Research Web exclusive

# Health care professionals' comprehension of the legal status of end-of-life practices in Quebec

# Study of clinical scenarios

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## **Abstract**

Objective To determine health care professionals' understanding of the current legal status of different end-of-life practices and their future legal status if medical aid in dying were legalized, and to identify factors associated with misunderstanding surrounding the current legal status.

Design Cross-sectional survey using 6 clinical scenarios developed from a validated European questionnaire and from a validated classification of end-of-life practices.

**Setting** Quebec.

**Participants** Health care professionals (physicians and nurses).

*Main outcome measures* Perceptions of the current legal status of the given scenarios and whether or not the practices would be authorized in the event that medical aid in dying were legalized.

**Results** Among the respondents (n=271, response rate 88.0%), more than 98% knew that the administration or prescription of lethal medication was currently illegal. However, 45.8% wrongly thought that it was not permitted to withdraw a potentially life-prolonging treatment at the patient's request, and this misconception was more common among nurses and professionals who had received their diplomas longer ago. Only 39.5% believed that, in the event that medical aid in dying were legalized, the use of lethal medication would be permitted at the patient's request, and 34.6% believed they would be able to give such medication to an incompetent patient upon a relative's request.

Conclusion Health care professionals knew which medical practices were illegal, but some wrongly believed that current permitted practices were not legal. There were various interpretations of what would or would not be allowed if medical aid in dying were legalized. Education on the clinical implications of end-of-life practice legislation should be promoted.

#### **EDITOR'S KEY POINTS**

- This study revealed misunderstandings about which end-of-life practices were currently legal in Quebec. Some respondents believed that using opioids adjusted to symptom relief was not permitted. Furthermore, nearly half of respondents believed that treatment withdrawal upon the patient's request had yet to be legalized.
- Misunderstandings surrounding the current legal status of medical practices were more common among those who obtained their diplomas longer ago, and among nurses. Nonetheless, nearly 1 in 3 family physicians and 2 in 5 other specialists demonstrated the same misunderstanding, underscoring the importance of continuing medical education regarding end-of-life care. No difference in comprehension was observed between those who cared for dying patients in their clinical practices and those who did not; this deserves special consideration in future studies.
- More than 60% of respondents believed that the use of lethal medication upon the patient's request would remain illegal if medical aid in dying were authorized in Quebec. Also, 34.6% of professionals believe that the use of lethal medication would be legal when requested by a relative, despite the fact that a voluntary request by a competent patient has been proposed as a necessary condition by all Quebec government reports since 2012.

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Recherche Exclusivement sur le web

# Ce que les professionnels de la santé comprennent des aspects juridiques des soins de fin de vie au Québec

Une étude à l'aide de scénarios cliniques

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# Résumé

Objectif Déterminer ce que les professionnels de la santé comprennent du statut juridique actuel de différents soins de fin de vie et du statut que ces soins auraient si on légalisait l'aide à mourir, et identifier les facteurs qui expliquent l'interprétation erronée du statut juridique actuel de ces soins.

# POINTS DE REPÈRE DU RÉDACTEUR

- Cette étude a révélé qu'il existe certains malentendus au sujet des soins de fin de vie qui sont actuellement légaux Québec. Certains répondants croyaient qu'il n'était pas permis d'ajuster les opiacés en fonction des symptômes. De plus, près de la moitié d'entre eux croyaient que l'arrêt des traitements à la demande du patient n'avait pas encore été légalisé.
- Cette interprétation erronée concernant le statut juridique de certaines pratiques médicales émanait surtout de personnes diplômées depuis longtemps et d'infirmières. Néanmoins, près d'un médecin de famille sur 3 et près de 2 autres spécialistes sur 5 faisaient preuve de la même incompréhension, ce qui montre l'importance de la formation médicale continue au sujet des soins palliatifs. On n'observait aucune différence de compréhension entre ceux qui avaient des patients en phase terminale dans leur clientèle et ceux qui n'en avaient pas; cela devra être pris en considération dans des études futures.
- Plus de 60 % des répondants croyaient que l'utilisation d'une médication létale à la demande du patient demeurerait illégale si une aide médicale à mourir était autorisée au Québec. De même, 34,6 % des professionnels croyaient que l'utilisation d'une médication létale serait permise si un parent en faisait la demande, malgré le fait que tous les rapports du gouvernement du Québec depuis 2012 proposaient, comme condition nécessaire, l'existence d'une demande volontaire en ce sens faite par un patient jouissant de ses facultés.

