ANALYSIS OF ERRORS IN COMPLETING DEATH CERTIFICATES AT HOSPITAL GERAL VALE DO ITAJAÍ

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ABSTRACT

OBJECTIVE: The present study aims to analyze the declarations that present inadequate completion, seeking to identify the most common types of errors in the completion of causes of death in a General Hospital in Vale do Itajaí, in addition to clarifying the importance of correct completion.

METHOD: A total of 507 death certificates were analyzed, completed from January to December 2022 at a General Hospital in Vale do Itajaí. The study consists of a descriptive quantitative research, seeking to understand errors and difficulties encountered by physicians in filling out death certificates at the Hospital. All death certificates filled out during the period were included, and certificates of deaths occurring at home were excluded. After analyzing the data extracted from the hospital's death committee, the data were organized in Excel spreadsheets and analyzed in graphs using the variants necessary for the study.

RESULTS: A total of 299 (58.9%) declarations were found to be correctly filled out and 208 (41.1%) were found to have some type of discrepancy with the Ministry of Health's Death Certificate Filling Manual. Among the statements that presented some type of error, 51.7% of them had only 1 type of error and 48.3% had more than 1 concomitant error. The study shows that the most common type of error was lack of nexus and wrong order, appearing in 49 (9.7%) statements. Of all the statements analyzed, 48.3% had more than 1 error in filling them out, and the most common reason for the error was lack of nexus and wrong order, followed by 32 (6.3%) statements that presented syndromic diagnosis as the underlying cause of death, for example, multiple organ dysfunction and/or cardiac arrest.

CONCLUSION: It was possible to identify that the prevalence of inadequately filled out declarations is quite expressive, totaling 41.1% of the total, showing that the most common type of error was lack of nexus and wrong order, appearing in 49 (9.7%) declarations.

Keywords: Death certificate. Causes of death. Medical ethics. Mortality records. Epidemiological data.

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INTRODUCTION

The Death Certificate (DC) is the standard document of the Mortality Information System and is mandatory to use throughout the national territory. It is a standardized instrument, printed with a unique numerical sequence, forming sets of three carbonless copies, with different standardized colors, such as white, yellow, and pink. Among the objectives of the declaration, the first is to be the form for collecting data on mortality that serve as a basis for calculating vital and epidemiological statistics in Brazil. The second, of a legal nature, is that of being the appropriate document, as provided for in the Law of Public Records by Civil Registry Offices, of the Death Certificate, which is indispensable for the legal formalities of burial and for the beginning of succession processes. (Brazil, 2009).

From 1976 onwards, the Ministry of Health implemented a single model of Death Certificate (DC) in order to be used throughout the national territory, as the basis of the Mortality Information System (SIM). The DC has two main objectives: to be the standard document for the collection of information on mortality, which will serve as a basis for the calculation of vital and epidemiological statistics in Brazil; and that of being the appropriate document, for the drafting, by the Civil Registry Offices, of the Death Certificate, indispensable for the legal formalities of burial. (Brazil, 2009).

The establishment where the death occurred must fill out the DC in its three copies. The first copy is retained, for later collection in an active search by the sectors responsible for processing, in the state and/or municipal health departments. The duplicate is delivered to the family members, who will take it to the civil registry office for the competent registration and obtaining the Death Certificate; This copy is retained at the notary's office, for legal procedures. The third copy remains in the Notifying Unit to be attached to the medical records of the deceased. (Brazil, 2001).

According to surveys, physicians report two main difficulties in filling out, 80% of the research participants stated that the fact that the instructions for filling out the fields of the DC form are not clearly defined is the main difficulty, since they cause doubts at the time of completion. For 20% of the physicians, the main difficulty in filling out the death certificate lies in the lack of information about the patient's diagnosis. Regarding the guidance for filling out, 80% stated that they had received some type of guidance, the other 20% declared that they had not received any instruction. Therefore, a very high number of doctors do not receive any help during medical training, since this is a topic that must be addressed in the academic environment. (Mendonça; Drumond; Cardoso, 2010)

Increasingly, health care institutions have included Hospital Committees as an important management instrument, with the function of reviewing and evaluating internal

actions and procedures, helping in the effectiveness of health indicators. Thus, there are Hospital Death Review Committees that aim to analyze the causes of death of their hospitalized patients, as well as the procedures and professional conducts carried out during their hospitalization. (Ferreira et al., 2016)

