

Death duties

Workshop on what family physicians are expected to do when patients die

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ABSTRACT

PROBLEM BEING ADDRESSED Family physicians are often called upon to pronounce and certify the deaths of patients. Inadequate knowledge of the *Coroners Act* (in the province of Ontario) and of the correct process of certifying death can make physicians uncomfortable when confronted with these tasks.

OBJECTIVE OF PROGRAM To educate family physicians about how to perform the administrative tasks required of them when patients die.

PROGRAM DESCRIPTION The program included an educational video, a tutorial outlining the process of death certification, and discussion with a regional coroner about key features of the *Coroners Act*. In small groups, participants worked through cases of patient deaths in which they were asked to determine whether a coroner needed to be involved, to determine the manner of death, and to complete a mock death certificate for each case.

CONCLUSION All participants reported a high level of satisfaction with the workshop and thought the main objective of the program had been achieved. Results of a test given 3 months after the workshop showed substantial improvement in participants' knowledge of the coroner's role and of the process of death certification.

RÉSUMÉ

QUESTION À L'ÉTUDE Le médecin de famille est souvent appelé à confirmer et à certifier la mort d'un patient. S'il connaît mal la *Loi sur les coroners* (dans la province de l'Ontario) et la façon correcte de rédiger le certificat de décès, il peut être mal à l'aise lorsqu'il doit effectuer ces tâches.

OBJECTIF DU PROGRAMME Renseigner le médecin de famille sur la façon d'effectuer les tâches administratives qui leur incombent quand un patient décède.

DESCRIPTION DU PROGRAMME Le programme comprenait une vidéo éducative, un atelier détaillant le processus de certification du décès et une discussion sur les principaux points de la *Loi sur les coroners* avec le coroner régional. On a soumis aux participants qui travaillaient en petits groupes des cas de décès de patients en leur demandant de décider si on devait faire appel à un coroner, d'établir le mode de décès et de rédiger un certificat de décès fictif dans chaque cas.

CONCLUSION Les participants ont tous rapporté un haut niveau de satisfaction par rapport à l'atelier et ils estimaient que le principal objectif du programme avait été atteint. Les résultats d'un test effectué 3 mois après l'atelier indiquaient que les participants avaient une bien meilleure connaissance du rôle du coroner et du processus de certification du décès.

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Family physicians are called upon to pronounce and certify the deaths of patients in various settings, including acute care hospitals, long-term care facilities, and patients' homes. Lack of familiarity with the process of death certification can make practising physicians uncomfortable when confronted with these tasks. In Canada, the information extracted from physician-completed death certificates is used for many purposes. Patients' families often require this information to settle estates and insurance claims. The database created from this information is used for research purposes to follow disease trends and to identify and track public health issues. The quality of the data in the database is threatened if physicians do not report cause-of-death information accurately. Many studies have documented the inaccuracies on death certificates completed by certifying physicians.¹⁻⁵

One of the primary reasons for errors in completing death certificates is that physicians are inadequately trained in this area. The *Coroners Act* in Ontario (and similar legislation in other provinces) and the process of death certification receive scant attention in most postgraduate and continuing medical education programs.^{6,7} Most attempts to improve physicians' knowledge and skills in this area have targeted medical students or physicians in training rather than practising physicians.^{1,8,9} Because practising physicians complete most of the death certificates in Canada, we developed a workshop aimed at improving Ontario physicians' working knowledge of the *Coroners Act* and their ability to complete death certificates accurately. The primary objective of the workshop was to improve family physicians' ability to perform the administrative duties required of them after patients die. Enabling objectives included improving their ability to apply the key components of the *Coroners Act* in their practices, helping them to understand the process of death certification, and teaching them how to complete death certificates accurately.

Program development and implementation

A needs assessment on the topic of certifying death was undertaken by discussing the aims of the workshop with key stakeholders, including family physicians, a regional coroner, and representatives of Statistics Canada. A literature review was done to identify deficits in knowledge regarding the process of certifying death. The needs assessment identified 2 key content areas for the workshop: the need for a practical working knowledge of the *Coroners Act*, and the need to be able to identify underlying causes of death and complete the World Health Organization's death certificate. Requirements for notifying the coroner vary from province to province; this workshop was based on Ontario's requirements.