Cet article a fait l'objet d'une révision par des pairs. Can Fam Physician 2015;61:e196-203

Type d'étude Enquête transversale au moyen de 6 scénarios cliniques développés à partir d'un questionnaire européen validé et d'une classification validée des soins palliatifs.

Contexte Le Québec.

Participants Des professionnels de la santé (médecins et infirmières).

Principaux paramètres à l'étude Ce que les participants pensent du statut juridique d'un scénario donné et s'ils croient que le type de soins qu'il propose serait autorisé si l'aide à mourir était légalisée.

Résultats Plus de 98 % des 271 répondants (taux de réponse : 88 %) savaient que l'administration ou la prescription d'une médication létale était actuellement illégale. Toutefois, 45,8 % croyaient à tort qu'il n'était pas permis de cesser un traitement susceptible de prolonger la vie à la demande du patient; on retrouvait cette opinion erronée surtout parmi les infirmières et les professionnels de la santé diplômés depuis longtemps. Seulement 39,5 % croyaient que, dans l'hypothèse où une aide médicale à mourir devenait légale, l'utilisation d'une médication létale à la demande du patient serait permise, tandis que 34,6 % croyaient qu'ils pourraient administrer une telle médication à un patient dans l'incapacité de décider, à la demande d'un parent.

**Conclusion** Les professionnels de la santé connaissaient les soins de fin de vie qui étaient illégaux, mais certains croyaient à tort que certains soins actuellement permis étaient illégaux. On interprétait de diverses façons ce qui serait ou ne serait pas permis si une aide médicale à mourir était légalisée. Il y a lieu d'instaurer des séances d'information sur les implications cliniques de la législation sur les soins de fin de vie.

he legal framework surrounding end-of-life medical practices is currently being debated in several Canadian provinces.1-3 In December 2009, a motion was unanimously adopted in Quebec's National Assembly to study the issues associated with end-of-life care and euthanasia. After 7 months of public consultations, the Commission spéciale sur la question de mourir dans la dignité published a set of recommendations.<sup>4</sup> The implementation of these recommendations was subsequently examined by a committee of legal experts mandated by the government.<sup>5</sup> In June 2013, Bill 52, An Act Respecting End-of-Life Care, was tabled.6 This law aimed to clarify the framework surrounding certain medical practices already allowed under Quebec law (eg, palliative sedation) and to authorize a new practice: medical aid in dying. However, the law did not specify which concrete end-of-life practices constituted medical aid in dying, and how they differed from currently authorized practices.

# **Current legal framework** at the time of the study

In Quebec, and elsewhere in Canada, the cessation or non-initiation of treatment that can potentially prolong life (eg, a ventilator) is authorized when this treatment is refused by a competent person or by that person's legal representative.7 The same applies to the use of medication adjusted to symptom relief (eg, use of opioids adjusted for pain relief7), even if a potential side effect might be to shorten life. However, at the time of the study it was prohibited to prescribe or administer potentially lethal medication above what was needed for symptom relief or treatment of a medical condition (eg, administering a neuromuscular blocking agent without ventilatory support).7 Only a few jurisdictions in the world (Oregon,8 the Netherlands,9 Belgium,10 Luxembourg,11 Washington State,12 and Vermont13) have modified their laws to authorize the prescription or injection of lethal doses of medication under certain conditions (eg, upon the voluntary request of a patient with unbearable suffering). Similar changes have been adopted in a recent decision by the Supreme Court of Canada, but will not take effect until the beginning of 2016.14

