

Knowledge, Attitudes, And Practice Survey About Drafting Medical Certificates of Death by Doctors: Preliminary Results

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ABSTRACT

Introduction: The writing of medical certificates of death (MCD) is a medical act that any physician may have to perform in his daily practice. Medical and legal consequences may result from the quality of its writing. The objectives of our work were to evaluate the knowledge and attitudes of physicians concerning the rules of writing MCD to propose corrective measures to the insufficiencies noted.

Methods: This is a cross-sectional study, over a period of two months (March 1st, 2022, to May 1, 2022) among general practitioners and specialists of public health and installed in private in the region of Tataouine.

Results: During the study period, we designed a questionnaire of 30 items with simple or multiple-choice questions. 34 doctors responded to this questionnaire. 50% of the doctors received continuing education on the rules for writing MCD. Concerning the administrative section, 55.9% of the physicians filled in all the boxes concerning the information on the deceased, and 88.2% filled in all the boxes concerning the information identifying the certifying physician.

Concerning the medical section, the box for a medicolegal obstacle to burial was checked in 94.1% of cases. The cause of death was mentioned by 88.2% of the physicians, and the sequence of causes of death was mentioned in 85.3% of cases. The causal hierarchy was respected in 73.5% of cases. This medical part, which is confidential, was covered by 82.3% of the physicians.

Conclusion: Our study showed that the quality of death certificate writing suffered from several deficiencies, which encourages us to make greater efforts in training doctors.

Keywords: Knowledge; Medical Certificate of Death; Survey; Evaluation

INTRODUCTION

The medical certificate of death (MCD), established by a doctor, is essential for the declaration of death to civil status services. The drafting of the MCD is an indispensable act before any funeral operations. Depending on the circumstances of the death, it can be the starting point for a judicial investigation. The MCD is not a simple medical formality, it is essential and represents at the same time a civil status act, a social act, a medico-legal act, and a source of epidemiological data which allows the collection of information on the causes of death. Emergency physicians are often asked to write this type of certificate. Despite the teaching of MCD writing rules during medical studies and the presence of writing guides developed by international and national organizations, various studies show that the frequency of writing errors is still high and is estimated at between 16 and 78% of MCDs. The reasons given by the authors are different and multiple and sometimes remain obscure (1).

Thus, given all these elements, the MCD must obey rules for drafting and issuing specific and objective quality criteria that must be known and mastered by all doctors.

Hence idea this work proposes to evaluate the knowledge and attitudes of physicians concerning the rules for writing MCD to recommend corrective measures for the insufficiencies noted.

METHODS

We conducted a cross-sectional study over a period of two months (March 1, 2022, to May 1,

2022) among general practitioners and specialist doctors in the Tataouine region.

Included in our study are the general practitioners and specialists practicing in Tataouine in the private and public sectors either in urban or rural areas regardless of age or seniority of practice and depending on the regional council of the order of physicians of Gabes.

We excluded doctors not registered with the CNOM as well as medical residents, doctors for whom no email address was available, and those for whom the email address was truncated.

We designed a 30-item questionnaire with single and multiple-choice questions.

The questionnaire had four parts:

- A first part collecting information on the participants' characteristics
- A second part concerning the physicians' knowledge of the rules of the CMD form
- A third part concerning the physicians' knowledge of the content of the CMD
- A fourth part concerns the knowledge of the physicians on the rules of delivery of the CMD.

We sent the questionnaire to the participants by e-mail. They were invited to answer it through an online link to the questionnaire. The estimated time required to respond was 15 min. The questionnaire was only available on the Internet. The data were entered with GOOGLE FORMS and the descriptive analysis was done with EXCEL software.

RESULTS

In total, among the 60 physicians for whom an email address was available, allowing us to send the questionnaire, 34 physicians agreed to

answer, i.e. a participation rate of 56.6%.

1. Participating Physician Data:

Among 34 physicians who responded to the questionnaire, 27 were general practitioners and 7 were specialists (Table I). 24 physicians practiced in an urban area and the other 10 physicians practiced in a rural area. Regarding years of practice, most of the physicians who responded to our questionnaire have been practicing for less than 10 years (25 physicians) (Table I).

Moreover, 50% of the physicians had received continuing education on MCD writing rules, of which only 18.8% had received practical training. This training dates from less than 1 year for 4 physicians, between 1 and 5 years for 11 physicians, and more than 5 years for 2 physicians.

In our study, most physicians (88.2%) write usually less than 5 death certificates per month, while the others (11.8%) write between 5 and 10 per month.

2. Knowledge regarding the MCD form rules:

32 physicians used a pre-printed model for writing MCDs, 1 physician used a headed paper and 1 physician used a blank sheet. 85.3% of the physicians reported using abbreviations.

3. Knowledge regarding the MCD content:

30 physicians reported mentioning the date and time of death on the MCD, 22 physicians mentioned the date of issuance of the certificate and only 17 mentioned the date and time of the finding of death.

In addition, 94.1% of the physicians declared requiring an official identity document (identity card, passport) to identify the decedent.