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To help physicians understand these requirements, a regional coroner (D.E.) developed a tutorial on the role of the coroner. The tutorial focused on the role of certifying physicians, when to call the coroner, differentiating between natural and non-natural deaths, and pronouncing death outside hospitals or long-term care facilities. To improve physicians' skill in completing death certificates, we planned to use case scenarios. We reviewed scenarios from previously successful resident workshops and from published instructional guides to see whether they were applicable to practising physicians.¹⁰ We amended case scenarios used for resident workshops to reflect cases that family physicians would encounter in practice. For instance, most of the scenarios in the resident workshops were created from hospital-based deaths, since this would have been of the greatest relevance to physicians in training. We expanded the scope of the scenarios to include deaths in patients' homes and nursing homes.

The half-day workshop consisted of an introductory video provided by Statistics Canada entitled *Death Counts*, the tutorial on the *Coroners Act*, and a review of the format of the World Health Organization's death certificate and the process for completing it accurately. After this, participants were divided into 4 small groups for discussion of case scenarios. For each scenario, groups discussed the need to call the coroner and then completed mock death certificates with the underlying and immediate causes of death. Groups then presented their cases to all participants and reviewed common pitfalls in completing death certificates and in notifying the coroner as illustrated by the scenarios.

Program evaluation

To measure participants' baseline familiarity with the process of death certification, we developed a pretest. Questions and case scenarios on the test were based on earlier workshops and a thorough literature review to probe into areas where physicians were known to have misconceptions about the process of death certification. Three months after the workshop, a posttest questionnaire was sent to participants. In addition to questions and case scenarios, an initial section on this questionnaire asked how the workshop had affected their knowledge of the *Coroners Act* and their confidence in completing death certificates. After participants sent in the posttest questionnaires, they were mailed a copy of a completed questionnaire with the correct answers. Participants also completed a questionnaire from the continuing education office on their satisfaction with the workshop.

The program proved popular. Eighty family physicians expressed interest in attending the workshop. Attendance was limited to 25 participants to allow for small-group learning. Most participants were community family physicians from eastern Ontario; 15 participants

had graduated from medical school more than 10 years before the workshop. Only 1 participant had received formal training on death certification. The number of death certificates completed by participants each year ranged from 0 to 50 (median 3). Twenty-one participants completed the pretest; 16 completed the posttest.

Pretest results

Very few physicians were aware of the many uses made of the information on death certificates. Most knew that the information was used to create a national database, but few thought the information was used for public health purposes or for research. Most participants were uncertain about Ontario's regulations regarding notifying the coroner. About 25% of respondents did not realize that all non-natural causes of death must be reported to the coroner, and about 33% thought that death certificates could not be amended once completed. About 25% believed that "old age" was an acceptable cause of death on a death certificate (it is not, for instance, in Ontario).

Two thirds of participants did not recognize that death due to a medical complication after a fall (eg, pulmonary embolus 1 week after a fall causing a fractured hip) was an accidental death requiring notification of the coroner. Most did not realize that nonspecific conditions, such as cirrhosis, require further clarification to be acceptable as a cause of death (eg, primary biliary cirrhosis, alcoholic cirrhosis). Common errors in completing death certificates based on case scenarios included using mechanisms or modes of death rather than underlying causes of death (eg, asphyxia instead of pneumonia) and not being specific enough when identifying underlying causes of death.

Posttest results

All participants who completed the posttest questionnaire indicated that they felt more knowledgeable and were more confident when certifying the deaths of their patients. During the 3 months after the workshop, the number of death certificates completed by participants ranged from 0 to 8.

Substantial improvement in participants' knowledge of the *Coroners Act* was seen at 3 months. All knew that, in Ontario, the coroner did not need to be called for deaths in the home. Almost all knew that the coroner needed to be called when the manner of death was deemed non-natural and did not need to be called for all deaths in nursing homes. Results of the posttest showed that participants were more knowledgeable about amending death certificates, not using old age as a cause of death, and identifying non-natural deaths. Completion of death certificates also improved, as evidenced by a decline in use of mechanisms of death as the underlying cause of death and increased use of more specific diseases as the underlying cause of death.

Satisfaction questionnaire

Twenty-one participants completed the continuing education questionnaire on their satisfaction with the workshop. Participants were uniformly positive in their evaluations. The facilitators received excellent ratings for their roles in the workshop. Participants commented that the workshop was practical and would result in changes in their practice.

Discussion

A 1993 survey of residents and family physicians found that many felt uncomfortable about the process of death certification. More than half the 131 practising family physicians who completed the survey acknowledged a need for more training in this area.⁶ The results of our study confirmed that there was a need and a desire for more training in the process of death certification.

