other specialists.

For all physician groups, and especially EPs, reporting unfit or potentially unfit drivers to RoadSafetyBC was less common than counselling patients or charting opinion on driving fitness. Of EPs who see more than 2 unfit drivers a year, 92% report potentially unfit drivers to RoadSafetyBC less than twice per year and 86% report definitely unfit drivers less than twice a year. This is much less than with GPs (55% and 52%, respectively) and other specialties (54% and 54%, respectively). Physicians who see more rural patients (> 50% of their practice) are significantly more likely to report unfit drivers than physicians who see fewer rural patients

Table 8: Comparison of the practices of physicians from different specialties who encounter definitely unfit patients more often than twice per year.

Task	Percentage (95% CI) who perform task < 2 / year			P-value
	GPs (n = 42)	EPs (n = 95)	Other (n = 24)	
Counselled patient not to drive	4.8 (1.3, 15.8)	8.4 (4.3, 15.7)	0.0 (0.0, 13.8)	0.2812
Informed family members about patient's fitness	42.9 (29.1, 57.8)	38.9 (29.8, 49.0)	33.3 (18.0, 53.3)	0.7464
Charted opinion of fitness to drive	11.9 (5.2, 25.0)	21.1 (14.1, 30.3)	0.0 (0.0, 13.8)	0.0296
Reported potentially unfit drivers	54.8 (39.9, 68.8)	91.6 (84.3, 95.7)	54.2 (35.1, 72.1)	<0.0001
Reported definitely unfit drivers	52.4 (37.7, 66.6)	86.3 (78.0, 91.8)	54.2 (35.1, 72.1)	<0.0001
Called police if patient direct threat to road users	97.6 (87.7, 99.6)	98.9 (94.3, 99.8)	95.8 (79.8, 99.3)	0.5772

(<5% of their practice). Close to half (44%) of physicians with a predominantly rural practice report unfit patients twice or more per year, compared with only 21% of physicians with a predominantly non-rural practice ($p < 0.05$).

higher proportion of rural patients (50%) were more likely to use a resource (89.9%) than those with few (<5%) rural patients (53.5%). (**Table 9**)

REFERENCE RESOURCES

Most physicians (65.3%) stated that they used personal medical judgment when determining patients' fitness to drive. Other commonly used resources include the "BC Driver's Fitness Handbook for Medical Professionals" (42.1%), the "2010 BC Guide in Determining Fitness to Drive" (32.6%), and the "CMA Driver's Guide" (22.7%). Emergency physicians were less likely to use any resource except for clinical judgment (44.8%) compared with GPs (88.4%) and other specialties (95.8%). Physicians with over 10 years in practice were slightly more likely to use any resource when compared with those with less than 5 years in practice (66.7% vs 53.6%, respectively). Additionally, physicians with a



The majority of physicians stated that they used medical judgment when determining patients' fitness to drive. The BC Driver's Fitness Handbook for Medical Professionals was the most commonly used resource among surveyed physicians.

Table 9: Resources used to determine a patient's fitness to drive.

I. BC Driver's Fitness Handbook for Medical Professionals*	102 (42.1%)
II. 2010 BC Guide in Determining Fitness to Drive*	79 (32.6%)
III. CCMTA Medical Standards for Drivers*	4 (1.7%)
IV. CMA Driver's Guide:	55 (22.7%)
V. Medical literature:	38 (15.7%)
VI. Personal medical judgment:	158 (65.3%)
VII. Others (please describe)**:	38 (15.7%)

* Since this survey was conducted, the BC Driver's Fitness Handbook for Medical Professionals and the 2010 BC Guide in Determining Fitness to Drive have been replaced with the CCMTA Medical Standards for Drivers with BC Specific Guidelines, which has been made available online.²⁴ The handbook was deemed unnecessary when RoadSafetyBC adopted the CCMTA Standards as the new web interface makes navigation of guidelines much easier for clinicians to quickly access condition specific information.

**Other resources reported by physicians included i) SIMARD MD, ii) "other cognitive tests", iii) "guidelines from other jurisdictions", iv) "consultation with an expert", and v) "common sense/clinical gestalt/or no resources".

BARRIERS TO REPORTING UNFIT DRIVERS

Most respondents endorsed several of the barriers to reporting medically unfit drivers that were listed in the survey. The most common barrier was being unaware which unfit drivers continue to drive (79% of respondents). Under current BC law, physicians are only legally obligated to report patients who are unfit to drive and continue to drive after being warned to stop. Other common barriers included lack of time (51%); lack of knowledge of the process (51%), guidelines (50%), or legal requirement (45%) for reporting unfit drivers, fearing loss of rapport with patients (48%); pressure from patients not to report (34%), lack of remuneration (27%), and pressure from family members not to report (25%).