# Proposed legal framework at the time of the study

The January 2013 report of the legal experts' committee defined medical aid in dying as the action of a health care professional in providing a medical service, such as care or any other intervention, with the goal of helping a patient die under strict conditions and upon the patient's request, by either providing the patient with the means to die or by directly helping the patient to die.5 In June 2013, Bill 52 stated that medical aid in dying must be administered by a physician, which would seem to

exclude prescribing lethal medications to be self-administered by the patient. Furthermore, the specific role of nurses has not been defined, despite the request of the Commission spéciale sur la question de mourir dans la dignité that the Ordre des infirmières et infirmiers du Québec modify its code of ethics to allow its members to participate.4 In fact, in countries where the intentional use of lethal drugs is permitted under certain conditions, nurses often play an active role,15-17 including the injection of the lethal medication.<sup>15</sup> In January 2014, Bill 52 was amended with an updated definition of medical aid in dying: care consisting of the administration of drugs or substances by a physician to a person at the end of life, at that person's request, with the goal to relieve his or her suffering by causing his or her death.6

Bill 52, which received assent on June 10, 2014, stipulates 4 main conditions for the legal practice of medical aid in dying by a physician. The person, having provided a free and informed request in writing, must be of legal age and able to provide consent for the care; be suffering from a serious and incurable disease; be in a medical situation characterized by an advanced and irreversible decline in his or her faculties; and be experiencing constant and unbearable physical or psychological suffering that cannot be alleviated in a way he or she deems tolerable.6 The physician would be required to declare his or her acts to the Commission spéciale sur la question de mourir dans la dignité, which is responsible for monitoring the application of the conditions stipulated under the law. However, the law does not specify which concrete end-of-life practices constitute medical aid in dying, which raises questions as to how health care professionals will interpret this new legal framework in clinical practice.

# Comprehension of end-of-life practices and their legal status

To date, most of the studies specifically related to the comprehension of end-of-life practices have been conducted with the general population. These studies reveal that people have difficulty distinguishing one practice from another, particularly with regard to what specifically constitutes euthanasia<sup>18-20</sup> and what is legal.<sup>21,22</sup> A few studies among health care professionals raised similar questions.23-28 Among these, a Belgian study has shown that, 7 years after Belgium legislated euthanasia, many physicians still had difficulty identifying which medical practices constituted euthanasia and must be declared to monitoring authorities.28 For example, most medical practices that involve potentially lethal doses of opioids or sedatives above what is needed for symptom relief were not perceived by physicians as euthanasia, as opposed to practices involving a combination of barbiturates and neuromuscular blocking agents, which are recommended by human euthanasia protocols.29

In light of the debate on whether to permit medical aid in dying by modifying the law, it was important to investigate the way in which health care professionals understood both current and proposed legislative frameworks. The first part of this article will describe which end-of-life medical practices health care professionals considered legal under the current legislative context at the time of the study, and which practices they believed they would be authorized to perform if medical aid in dying were legalized. The second part will seek to identify which factors might be associated with misunderstanding regarding the current legal status of these medical end-of-life practices.

#### **METHODS**

## Study design

A cross-sectional study using a self-administered questionnaire with clinical scenarios was conducted between September 2012 and January 2013. The project was approved by the University of Sherbrooke ethics committee.

# **Participants**

The study was conducted with a convenience sample of health care professionals registered in continuing medical education activities addressing different general topics (eg, primary care, general nursing practice, medical education). Physicians and nurses were working in 2 Quebec regions: 1 urban region (Montérégie) and 1 rural region (Abitibi-Témiscamingue). One member of the research team made a brief presentation about the project and answered questions before distributing questionnaires to be filled out on site.

# Measuring instruments

Six clinical scenarios from a validated European guestionnaire28 were adapted for the Quebec context and translated by our research team. The classification of end-of-life medical practices was first developed within the context of a systematic review30 and validated by a committee of 8 Canadian experts specializing in end-of-life legal and medical fields. The scenarios' final wording was validated by a group of 6 professionals (physicians and nurses) working in active clinical practices. These end-of-life practice categories vary according to 3 factors: the practice itself (treatment withdrawal, prescription or administration of medication by type and dosage); the presence or absence of a patient request; and the justification for the practice based on symptom relief. We used a descriptive approach for our scenarios, describing observable medical practices without presuming professionals' intent. Although relevant from a legal and ethical perspective, attributing intention to observed practices presents a

number of issues regarding interpretation owing to its complexity28 and subjective nature.