What is intended is that the work of the Death Review Committees gathers information and critical analyses that effectively contribute to the patient care process, enabling the sharing and immediate access to data, greater efficiency in clinical and administrative processes, and the optimization of physical indicators and epidemiological statistics of the population served. It is worth noting that the medical record has great centrality in the midst of this discussion, as it consists of the instrument that aggregates essential information and reflects the quality of medical care provided by the multiprofessional health team to the hospitalized patient. The quality of the information in the medical record, together with the correct completion of the DC, are indicators of good care provided in health services and need to be monitored by the institution's medical audit service. Thus, a periodic evaluation of the quality and reliability of the records stored in the DC is essential, since these data are used on a large scale for the development of public policies. (Ferreira et al., 2016)

According to a study carried out at the Santa Casa Hospital in Belo Horizonte (SCBH) in 2014, in which the medical records of patients aged at least one year old, who died were included in the study, with regard to the underlying cause of death, when the diagnoses reported in the medical record were analyzed, it was found that such information was sufficient for the auditor to identify the underlying cause of death in the absolute majority of cases. Another author who analyzed 39,872 deaths demonstrated that the main diagnosis mentioned in the patient's medical record was reported in 83% of the death certificates, either as the underlying cause of death (59%) or as a contributing cause (24%). In another recent study carried out in Belo Horizonte, it is highlighted that, considering deaths that occurred in hospitals, 28.7% of them had ill-defined causes, classified as garbage code for the purposes of epidemiological studies. This code, which was initially designed to include causes that should not be considered as the underlying cause because they are of little use in public health, has expanded to include ill-defined causes and incomplete diagnoses. (Issa Neto; et al., 2020)

From the results found in the studies, it can be inferred that physicians are insufficiently prepared and that they are not aware of the rules for filling out the rules and concepts of causes of death. This is reflected in difficulty in providing appropriate information and in the inappropriate use of vague expressions such as cardiac arrest and

multi-organ failure. It is also known that when the filling is performed by the physician on duty, he often does not know the patient's case and does not have enough time for a thorough analysis of the medical record, as was done by the medical auditor. (Issa Neto; et al., 2020)

The correct completion of the death certificate reflects on the elaboration of health strategies, whether in prevention or promotion. This document shows the reality of health in Brazil, thus being an important instrument for epidemiological purposes, when filled out correctly. Thus, the physician has ethical and legal responsibility for filling out and signing the DC, as well as for the information recorded in all fields of the document. Therefore, you should review the document before signing it.[1] In view of the above, we will analyze the declarations that present an inadequate filling, seeking to identify the most common types of errors in filling in the causes of death in a General Hospital in Vale do Itajaí, in addition to clarifying the importance of correct filling.

METHODS

The present study presents a quantitative descriptive approach seeking to understand the errors and difficulties encountered by physicians in filling out death certificates at the Hospital. For this, data extracted from the hospital's Death Commission from January to December 2022 were used, where the death certificates of the patients were analyzed, following a script for the analysis of these certificates. The type of quantitative research is associated with the use of statistical techniques that help in the analysis of relationships between variables. (Sordi, 2013)

The sample consists of 507 Death Certificates, filled out from January to December 2022 at a General Hospital in Vale do Itajaí. All death certificates filled out during the period were included, and certificates of deaths occurring at home were excluded. The study aimed to evaluate, essentially, the completion of death certificates, considering that the information recorded in the documents is faithful to the instructions given by the Ministry of Health.

After the analysis of the death certificates, the data were organized in Excel spreadsheets and analyzed through graphs according to the variants necessary for the study, which are the reasons for errors found in the certificates.

ETHICAL ASPECTS

It is noteworthy that the project was initiated only after the acceptance of the Research Ethics Committee of a local university, under opinion number 6.092.447, and the request for exemption from the ICF was approved, complying with all ethical precepts.