Emergency physicians reported different barriers than GPs or other specialists. Emergency physicians were less likely than GPs or other



The most common cited barrier to reporting was being unaware of which unfit drivers continue to drive. Under current BC law, physicians are only legally obligated to report patients who continue to drive after being advised not to.

specialists to report loss of rapport (30% vs 62% and 66%, respectively), pressure from patients (23% vs 42% and 50%), or pressure from family (16% vs 34% and 31%) as barriers, but more likely to report not being aware of which unfit

drivers continue to drive (89% vs 67% and 81%), lack of knowledge regarding the legal requirement to report (60% vs 30% and 31%), lack of knowledge regarding guidelines that determine fitness to drive (66% vs 38% and 31%), the process for reporting unfit drivers (62% vs 40% and 44%), and lack of time (68% vs 36% and 38%). Specialists were more likely to cite lack of remuneration as a barrier compared with GPs and EPs (44% vs 18% and 30%, respectively). (Table 10 and Figure 3)

or the process for reporting unfit drivers (78%) as barriers to reporting.

INCENTIVES FOR REPORTING UNFIT DRIVERS

Respondents were asked whether certain factors would increase their reporting of unfit drivers. Several factors were chosen by approximately two-thirds of respondents: better understanding of criteria for fitness to drive (70%), more information regarding how to report

Table 10: Barriers to reporting unfit drivers according to speciality.

Barriers to reporting unfit drivers	Proportion (95% CI) (%)			p-value
	GPs (n = 97)	EPs (n = 113)	Other (n = 32)	
Not aware of which unfit drivers continue to drive	67.0 (57.2, 75.6)	89.4 (82.4, 93.8)	81.2 (64.7, 91.1)	0.0003*
Loss of rapport with patients	61.9 (51.9, 70.9)	30.1 (22.4, 39.1)	65.6 (48.3, 79.6)	<0.0001*
Lack of remuneration	17.5 (11.2, 26.3)	30.1 (22.4, 39.1)	43.8 (28.2, 60.7)	0.0084*
Lack of knowledge regarding:				
Legal requirement to report	32.0 (23.5, 41.8)	60.2 (51.0, 68.7)	31.2 (18.0, 48.6)	0.0001*
Guidelines that determine fitness to drive	38.1 (29.1, 48.1)	66.4 (57.3, 74.4)	31.2 (18.0, 48.6)	<0.0001*
Process for reporting unfit drivers	40.2 (31.0, 50.2)	61.9 (52.7, 70.4)	43.8 (28.2, 60.7)	0.0050*
Lack of time	36.1 (27.2, 46.0)	68.1 (59.1, 76.0)	37.5 (22.9, 54.7)	<0.0001*
Outside scope of practice	16.5 (10.4, 25.1)	11.5 (6.8, 18.7)	9.4 (3.2, 24.2)	0.4474
Pressure from patients not to report	42.3 (32.9, 52.2)	23.0 (16.2, 31.6)	50.0 (33.6, 66.4)	0.0018*
Pressure from family not to report	34.0 (25.4, 43.9)	15.9 (10.3, 23.8)	31.2 (18.0, 48.6)	0.0075*

Physicians with less than 5 years in practice were most likely to identify lack of knowledge regarding the legal requirement to report (78%), guidelines for determining fitness to drive (78%),

(67%), and more information on when to report (65%). Just under two thirds (62%) of respondents stated that their reporting would increase if the Section 230 of the Motor Vehicle