All scenarios refer to a 75-year-old patient with a terminal pulmonary disease. Scenarios were adapted to correspond with the various practices (Table 1). The time frame between the practice itself and the patient's death takes into account the type of medication used and the clinical situation involved. For each scenario, respondents were asked to specify whether or not the clinical practice was currently legal in Quebec and whether or not it would be authorized in the event that medical aid in dying were legalized.

#### **Statistics**

The data were analyzed using SPSS, version 20. Frequency distributions or averages were generated for each variable. To better understand which sociodemographic characteristics were associated with misunderstandings regarding the current legal framework,  $\chi^2$  and Pearson correlation tests were performed, along with a stepwise logistic regression analysis.

#### **RESULTS**

A total of 271 professionals, out of 308 contacted, filled out the questionnaire (response rate 88.0%). Five respondents were excluded owing to missing data. The sociodemographic data are presented in Table 2. With regard to the comprehension of the current legal status of end-of-life medical practices, more than 98% of respondents knew that the use of lethal medication above what is needed for symptom relief (scenarios 3 to 6) was currently illegal in Quebec (Table 3). Similarly, a high proportion of respondents (82.7%) knew that the use of opioids adjusted to symptom relief (scenario 2) constituted a legal practice. However, 45.8% incorrectly said that withdrawing a potentially life-prolonging treatment upon the patient's request was not permitted (scenario 1). Most respondents believed that medical practices that were currently legal (scenarios 1 and 2) would be permitted in the event that medical aid in dying were legalized (81.2% and 92.3%, respectively). Less than 40% of respondents believed that the use of lethal medication upon the patient's request would be authorized (scenarios 3 to 5) if medical aid in dying were legalized, while 34.6% believed that such a practice would be permitted upon request from a relative if the patient were incompetent (scenario 6).

Overall, 53.9% of respondents were confused about the current legal status of end-of-life practices in at least 1 of the 6 scenarios. Misunderstanding varied according to age, profession, and the mean number of years since receiving their last diploma (Table 4). Those who demonstrated the highest levels of confusion included

Table 1. Clinical scenarios					
SCENARIO NO.	CLINICAL PRACTICES	SCENARIO			
1	Withdrawal of potentially life-prolonging treatment	A 75-year-old patient is suffering from a terminal pulmonary disease. She was transferred to an intensive care unit and intubated after acute respiratory distress. She has been on mechanical ventilation for a week. In writing, the patient asks her physician for aid in dying, and to stop the ventilator. With the physician's prescription, mechanical ventilation is withdrawn and the nurse starts an intravenous midazolam infusion adjusted for respiratory symptom relief. The patient dies within an hour			
2	Use of medication adjusted to symptom relief	A 75-year-old patient is suffering from metastatic and incurable lung cancer. She is having pain that is causing suffering that she considers intolerable. The patient asks her physician for aid in dying. With the physician's prescription, morphine is gradually increased until the patient's symptoms are relieved. The patient dies the next day			
	Use of potentially lethal medication above what is needed for symptom relief				
3	<ul> <li>administered by the patient (oral barbiturates)</li> </ul>	A 75-year-old patient is suffering from metastatic and incurable lung cancer.	With the physician's prescription, the nurse provides her with a bottle of high-dose barbiturates (eg, thiopental). The patient takes the medication and dies 3 hours later		
4	<ul> <li>administered by the health care professional (intravenous opioids above what is needed for symptom relief)</li> </ul>	The pain is relieved with morphine, but she is suffering from increasing tiredness and difficulties with everyday activities at home. She does not want to be a burden to her	With the physician's prescription, the nurse administers 100 mg of morphine intravenously, doubling the dose with each injection, even after the patient becomes unconscious. The patient dies a few hours later		
5	<ul> <li>administered by the health care professional (barbiturates and a neuromuscular blocking agent)</li> </ul>	family and believes that her condition causes her intolerable suffering. The patient asks her physician for aid in dying	With the physician's prescription, the nurse administers barbiturates (eg, thiopental) intravenously and, after the patient becomes unconscious, injects a neuromuscular blocking agent (eg, pancuronium) that paralyzes muscles, including respiratory ones. The patient stops breathing and death is certified a few minutes later		
6	• administered by the health care professional upon a relative's request (barbiturates and a neuromuscular blocking agent)	A 75-year-old patient is suffering from metastatic and incurable lung cancer. She has been unconscious for a few days. The patient did not request medical aid in dying from her physician. The patient's representative (her son) asks the physician for aid in dying because his mother would not have wanted to live like this. He considers his mother's suffering intolerable and that it would be unacceptable to prolong her agony. With the physician's prescription, the nurse administers barbiturates (eg, thiopental) intravenously and, after the patient becomes unconscious, injects a neuromuscular blocking agent (eg, pancuronium) that paralyzes muscles, including respiratory ones. The patient stops breathing and death is certified a few minutes later			