The effect of experience on physicians' ability to complete death certificates accurately is controversial. Both Maudsley and Williams⁶ and Messite and Stellman¹¹ reported no difference in accuracy in completing mock certificates based on case scenarios between physicians who had completed many certificates and those who had not. Two more recent studies found that more experienced physicians completed death certificates more accurately.^{12,13} In our study, physicians with more than 10 years' experience with certification of death scored substantially better on the pretest. However, more recent graduates who attended our workshop had greater improvement on their posttest scores compared with more experienced physicians; 3 months later, there was no significant difference in scores of physicians experienced and not experienced in completing death certificates.

Results of our pretest confirmed that physicians did not know enough about how to apply the *Coroners Act*. Misconceptions included the belief that death certificates could not be amended once completed, and there was uncertainty around definitions of natural and non-natural deaths. Participants frequently made errors when completing mock certificates based on case scenarios. Use of mechanisms (eg, cardiac arrest) instead of specific underlying causes of death was a frequent error, as was choosing conditions that did not have specific diagnoses.

Many investigators have documented the frequency and types of errors made by physicians when completing death certificates, but very few studies have evaluated strategies to enhance the knowledge and skills required for completing death certificates accurately. A randomized controlled trial of first-year medical students evaluated the effects of an educational video on students' ability to certify death. The intervention group showed a small but significant improvement over the control group in overall knowledge and skills.⁸ The effect of such an intervention so early in medical training on eventual skill in practice is unclear.

Weeramanthri and Beresford⁹ sent written educational materials on certifying death as part of a questionnaire to house officers at a teaching hospital in Australia and compared rates of errors on death certificates 1 month before and 1 month after the intervention. Although the rate of errors dropped, the change was not statistically significant. Written educational materials and guidelines have been shown to be inadequate for bringing about sustained changes in physicians' practice, and this might have contributed to the negative results of this study.¹⁴

Our workshop for family physicians was an expanded version of a 90-minute workshop for residents. In addition to receiving written guidelines, participants had the opportunity to interact with opinion leaders in the area of death certification and to practise completing death certificates. We believe this has advantages over use of educational materials alone. Results of our evaluation of both residents and family physicians showed that their knowledge and skills were greatly enhanced by the workshop.¹

Limitations

The number of participants in our workshop was small and was limited to a self-selected group of family physicians. Our results, therefore, might not be applicable to other groups of physicians or in other jurisdictions in Canada. We did not use a control group and we did not measure direct effects on practice. Comparing actual death certificates completed by the family physicians who attended the workshop with those completed by physicians who did not might provide a better indicator of improvement in practice. This option was considered, but would have presented a substantial logistical challenge due to regulations on confidentiality and the range of settings in which our workshop participants practised.

Conclusion

We believe that a half-day workshop on the *Coroners Act* and the process of death certification can improve the knowledge and skills of family physicians faced with certifying the deaths of patients. Although the topic is an unusual one for a continuing medical education event, it was popular with physicians and demand far exceeded capacity. The administrative tasks that need to be done when a patient dies are an important part of family physicians' practice, and to help family doctors to be more comfortable in performing these tasks, more continuing medical education programs could consider including this topic in their curriculums. ✨

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Competing interests

None declared

EDITOR'S KEY POINTS

- Many physicians do not know that information on death certificates is used for research purposes to follow disease trends and to identify and track public health issues.
- A common misconception in completing death certificates is the belief that they cannot be amended once completed. Common errors in completing death certificates include choosing conditions with nonspecific diagnoses (eg, cirrhosis) and reporting mechanisms (eg, cardiac arrest) instead of specific underlying causes of death. Physicians are also unsure when a coroner should be called.

POINTS DE REPÈRE DU RÉDACTEUR

- Plusieurs médecins ignorent que l'information contenue dans les certificats de décès est utilisée aux fins de recherche pour connaître les tendances des maladies et pour identifier les problèmes de santé publique et en suivre l'évolution.
- On croit souvent à tort qu'une fois le certificat de décès rédigé, il ne peut plus être modifié. Parmi les erreurs fréquentes dans la rédaction du certificat de décès, mentionnons le choix de conditions n'ayant pas de diagnostic spécifique (par ex., cirrhose) et la mention du mécanisme (par ex., arrêt cardiaque) plutôt que de la cause spécifique ayant entraîné la mort. De plus, les médecins ne savent pas trop quand il faut appeler un coroner.

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