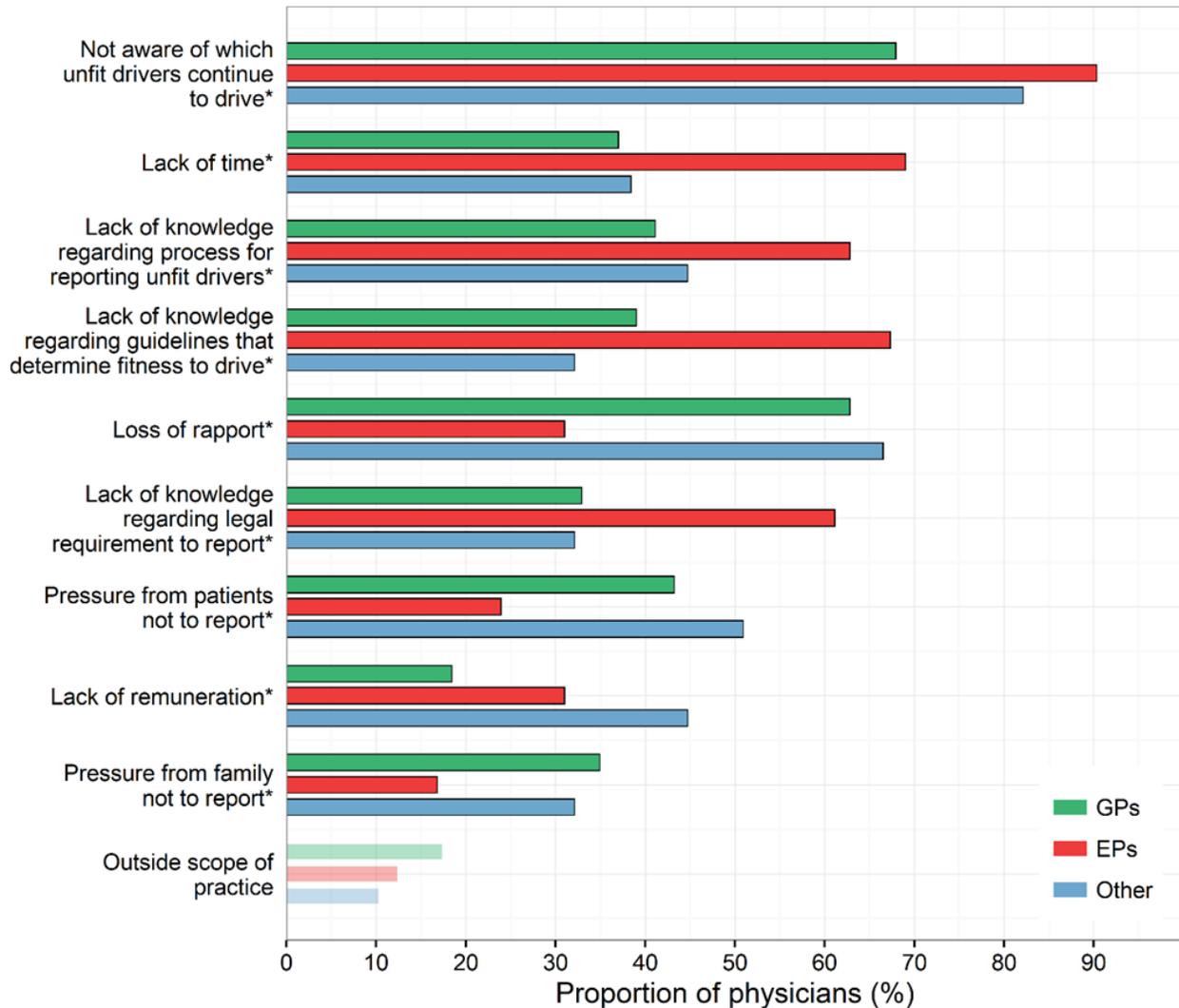


Figure 3. Barriers to reporting according to specialty. Solid bars indicate statistically significant differences between specialties.

Act was revised so that physicians were not required to know whether or not an unfit driver continues to drive after being warned not to. Additionally, 43% indicated that compensation would increase reporting rates.

Emergency physicians were more likely than GPs or other specialists to say that more information on how to report, or compensation for reporting would increase their reporting rates (Table 11 and Figure 4). Physicians with less than 5 years in practice were more likely to

desire more information regarding how to report (92%) and when to report (81%) compared to those with more experience.

Table 11: Factors that would increase reporting according to specialty.

Factors that would increase reporting	Proportion (95% CI) (%)			p-value
	GPs (n = 97)	EPs (n = 113)	Other (n = 32)	
More information regarding how to report	61.9 (51.9, 70.9)	74.3 (65.6, 81.5)	53.1 (36.4, 69.1)	0.0364*
More information regarding when to report	58.8 (48.8, 68.0)	71.7 (62.8, 79.2)	62.5 (45.3, 77.1)	0.1374
Better understanding of criteria for fitness to drive	67.0 (57.2, 75.6)	76.1 (67.5, 83.0)	56.2 (39.3, 71.8)	0.0713
Compensation for reporting	28.9 (20.8, 38.6)	54.0 (44.8, 62.9)	43.8 (28.2, 60.7)	0.0012*
Revision of motor vehicle act	57.7 (47.8, 67.1)	68.1 (59.1, 76.0)	53.1 (36.4, 69.1)	0.1630