When writing the medical certificate of death, 19 doctors (55.9%) filled in all the boxes concerning the information about the decedent, 14 doctors (44.1%) filled only in boxes for which they had answers and 1 doctor (2.9%) reported mentioning only the decedent identity.

Moreover, 30 physicians filled in all the boxes regarding their information and 4 physicians mentioned only their identity.

Besides, most of the responding physicians (94.1%) considered that it was mandatory in all the cases to check the "yes" or "no" box in front of the mention of the existence of a medico-legal obstacle to inhumation.

Similarly, 31 physicians considered it mandatory to check "yes" or "no" in front of the box of "placement in a coffin". The conditions for checking "yes" in front of each one of these boxes according to them are specified in figures 1 and 2.

Concerning the cause of death part, only 5 physicians (14.7%) thought that it was mandatory to fill in all the lines in all cases, while 85.3% of the physicians considered that it is possible to leave empty lines, depending on the case.

30 of our physicians (88.2%) mentioned the cause of death (such as MI, or stroke ...) and 18 of them mentioned the mechanism of death (such as heart failure, or respiratory failure ...). In the 'cause of death' section, most physicians (85.3%) mentioned the sequence of causes leading to

death, while 4 physicians (11.8%) mentioned only the immediate cause of death and only 1 physician mentioned the initial cause of death.

The hierarchy of the causes of death was always respected in 73.5% of cases and sometimes respected in 26.5% of cases. The time delay of the morbid conditions causing death was noted by the physicians always by 10 of the physicians in our study (29.4%), sometimes noted by 16 physicians (47.1%), and never noted by 8 physicians (23.5%).

Other morbid conditions contributing to death were mentioned in 73.5% of cases, and not noted in the other cases.

The lower part concerning additional information about the death was compulsorily filled in by 12 of the physicians in our series, while for the remaining 22 physicians it is filled in according to the cases and the available data.

4. Physicians' knowledge of the rules for issuing MCD:

Regarding the person receiving MCD, 15 physicians mentioned to whom the certificate is issued, while the remaining 19 physicians did not specify this information. After filling the MCD, 28 physicians close the bottom part to seal it while the six remaining doctors do not.

DISCUSSION

The MCD is a document on which the physician, certifying that the death is real and constant, reports different information on the circumstances of the death and the cause of its occurrence. This document represents the main source for making relevant national statistics on morbidity and mortality (1).

1. Participating physicians' data:

In our study, we noted equality between women and men, with a majority practice in the public sector (76.5%) and urban areas (70.6%). The number of years of practice was less than 10 years for 73.25% of them with a density of writing MCD of less than 5 certificates per month.

2. Knowledge regarding the MCD form rules:

In our study, 32 physicians used a pre-printed model, 1 physician used a headed paper and 1 physician used a blank sheet. However, the study of Ben Khelil et al in 2014, which evaluated the quality of 757 death certificates, found that all certificates were written on a pre-printed model (2).

Decree No. 99-1043 of May 17, 1999, of the Official Gazette of the Tunisian Republic No. 43 of May 28, 1999 (3) has set the model of the death certificate and the mentions it must include. This model conforms with the international model which was established and recommended in 1948 by the World Health Organization to all member states. The public health structures are responsible for supplying the different departments with these certificates and the Council of the Order makes them available to private doctors.

In our study, 17.6% of physicians used abbreviations. In the study conducted by Patel et al, 32.5% of the certificates studied contained abbreviations and 15% of the certificates were filled in with illegible writing. The medical

certificate should be written perfectly in simple and understandable terms.

3. Knowledge regarding the MCD content:

Regarding the dates mentioned, 30 physicians mentioned the date and time of death, 22 physicians mentioned the date of issuance of the certificate and only 17 mentioned the date of the finding of death. However, the physician may be confronted with situations where the date and time of death are unknown. In this case, he can put the estimated date and time of death by referring to his thanatological knowledge (4).

In our study, the national identity card or passport was required by 94.1% of the physicians whereas Burger et al (5) noted that only 2/3 of MCDs mentioned the identity of the deceased.

In our study, 19 physicians (55.9%) completed all the boxes concerning information about the deceased. Haque et al (6) found that in 92% of the MCDs, there were some errors or missing information in the socio-demographic data of the deceased. Another study by Swift B et al found many errors in recording the place of residence of the deceased on the MCD. Sibai et al noted that the deceased's occupation and age were most often missing from the MCD (95% and 78% respectively) (7).

It should be noted that the upper part of the MCD or the administrative part will be detached by the registrar to draw up the death certificate and issue the burial permit. It will be kept by the municipality, and the information on the identity of the deceased, the date and the estimated time of death, and the place of death will be recorded on a form transcribed by the registrar and sent

directly to the National Institute of Statistics (NIS) to produce national mortality statistics; hence the importance of recording all the information requested on this part (8–10).

Regarding the identification of the writing physician, in our study, 88.2% of the physicians provided all the information concerning them, while 11.8% mentioned only their identity.