professionals aged 50 years and older, those who received their diplomas longer ago and nurses (particularly auxiliary and technical nurses). When these variables are considered overall under a logistic regression model, profession (P<.01 for clinical nurse or nurse practitioner and *P*<.001 for auxiliary or technical nurse) and the number of years since receiving the last diploma (P < .05) remained significant factors (**Table 5**).

### DISCUSSION

To our knowledge, this is the first study in Canada to evaluate health care professionals' understanding of the legal status of medical end-of-life practices. In addition to the

high rate of participation, one of the study's strengths was its use of clinical scenarios with descriptive language, which reduces the risk of different interpretations and subjectivity. 19,28 Another original aspect involved the inclusion of different types of health care professionals, such as nurses, who assume important roles in end-of-life care, even in cases of euthanasia where the practice is authorized. 15-17

This study revealed misunderstandings as to which end-of-life practices were currently legal in Quebec. In fact, some respondents believed that using opioids adjusted to symptom relief was not permitted, a belief that could restrict access to appropriate pain medication. Furthermore, it was surprising to note that roughly 20 years after treatment withdrawal upon patient request

was authorized in Quebec,31 nearly half of respondents believed it had yet to be legalized. Misunderstandings surrounding the current legal status of medical practices were more frequent among those who obtained their diplomas longer ago and among nurses. Nonetheless,

**Table 2.** Baseline characteristics of the study population: N = 271. Mean (SD) y since last diploma (n = 262): 21.1 (10.1), range 1-42.

CHARACTERISTIC	N (%)*
Sex	
• Male	213 (84.2)
• Female	40 (15.9)
Age, y	
• 20-29	22 (8.2)
• 30-39	65 (24.3)
• 40-49	90 (33.7)
• 50-59	84 (31.5)
• ≥ 60	6 (2.2)
Profession	
Family physician	45 (16.9)
<ul> <li>Other specialist (anesthesia, surgery, internal medicine, neurology, psychiatry, urology, etc)</li> </ul>	24 (9.0)
<ul> <li>Clinical nurse or nurse practitioner</li> </ul>	114 (42.7)
<ul> <li>Auxiliary or technical nurse</li> </ul>	83 (31.1)
Experience with end-of-life care <sup>†</sup>	
• Yes	149 (55.8)
• No	116 (43.4)

\*Totals for each characteristic might be different owing to missing data. <sup>†</sup>Question: "Do you care for dying patients in your clinical practice?"

nearly 1 in 3 family physicians and 2 in 5 other specialists demonstrated the same misunderstanding, underscoring the importance of continuing medical education regarding end-of-life care. The fact that no difference in comprehension was observed between those who cared for dying patients in their clinical practices and those who did not appears counterintuitive and deserves special consideration in future studies.