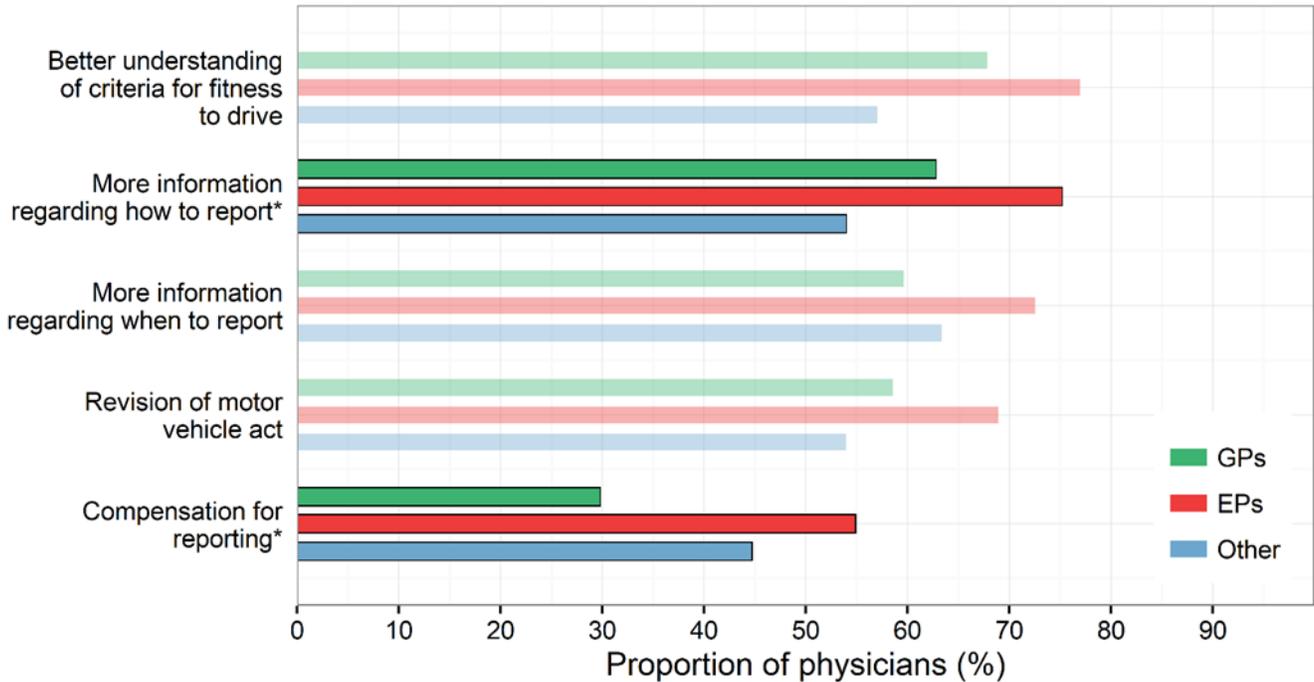


Figure 4. Factors that would increase reporting according to specialty. Solid bars indicate statistically significant differences between specialties.

Additional Barriers and Incentives

Respondents were given the option to provide written comments on barriers or incentives to reporting and 61 physicians made comments in this section. Additional barriers and incentives were apparent in comments to other questions so the research team examined all physician comments (i.e. comments for all questions) to identify additional barriers and/or incentives. Overall 196 physicians provided a comment to any question, and from those responses the following themes emerged:

1. Barrier: *Lack of knowledge about the patient.*

Thirty physicians (15%) wrote comments identifying lack of knowledge about the patient as a barrier to reporting. This includes not knowing whether a patient continues to drive after having been warned not to. It also includes not knowing the patient's true diagnosis, for example if the patient is not forthcoming with information about his/her medical conditions. This later might happen if a patient asked a new physician to fill out a fitness to drive form.

2. Barrier: *Lack of knowledge about the criteria for determining fitness to drive.*

Twenty-one physicians (11%) wrote comments identifying lack of knowledge of how to determine fitness to drive as a barrier to reporting. This refers to physician uncertainty about which medical conditions, or what severity of illness, make a patient unfit to drive and should be reported.

Incentive: Provide physician education on which medical conditions to report

Thirteen physicians (7%) wrote comments identifying physician education as an incentive for reporting.

3. Barrier: *System failure – reporting process*

Twenty-four physicians (12%) wrote comments identifying a reporting process failure as a barrier to reporting. This refers to procedural things that make the process of reporting difficult or time consuming and to the workload associated with reporting. Specific comments include:

- Reporting forms being hard to find
- Cumbersome/paperwork
- Not knowing how to make a report
- Long assessment time (i.e. proper assessment of patient takes time)

Incentive: Simplify the reporting process.

Thirty physicians (15%) wrote comments identifying a simpler reporting process as an incentive for reporting. Suggestions here included a telephone hotline for reporting or the potential for online submission of reports.

Incentive: Allow a physician designate make the report.

Eighteen physicians (9%) wrote comments identifying availability of physician designates to make the report as an incentive for reporting. For example, having social workers make the report on behalf of the physician.

4. Barrier: *System failure – response to a report*

Eighteen physicians (9%) wrote comments identifying a failure in response to a report as a barrier to reporting. This refers to things that happen (or don't happen) after a report is made:

- Long waiting time for the report to be reviewed and the patient tested.
- Lack of feedback – MD never finds out what happens after a report is made.
- Difficulty reinstating license in cases where the patient becomes fit to drive again.

Incentive: Rapid action after a report is made

Twenty physicians (10%) wrote comments identifying rapid action after the report is made as an incentive for reporting. For example, prompt review of the report, and prompt road testing when indicated.

Incentive: Feedback (i.e. give feedback to physicians re outcome of report)

Eight physicians (4%) wrote comments identifying feedback as an incentive for reporting.

Incentive: Make a simple process for reinstating license

Four physicians (2%) wrote comments identifying an easier license reinstatement process as an incentive for reporting. In cases where the patient becomes fit to drive again there should be a simple way to reinstate license.

5. Barrier: *Lack of remuneration for reporting.*

Eleven physicians (6%) made comments that either identified lack of remuneration as a barrier or remuneration as an incentive for reporting.

6. Barrier: *Fear of legal liability resulting from reporting.*

Eighteen physicians (9%) wrote comments identifying legal liability as a barrier or suggesting some form of medico-legal protection as an incentive to reporting.

7. Barrier: *Fear of damaging doctor-patient rapport.*

Seventeen physicians (9%) wrote comments identifying damage to doctor-patient rapport as a barrier to reporting.

Incentive: Educate the public about physician's duty to report.

Four physicians (2%) commented on public education as an incentive for reporting. That is, inform the public that physicians are obligated to report certain unfit drivers – don't blame the doctor.

8. Barrier: *A belief that reporting is someone else's responsibility.*

Fifteen physicians (8%) wrote that reporting was not their responsibility.