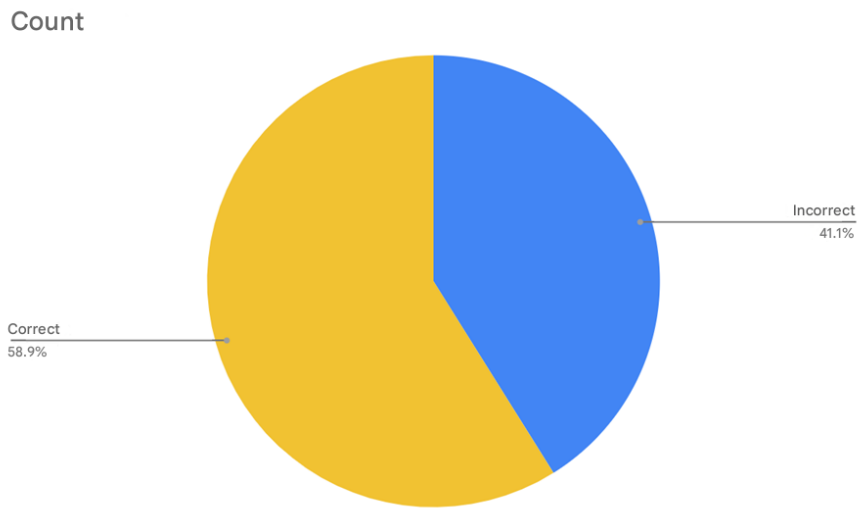
RESULTS

The statements analyzed in this study were based on the Manual for Filling Out Death Certificates of the Ministry of Health, following all recommendations. In total, 507 declarations were analyzed from January to December 2022, which were completed by 87 different doctors, from all sectors of the hospital.

The types of errors were divided into: 1) Correct; 2) Wrong order; 4) Lack of Nexus; 8) Syndromic Diagnosis; 16) Multiple diagnoses; 32) Incomplete Filling. More than one type of error may be added to the same declaration.

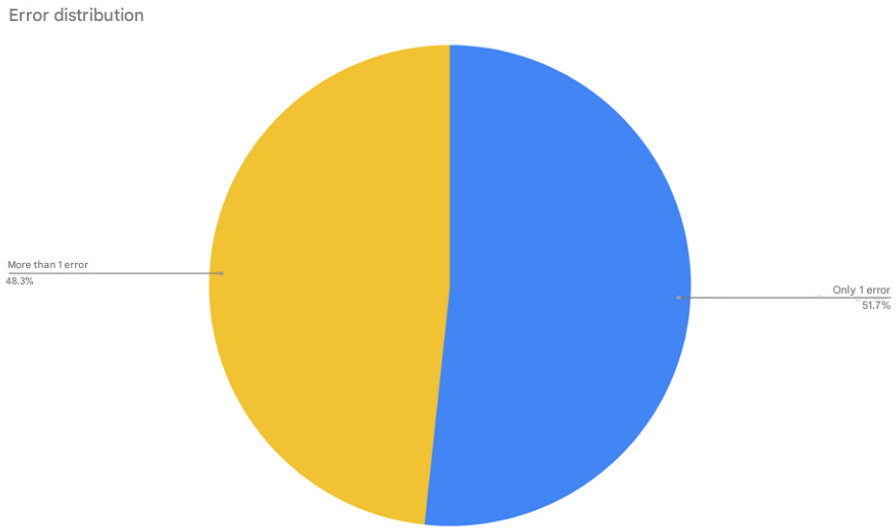
Among the 507 declarations analyzed, 299 (58.9%) were filled out correctly. Among the statements that presented some type of error, 51.7% of them had only 1 type of error and 48.3% had more than 1 concomitant error.

Figure 1. Division of correct and incorrect statements.



Source: Survey data, 2023

Figure 2. Statements with only 1 error or more than 1 error.



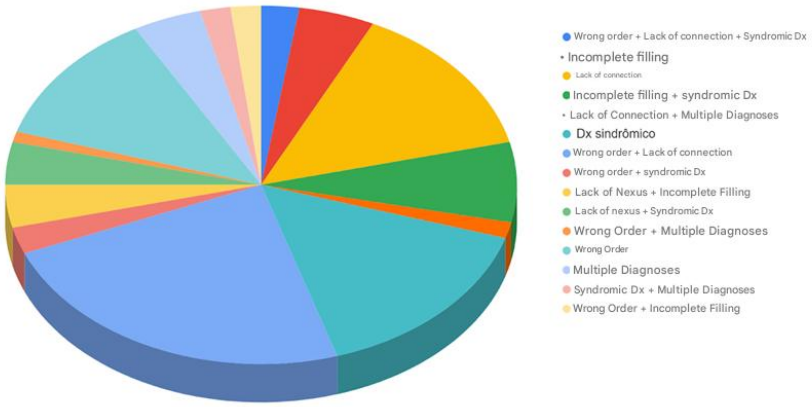
Source: Survey data, 2023

Of all the declarations analyzed, 48.3% appeared with more than 1 error in their filling.

The most common reason for the error was lack of nexus and wrong order, appearing in 49 (9.7%) statements. In second place, there are 32 (6.3%) statements that presented syndromic diagnosis as the underlying cause of death, for example, multiple organ dysfunction and/or cardiac arrest. In this study, 10 (2%) certificates were found to be filled out with Multiple Organ Dysfunction and 23 (4.5%) were filled out with Sudden Death of Unknown Cause.