Most health care professionals believed that currently legal practices (scenarios 1 and 2) would be authorized by legislative changes permitting medical aid in dying. However, we found that nearly half of the respondents wrongly identified the cessation of lifesustaining treatment upon a patient's request as an illegal act in Quebec. These results lead us to believe that some professionals interpret legalizing medical aid in dying as an authorization of practices that are already legal. Furthermore, more than 60% of respondents believed that the use of lethal medication upon the patient's request (scenarios 3 to 6) would remain illegal if medical aid in dying were authorized in Quebec. Scenario 4 (the injection of opioids beyond what is necessary to relieve symptoms) is the scenario most frequently associated with possible legislative changes (39.5%). However, in countries in which euthanasia is permitted, the injection of opioids has been criticized because of its uncertain lethal potential. 32,33 In fact, combining barbiturates and neuromuscular blocking agents remains the preferred method recommended by human euthanasia protocols29 owing to the combination's effectiveness in inducing death rapidly. This method, which could likely be targeted by medical aid in dying legislation, can be found in scenario 5. Results

**Table 3.** Comprehension of the legal status of end-of-life practices by scenario: N = 271.

SCENARIO NO.	CLINICAL PRACTICES AT THE END OF LIFE	CURRENT LEGAL STATUS AT THE TIME OF THE STUDY	THINK THE PRACTICE IS CURRENTLY LEGAL, N (%)	THINK THE PRACTICE WOULD BE AUTHORIZED IF MEDICAL AID IN DYING WERE LEGALIZED, N (%)*
1	Withdrawal of potentially life-prolonging treatment	Legal	147 (54.2)	220 (81.2)
2	Use of opioids adjusted to symptom relief	Legal	224 (82.7)	216 (92.3)
	Use of potentially lethal medication above what is needed for symptom relief			
3	<ul> <li>administered by the patient (oral barbiturates)</li> </ul>	Illegal	4 (1.5)	59 (21.8)
4	<ul> <li>administered by the health care professional (intravenous opioids above what is needed for symptom relief)</li> </ul>	Illegal	4 (1.5)	107 (39.5)
5	<ul> <li>administered by the health care professional (barbiturates and a neuromuscular blocking agent)</li> </ul>	Illegal	2 (0.7)	74 (27.3)
6	<ul> <li>administered by the health care professional upon a relative's request (barbiturates and a neuromuscular blocking agent)</li> </ul>	Illegal	1 (0.4)	88 (34.6)

Table 4. Comparison of respondents who were confused about the current legal status of end-of-life practices and those who were not, by sociodemographic characteristics: N = 266.

CHARACTERISTIC	CONFUSED (N = 144)	NOT CONFUSED (N = 122)	P VALUE
Sex, n (%)			NS
• Male	115 (54.5)	96 (45.5)	
• Female	20 (50.0)	20 (50.0)	
Age, y, n (%)			<.05
• 20-29	7 (31.8)	15 (68.2)	
• 30-39	33 (51.6)	31 (48.4)	
• 40-49	47 (52.2)	43 (47.8)	
• ≥ 50	57 (63.3)	33 (36.7)	
Profession, n (%)			<.001
Family physician	14 (31.1)	31 (68.9)	
Other specialist	10 (41.7)	14 (58.3)	
Clinical nurse or nurse practitioner	64 (56.1)	50 (43.9)	
<ul> <li>Auxiliary or technical nurse</li> </ul>	56 (68.3)	26 (31.7)	
Experience with end-of-life care,* n (%)			NS
• Yes	77 (52.0)	71 (48.0)	
• No	67 (56.8)	51 (43.2)	
Mean (SD) y since last diploma	22.8 (9.4)	19.3 (10.6)	<.05

showed that only 27.3% of health care professionals believed that such a practice would be authorized.

\*Question: "Do you care for dying patients in your clinical practice?"