Of the 196 physicians who made any free text comments in the survey, there were several differences between physician groups with respect to how often certain themes were reported. Fear of damaging patient rapport was raised less often as a concern by emergency physicians (2%) than by GPs (12%) or other specialists (17%) ($p= 0.016$). More GPs (20%) mentioned post-reporting system failure as a theme than EPs (not mentioned) or other specialists (7%) ($p< 0.001$). More other specialists (24%), provided written comments that mentioned lack of knowledge about determining driver fitness compared to GPs (9%) or EPs (8%) ($p = 0.040$). This contrasts with the results from (Table 9) where more EPs indicated that "lack of knowledge of the guidelines that determine fitness to drive" was a barrier to reporting. Eighty three physicians commented on ways to improve reporting. More GPs (9%) than EPs (not mentioned) or other specialists (3%) suggested that feedback from RoadSafetyBC following a report would be helpful feedback ($p= 0.020$). There were no other statistically significant differences between groups with respect to comments on suggestions to improve reporting.

AMENDMENT TO BC MOTOR VEHICLE ACT

Respondents were asked whether or not they agree with removal of Clause 1b from section 230 of the Motor Vehicle Act. Over half of respondents (56%) either agreed (31%) or strongly agreed (26%) with the statement, while fewer disagreed (15%) or strongly disagreed (9%). Another 14% of respondents remained neutral and 4% left this question blank. GPs and EPs were more likely to agree or strongly agree with the amendment to the Motor Vehicle Act than other specialists (61% and 65% vs 39%, respectively).

Thematic Analysis: Respondents were asked to expand on their opinion of the amended law. After an analysis of all responses, the following themes emerged and were subdivided into those who were in support of the proposed changes and those who were against:

Overall 139 physicians either agreed or strongly agreed with the amendment to the motor vehicle act and 86 of those made comments. The following themes emerged from those comments:

1. Duty to public safety.

It is our responsibility to protect the public. Twenty two percent (19/86) of physician comments were coded as “duty to public safety”.

2. Removes ambiguity.

The amendment would clarify the physician’s responsibilities around reporting unfit drivers because it does not depend on knowing whether the patient continues to drive. Forty percent (34/86) of physician comments were coded as “removes ambiguity”.

3. Improves compliance and would be more effective.

The amendment would make it less likely that unfit patients will continue to drive after being

warned. Nineteen percent (16/86) of physician comments were coded as “improves compliance”.

4. Takes the onus off of the doctor.

Reporting is no longer up to the physician’s discretion – it is mandatory. Therefore the doctor can tell patient that he is doing his legal duty and has no other choice. Sixteen percent (14/86) of physician comments were coded as “takes onus off of the doctor”.

Overall 59 physicians either disagreed or strongly disagreed with this amendment and 45 of those made comments. The following themes emerged from those comments:

1. Capacity of the system.

These changes would result in a flood of reports that cannot be handled by the current system. Two percent (1/45) of physician comments were coded as “capacity of the system”.

2. Cumbersome.

This would result in increased workload for the physician. Thirty six percent (16/45) of physician comments were coded as “cumbersome”.

3. Uncertainty.

The doctor might not know which patients are fit or unfit to drive. Four percent (2/45) of physician comments were coded as “uncertainty”.

4. Unnecessary.

Many patients are compliant and voluntarily agree not to drive when warned. Thirty one percent (14/45) of physician comments were coded as “unnecessary”.

5. Not my responsibility.

Reporting or “acting as police” is not a physician responsibility. Eighteen percent

(8/45) of physician comments were coded as “not my responsibility”.

6. Damages doctor-patient relationship.

Reporting, even if legally mandated, will damage doctor-patient relationship. Some patients may even avoid medical care for fear of being reported. Thirteen percent (6/45) of physician comments were coded as “damages doctor-patient relationship”.

7. Increased litigation risk.

Fear that physicians may be at risk of litigation if they fail to report a patient who subsequently has a crash and is deemed unfit. Twenty percent (9/45) of physician comments were coded as “increased litigation risk”.

8. Nuisance reporting of temporary illness or disability.

Many physicians assumed (incorrectly) that the amendment would require them to report drivers who are temporarily unfit after an orthopedic injury or temporary illness or following sedation for an operative procedure. Reporting all of these cases would quickly overwhelm the system. Twenty two percent (10/45) of physician comments were coded as “reporting temporary illness or disability”.

More physicians (16%) whose practice consisted of over 50% elderly patients mentioned duty to public safety as a theme than physicians who saw <50% elderly drivers (6%) ($p= 0.027$). Among physicians who disagreed with the proposed amendment, more other specialists (28%) felt that the changes would be cumbersome compared to GPs (6%) and EPs (8%) ($p= 0.003$), and more other specialists (21%) felt that the proposed changes were not necessary compared with GPs (11%) and EPs (2%) ($p= 0.006$). Comments that the laws were not necessary were also most common in physicians whose practice consisted of 5-50%

rural patients. Physicians with fewer than 5 years in practice mentioned risk of liability more often than those with 6-10 years or over 10 years in practice (18% versus 6% and 4% respectively; $p= 0.019$). More physicians (11%) with 5-50% rural patients in their practice mentioned that the new laws would damage the doctor-physician relationship compared to those with over 50% rural patients (not mentioned) or fewer than 5% rural patients (3%) ($p= 0.049$).