In the study by El Nour et al (11), the signature and stamp of the certifying physician were absent in 18% of the MCDs. Yet, Article 27 of the medical code of ethics recommends that all certificates should be signed by the physician, in addition to the authentication stamp (12). The signature of the document should be handwritten. Thus, the handwritten signature of the physician, possibly accompanied by a stamp, is one of the means of limiting the risk of fraud.

In our study, the "presence of a medico-legal obstacle" box was checked by 'yes' or 'no' in 94.1% (32 physicians), while 2 physicians found that it could be left unchecked, which is a major fault.

Concerning the medico-legal obstacle, the certifying physician must indicate the presence of a medico-legal obstacle at a burial in certain cases (3,13,14).

There are two possible outcomes:

- Either the death is natural, it is an expected death, resulting from the evolution of a pathological condition of the individual or the term of his aging. It is the consequence of a known or unknown pathological process that does not involve any directly responsible external third party

- Or a death posing a medico-legal problem: this situation includes cases of violent death (public road accidents, work accidents, domestic accidents, suicides, and homicides), suspicious death (not explicable or occurring in unusual circumstances: suspected medical malpractice, death in a prison setting) or sudden death (which occurs unexpectedly in a healthy subject within a short period after the onset of any symptoms i.e., after a brief agony) (15–17).

In our study, 31 of our physicians considered it mandatory to check "yes" or "no" in the box of "placement in a coffin". For our physicians, placement in the coffin was mandatory in some situations. The obligation of putting the body in a coffin concern certain contagious, epidemic, or infectious diseases. According to decree n° 97-1326 of July 7, 1997, the diseases concerned are cholera, rabies, AIDS, and viral hepatitis except confirmed hepatitis A and viral hemorrhagic fevers (18). In the last three years, due to the appearance of the COVID-19 pandemic, the COVID-19 disease has been considered a requirement to be buried.

Concerning the cause of death part, only 5 physicians (14.7%) thought that it is mandatory to fill in all the lines in all cases, while 85.3% of the physicians considered that it is possible to leave empty lines, depending on the case.

The sequence of causes leading to death was respected in 85.3% of cases in our series, whereas it was respected in only 45% of cases in the study by Patel et al (18) and 77.7% of cases in the study by Jordan et al (19).

The delay of the morbid states causing death was

always noted by physicians in 29.4% of cases and never in 23.5%. This time interval makes it possible to know the sequence of events and to interpret the sequence that led to death (5,20).

Part II was completed in only 52.9% of cases in our study, whereas it was completed in 100% of MCDs in the Agarwall study (21). On the other hand, other studies have found that this part is rarely used, such as the study by Burger et al (5) (8.5% use) and the study by El Nour et al (11) (3% use).

This part concerns additional information concerning the circumstances of the death. This part was filled in by 12 of our doctors (35.5%), while in 64.7% it is to be done according to the cases and the available data.

4. Physicians' knowledge of the rules for issuing and confidentiality of MCD:

Regarding the person receiving MCD, 15 physicians mentioned to whom the certificate is issued, while the remaining 19 physicians did not specify to whom the MCD is issued. After filling the MCD, 28 physicians close the bottom part to seal it while the six remaining doctors do not. Article 254 of the Tunisian Penal Code states that "doctors, surgeons and other health workers, pharmacists, midwives and all persons who, by their status or profession, are entrusted with secrets, will be punished by six months imprisonment and a fine of 120 dinars, if they reveal these secrets, except in cases where the law obliges or authorizes them to act as whistleblowers" (22). Similarly, articles 8 and 9 of the Code of Medical Ethics state that "secrecy is binding on all physicians, except in the case of

derogations established by law" and that "the physician must ensure that the persons who assist him in his work are informed of their obligations concerning professional secrecy and comply with them"(12).

Despite this, we noted in our study that in 17.6% of cases the confidential part was not sealed. Different results were observed in the study carried out in the forensic medicine department of the CHU of Garches in France, where it was noted that 75% of the MCDs studied were not sealed (23).

5. Recommendations

In our medical training, the student receives only theoretical teaching on MCD. This seems very little given the importance of this document in all the literature published recently. Doctors, whatever their specialty, deplore insufficient training (24,25).

In our study, 14 physicians (41.2%) had received continuing education, 87.5% of which was theoretical and 76% of which was more than one year old. This training will certainly improve the quality of writing and reduce the percentage of errors. The study by Myers et al (20) found that, after an educational intervention, there was a decrease in the occurrence of errors with a decrease in the mechanisms of death mentioned, an improvement in the identification of deaths causing a medico-legal obstacle, and a more complete and specific accuracy of the cause of death.

CONCLUSION

Our study showed that the quality of writing death certificates suffered from several

deficiencies which encourages us to provide more efforts in the training of physicians. Although this study was limited to a few medico-legal death certificates, it could be a starting point for several more complete and wider studies including all medical death certificates.

Physicians should be aware that writing a death certificate is a medical act as much important as caring for the patient, and that this act may lead to their medical liability.

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