Finally, some uncertainty also existed as to which practices would remain illegal if medical aid in dying were legalized. In this study, 34.6% of professionals believed that the use of lethal medication would be legal when requested by a relative (scenario 6), despite the fact that a voluntary request by a competent patient has been proposed as a necessary condition by all Quebec government reports since 2012. While this scenario will not be permitted under An Act Respecting End-of-Life Care, further examination of the question of incompetent patients was nonetheless suggested in the Commission spéciale sur la question de mourir dans la dignité final report,4 and in a Collège des médecins du Québec working group report.34

#### Limitations

Despite the high response rate, such a study should be replicated with a larger sample of professionals, particularly with family physicians and other specialists who might have been underrepresented. We cannot exclude the possibility that our recruitment process targeting participants who take part in continuing medical education limits the generalizability of results and might have encouraged the recruitment of professionals who were better informed. Furthermore, the first scenario contained a few details not found in the others, in particular the fact

Table 5. Factors associated with confusion regarding current legal status of end-of-life practices: N = 265.

	LOGISTIC REGRESSION MODEL*		
FACTOR	ODDS RATIO (CI)	P VALUE	
Profession			
<ul> <li>Family physician</li> </ul>	1	Reference category	
<ul> <li>Other specialist</li> </ul>	1.6 (0.6-4.4)	NS	
<ul> <li>Clinical nurse or nurse practitioner</li> </ul>	2.6 (1.3-5.6)	<.01	
<ul> <li>Auxiliary or technical nurse</li> </ul>	4.8 (2.2-10.5)	<.001	
Mean y since last diploma <sup>†</sup>	1.0 (1.0-1.1)	<.05	

NS-not significant.

\*Nagelkerke  $R^2$  = 0.21; Hosmer-Lemeshow test  $\chi_8^2$  = 8.47; P = .39; classification table 64.2%.

<sup>†</sup>Age was not included in the multivariate analysis. This variable was highly correlated with mean y since last diploma (r = 0.82).

that the request was made in writing rather than verbally (because the patient was intubated), and the fact that the scenario combined 2 legal clinical practices (cessation of ventilation and the use of sedatives adjusted for symptom relief). This might have led to differential interpretation for some respondents. However, the factors that help distinguish the first scenario from the others clinical practices were clearly delineated. Finally, the study's general context should also be considered with

regard to the interpretation of results. The study was conducted after the public consultations and the publication of the 2012 Commission spéciale sur la question de mourir dans la dignité report,<sup>4</sup> but before the report from the legal experts<sup>5</sup> and Bill 52, An Act Respecting End-of-Life Care6; the concept of medical aid in dying is new in Quebec and was not defined at the time of the study; and no clinical guidelines have yet been published in Quebec to describe recommended drugs and clinical procedures for medical aid in dying.

#### Conclusion

While most health care professionals knew which end-of-life practices were not currently permitted, some were confused regarding the legal status of practices that were currently authorized, such as treatment withdrawal upon patient request and the use of opioids or sedatives adjusted to symptom relief. Regarding the possible legalization of medical aid in dying in Quebec, professionals had different and sometimes contradictory interpretations of which clinical practices would be authorized, and which ones would remain illegal. Training and awareness raising for health care professionals regarding the clinical implications of end-of-life practice legislation should be promoted.

Dr Marcoux is Assistant Professor in the Interdisciplinary School of Health Sciences at the University of Ottawa in Ontario and Researcher at the Charles-Lemoyne Research Centre in Longueuil, Que. Dr Boivin is Adjunct Professor in the Department of Family Medicine at the University of Montreal in Ouebec and Researcher at the Charles-Lemovne Research Centre. Drs Arsenault, Toupin, and Youssef were residents in the Department of Family and Emergency Medicine at the University of Sherbrooke at the time of the study.

Dr Marcoux participated in the conception of the study, performed the statistical analysis, interpreted the results, wrote the first draft, and revised the manuscript. Dr Boivin conceived the study, supervised the data collection, and analyzed and interpreted the data, and wrote and revised the manuscript. Drs Arsenault, Toupin, and Youssef participated in the conception of the study, collected the data, interpreted the results, and revised the manuscript. All authors approved the final version submitted for publication.

#### **Competing interests**

None declared

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