INTERPRETATION

PHYSICIANS IN THIS SURVEY HAD GENERALLY POSITIVE ATTITUDES TOWARDS COUNSELLING AND REPORTING UNFIT DRIVERS. This finding is similar to previous research that also found that most Canadian physicians,^{10, 13} psychiatrists,¹⁵ and psychologists¹⁶ endorse the importance of reporting unfit drivers. Most physicians in our survey felt that physicians should be obligated to advise medically unfit patients not to drive. The majority also felt that, in their practice, it was *always appropriate* for them to advise medically unfit drivers not to drive, document fitness to drive in the medical record, and report definitely unfit drivers to licensing authorities for further assessment. Physicians were less definitive about the need to speak to family members of unfit drivers or the need to report *potentially* unfit drivers, with most saying that these activities were *sometimes appropriate* in their practice depending on the clinical context and on a balance between risk and the need to protect patient confidentiality. Reporting, counselling the patient, or informing family that the patient shouldn't drive were more likely to be considered appropriate if the visit was related to driving or if the risk was high, for example if the patient continued to drive after being warned not to or

the patient was felt to present a clear risk to the public. Family physicians were more likely than emergency physicians or other specialists to feel responsible for reporting unfit drivers or informing family members.

MOST RESPONDENTS REPORTED LITTLE KNOWLEDGE OR TRAINING in determining driver fitness or on the legal obligation and process for reporting unfit drivers. This lack of knowledge is consistent with previous research from Canada^{10, 13, 15} and other countries.^{11, 25} Compared to other physicians, emergency physicians reported the least knowledge and training regarding driver fitness. This likely reflects the traditional focus of emergency medicine training on diagnosis and resuscitation of patients with acute illness or injury. It is interesting to note that, despite reporting the least knowledge or training, emergency physicians were less likely than other groups to use reference material when assessing driver fitness. This may reflect the fast-paced clinical environment which makes it difficult to consult reference material and perhaps lack of access to driver fitness reference material in most emergency departments. However, there is a strong public health rationale for emergency physicians to be knowledgeable about driver fitness. For one, emergency physicians are more likely than other physicians to treat drivers after a crash, making them uniquely positioned to identify and report medically unfit drivers who still drive and to provide counselling to unfit drivers during a “teachable moment” after a crash. Furthermore, the practice of emergency medicine is expanding to include preventative measures such as screening and brief intervention for patients with substance use problems or providing vaccinations to at risk individuals, and it already includes public health duties such as reporting patients with gunshot wounds or reporting certain communicable disease. Therefore, assessing driver fitness and

counselling / reporting unfit drivers is within the scope of what emergency physicians already do.

PRACTICE DIFFERS FROM ATTITUDE. We found that most physicians whose practice included many unfit drivers, regularly warn unfit drivers not to drive and document warnings in the medical chart. However, there was a clear discrepancy between the positive attitudes of physicians towards the importance of reporting unfit drivers and their actual practice. The vast majority of physicians who saw *more than 2* definitely unfit drivers a year reported unfit drivers less often than twice a year. This low rate of reporting, is similar to previous research. For example, Redelmeier found that, even with Ontario’s mandatory reporting laws, the majority of drivers with reportable conditions who presented to a Toronto trauma centre after a crash, had not previously been reported to licensing authorities.¹⁹ Compared to other physicians, we found that emergency physicians were less likely to chart their opinion of patients’ fitness to drive and less likely to report potentially or definitely unfit drivers. This may partially reflect the lack of knowledge of indications and process for reporting unfit drivers reported by emergency physicians. Low reporting by emergency physicians is likely also due to the unique British Columbia requirement for mandatory reporting: that the patient continues to drive after being warned not to. This is information that most emergency physicians would not know. Conversely, physicians who see more rural patients were significantly more likely to report unfit drivers than physicians who see fewer rural patients. This may reflect greater need for reporting in rural regions where there are fewer options for transportation and unfit drivers may be less likely to voluntarily stop driving.

RESPONDENTS IDENTIFIED SEVERAL BARRIERS THAT HINDERED REPORTING OF UNFIT DRIVERS. Barriers included lack of time, limited knowledge

of how or whom to report, fearing loss of rapport (possibly resulting in patients avoiding medical care), pressure from patient or family not to report, lack of remuneration for reporting, difficulties with the reporting process (i.e. it is cumbersome), slow response from licensing authority after a report is filed, lack of feedback to physicians who file a report, fear of legal liability, and the opinion of some physicians that reporting is not their responsibility. Compared to GPs and other specialists, emergency physicians were more likely to cite lack of knowledge as a barrier. This is consistent with the fact that emergency physicians reported having the least knowledge or training around driver fitness. In addition, emergency physicians were more likely to report “being unaware of patient’s driving habits” as a barrier but less likely to report concern about loss of rapport or pressure from patients. This is not surprising since emergency physicians manage acute problems but do not typically see patients on a regular ongoing basis. Family physicians have higher rates of reporting and were most likely to comment on post-reporting problems such as slow response or lack of feedback. Respondents also identified incentives that would increase reporting. These included additional training around driver fitness and the reporting process, compensation for reporting, simplification of the reporting process, faster response once a report is made, feedback to physicians filing a report, legal protection for physicians who file a report, campaigns to educate the public on physician’s duties around reporting (to minimize loss of rapport). These reported barriers and incentives suggest ways to improve reporting of unfit drivers (See recommendations).

MIXED OPINION REGARDING THE PROPOSED AMENDMENT TO THE BC MOTOR VEHICLE ACT.

The most commonly cited barrier to reporting unfit drivers in British Columbia is the unique clause in the BC Motor Vehicle Act, making

reporting mandatory only when the medically unfit patient has been warned not to drive but continues to drive despite these warnings. The physicians who participated in this survey had mixed views about removing this clause so that it would be mandatory to report all medically unfit drivers regardless of whether or not they had previously been warned. Just over half of survey participants agreed with removing this clause but 24% disagreed, including 9% who strongly disagreed. Physicians who agreed with removing this clause cited public safety, increased clarity around when reporting is required, improved compliance with reporting, and the belief that removing this clause would take the onus off the physician because they could inform medically unfit drivers that, as physicians, they are legally obligated to file a report. Physicians with large numbers of elderly patients in their practice were more likely to mention duty to public safety as support for removing this clause. Reasons for disagreement with removing this clause included concerns about increased workload for physicians, physician uncertainty about determining fitness to drive, the feeling that reporting was usually unnecessary because most patients would voluntarily comply with warnings against driving, fear of damaging physician-patient rapport, fear of litigation if they failed to report, and the belief that it was not the physician’s role to act as police in reporting their patients. Specialists other than emergency physicians were more likely to mention workload concerns. In addition, many physicians were concerned that the system would be overwhelmed with reports if physicians began reporting all medically unfit drivers. Several respondents incorrectly assumed that reporting would be required for all drivers with self-limited conditions that made them temporarily unfit to drive, such as those with orthopedic injuries, or following anesthesia for a surgical procedure. Reporting all such drivers

would result in large numbers of reports for temporary conditions.

STRENGTHS AND LIMITATIONS

The major strength of this survey is that, unlike most previous research, we sampled physicians from multiple specialties instead of only family practitioners or only psychiatrists. In particular, our survey included many emergency physicians. There are good reasons to engage emergency physicians in reporting unfit drivers since they are more likely than other physicians to treat patients after a crash and are often the first to diagnose high risk conditions such as a new seizure or syncopal episode. The major limitation of this survey is the low response rate. Only 2% of BC physicians responded to our email invitation and we received very few responses from rural physicians. Emergency physicians received an additional invitation through the UBC Department of Emergency Medicine and the response rate was higher (25.9%). We suspect that our respondents included those physicians in British Columbia with the most interest in the issue of medically unfit drivers and may not reflect the views of other physicians in the province. In particular it is likely that survey respondents included physicians with more knowledge of the topic as well as those with the strongest views for or against reporting unfit drivers. A further limitation is that responses may reflect ideal practice, what physicians would like to do, rather than actual practice. For example, the rates of reporting unfit drivers may be lower than actually reported. There is also the risk of reporting bias where respondents provide answers that they feel to be socially acceptable. Reporting bias is limited by the fact that this survey was online and anonymous.

RECOMMENDATIONS

Our findings suggest several methods to improve reporting of medically unfit drivers in BC. Please note that, since this survey was completed, RoadSafetyBC has worked to address several of these recommendations (See update below).

1. PROVIDE TRAINING AND RESOURCES.

Physicians require training and easy access to reference material to help them identify medically unfit drivers and to clarify reporting requirements and the process for reporting. Continuing medical education courses on fitness to drive should be offered to physicians who see medically unfit drivers in their practice. Course content should include an approach for identifying unfit and potentially unfit drivers as well as a clear explanation of the rationale, legal requirements, and process for reporting potentially unfit drivers. Ideally courses should be tailored to different types of medical practice, including a course specifically for emergency physicians as well as a course for physicians with office based practices. Courses should be supplemented with high quality reference material that can be easily accessed in real time and includes a high level summary as well as detailed information on identifying unfit drivers as well as a step by step guide for reporting these drivers. For emergency physicians in British Columbia this material might be made available through the soon to be launched *Emergency Medicine Network* – a province wide initiative that aims to improve emergency medical care in British Columbia through several measures, including by making relevant reference material available to all emergency physicians in BC. In the long term, content on driver fitness should be

introduced during medical school and included as part of residency training.

2. MINIMIZE PHYSICIAN WORKLOAD.

The reporting process should be made as simple as possible and should allow multiple methods for making a report to account for different physician preference and work habits. This should expand the current method of faxing reports to also include the option to send reports by email or online. Consideration should be given for reporting by a telephone hotline. Physician designates should be allowed to report, especially in emergency departments or hospitals where social workers and other ancillary staff are available. Consideration should also be given to providing remuneration for reporting.

3. IMPROVE THE POST-REPORTING RESPONSE.

Feedback for physicians who file reports is important to improve compliance and so that physicians know the driving status of their patients. Physicians should receive rapid confirmation when reports are received and should be informed of the result of the report. Privacy issues that currently prevent this feedback should be addressed. In addition, the actual assessment of patients after a report is filed should occur in a timely fashion in order to remove unfit drivers from the road as quickly as possible, and to emphasize the relevance and importance of reporting (i.e. a slow response makes reporting seem unimportant). In cases where the patient regains fitness to drive, there should be a process to rapidly reinstate the driver license.

4. PROTECTION FOR PHYSICIANS.

Concern over legal liability for breaching doctor – patient confidentiality is a barrier to

reporting. Regardless of whether or not reporting of all medical unfit drivers is made mandatory (see discussion about clause 1b below), the law should be amended so that physicians who report potentially unfit drivers in good faith are not incurring medico-legal risk. Alternatively, if legal analysis shows that the existing “good faith” provision in the law protects physicians from medico-legal risk, then those protections should be clarified and the information shared with physicians. In addition, to protect physicians who file reports from backlash from patients or their families, public education campaigns should highlight the public health importance of removing medically unfit drivers from the roads and on physician duties around reporting.

5. CONSULTATIONS RE AMENDING THE BC MOTOR VEHICLE ACT.

Our survey suggests that removing clause 1b from section 230 of the motor vehicle act will reduce ambiguity around physician duty to report unfit drivers and will likely increase reporting. Thus it seems reasonable to remove clause 230 from the motor vehicle act. However there are several important considerations before this is done. Given the strong opinions that this topic generates and the very real concerns about damage to the doctor-patient relationship, it is important to further engage physicians (particularly rural physicians who were poorly represented in this survey) and physician groups (Doctors of BC and the College of Physicians and Surgeons of BC) prior to any changes in the law. RoadSafetyBC will want an understanding of the logistic challenges such as increased workload as well as the anticipated road safety benefits (i.e. how many additional unfit drivers may be prevented from driving if the law is amended).

6. BEST PRACTICE GUIDELINES FOR REPORTING.

In addition to better training / knowledge of how to assess fitness to drive and how to file a report (recommendation 1), physicians require guidelines around the reporting requirements in different clinical contexts. Some factors to be considered include.

Temporary Conditions: Physicians need to know that they are not expected to report conditions associated with temporary loss of fitness to drive (such as after an injury or following a medical procedure). In these cases, the patient should be warned not to drive for a defined period (as indicated by the medical situation) and the warning documented in the medical chart, however a report to the licensing agency is not required. This information is noted in a recently developed RoadSafetyBC fact sheet²⁶ (see update below) and should be included with other driver fitness educational and reference material.

New Diagnoses. Assuming that physicians who report in good faith are protected from medico-legal risk (recommendation 4), it makes sense that physicians who make a new diagnosis of a condition that renders a patient unfit to drive should report this to licensing authorities. For example, an emergency physician who sees a patient after a *first* seizure should report that condition.

Chronic Conditions. Chronic conditions that make a patient unfit to drive should be reported by the physician(s) who follow the patient for that condition. It may not be necessary or reasonable to expect that physicians report all medically unfit drivers who they see for unrelated conditions or for a complication of a chronic condition that is managed long-term by another physician. Thus, for example, family physicians or

neurologists who treat epileptic patients on a long-term basis would be expected to report the condition, but a cardiologist who sees an epileptic patient for angina would not be expected to report that the patient is epileptic. Similarly, the emergency physician who sees a known epileptic (who is followed by another physician) after a seizure would not be expected to make a report unless it is believed that the patient's condition has changed.

Drivers seen after a crash. Drivers who are treated for injuries after a crash warrant an assessment of their fitness to drive – especially if the crash circumstances suggest that the driver contributed to the crash. Unfit drivers who have been involved in a crash should be reported by the physicians involved in their care.

Update – spring 2017: Since this survey was completed, RoadSafetyBC has worked to address several of these recommendations.

1. RoadSafetyBC developed a one page fact sheet and a PowerPoint presentation to inform physicians about what medical conditions to report, and when to report them. The fact sheet specifically mentions that physicians should not report temporary conditions. This information is posted on the RoadSafetyBC website,²⁶ and has been distributed to BC physicians through the Doctors of BC E-news.

2. RoadSafety has also updated their web material and interface and the reporting form is now available online as a hyperlink.²⁷ In addition, there is consideration of accepting email and online reporting if privacy security issues can be addressed. Currently RoadSafetyBC accepts reports from all healthcare professionals and will accept reports from physician delegates if those reports are signed by the physician. In this

situation, the report is accepted by the program as coming from the physician.

3. RoadSafetyBC has also implemented changes that will give physicians confirmation of receipt of reports, when requested, as part of the new reporting process. In addition, the Driver Fitness program has increased its staffing resources in order to review and assess these reports in more timely manner, the goal is to have reports reviewed within 1-2 days of receipt. However, due to privacy issues, there are no plans to inform physicians of the results of their patient's license assessment.

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