The following are the types of errors in order: Lack of nexus (13.9%); Wrong order (12%); Incomplete completion and syndromic diagnosis (7.2%); Incomplete completion (4.8%); Multiple diagnoses (4.3%); Lack of nexus and syndromic diagnosis (3.8%); Wrong order, lack of nexus and syndromic diagnosis (2.4%); wrong order and syndromic diagnosis (2.4%); Wrong order and incomplete completion (1.9%).

Figure 3. Breakdown of error types, excluding correct statements.



Source: Survey data, 2023

Recording the cause of death represents a vital system whose function is to provide critical information needed to guide public health programs. That is why they must follow a worldwide standard of rules when filling out. (When evaluating the death certificates, more than 41% of the documents were found to have at least one error in filling in the field of the underlying cause of death.

Of all the Death Certificates analyzed in 2022, the most cited underlying cause of death was Sepsis, appearing 98 (19.4%) times, followed by Respiratory Failure, which was cited 90 (17.8%) times.

Of the total gaps to be filled (3,042) in the 507 statements analyzed, 1,212 spaces were empty. This value corresponds to 39.8% of "blank" space in all declarations for the year 2022.

DISCUSSION

According to the Ministry of Health (MS), the Death Certificate is the base document of the Ministry of Health's Mortality Information System, therefore, in addition to its legal function, death data are used to know the health situation of the population and generate actions aimed at its improvement. To do so, they must be reliable and reflect reality. Mortality statistics are produced based on the DC issued by the physician. (BRAZIL, 2009).

In addition to certifying death, the death certificate is used to know the real health situation of the population and generate attitudes and planned actions aimed at improving the sector. Therefore, it must be reliable and express the reality of the population's health, which is measured based on the death certificate issued by the physician, since the physician has the ethical and legal responsibility for filling out and signing the death certificate, as well as for the information recorded in all fields of this document. (Brazil,

2009). Failures in filling out the underlying cause occur mainly due to a high percentage of ill-defined causes or the use of vague terms, mistakes in filling out the death certificate, and the high incompleteness of the variables, which ultimately limit the use of death certificates for national statistics.

Regarding the certificates analyzed in the present study, 41% presented some divergence in relation to the instruction given in the Ministry of Health's death certificate manual, so it is necessary to take measures to change this reality.

A mistake often found in the statements is the use of vague terms as the underlying cause of death, such as cardiorespiratory arrest and multiple organ failure and/or dysfunction, found in more than 7% of the statements. These, in reality, are symptoms or conditions of death, and not causes of death, so their use is irrelevant to public planning policies.

A piece of data of great relevance to public health is the patient's age, which was not described correctly or illegible in some statements. This data is of great importance in studies that aim to identify a predominance of deaths in a given age group, as well as for mortality studies.

The number of death certificates with "blank" fields (incomplete filling) in the present study was 39.8%. Excluding Block I, referring to the notary's data, all other Blocks are the ethical and legal responsibility of the physician, with regard to their completion and veracity.

The Mortality Information System, despite being the main source of data on mortality in Brazil, faces obstacles to improving the quality of its data, mainly due to the completion of the death certificate. However, it is important to emphasize that the medical profession is solely responsible for such losses of this and epidemiological data. (Brazil, 2001).

Through the study, it was possible to identify that the most common type of error was lack of nexus and wrong order, appearing in 49 (9.7%) statements.

According to research carried out with doctors, they say that the greatest difficulty for correct completion is the lack of clarity of the instructions contained in the document itself. Therefore, the lack of continuing medical education projects, as well as better preparation by medical schools, can easily explain part of these errors. And, in fact, most clinicians say that the practice of lectures related to training in filling out the document can lead them to modify the cause of death in various circumstances. (Silva; et al., 2013)

According to a study conducted by Silva et al, the university professors who were analyzed do not have sufficient knowledge about death certificates, a result different from what would be expected for those who deal directly with medical education. This is a worrying fact, as it reveals an evident deficit in medical training, showing that the lack of

continuing medical education projects, as well as the lack of preparation of medical schools, explain part of these errors and difficulties. The conclusion of this study is similar to that found in our research: the importance of continuing education about the completion of medical documents, especially acquired in undergraduate studies, which should be permanently updated and improved in order to avoid failures and improve the quality of the information generated based on these documents. Therefore, it is possible to predict and warn, especially in the context of medical training, how common it is for doctors to come across a death certificate for the first time when they find themselves in the real obligation to fill it out. (Silva; et al., 2016)

Another exploratory study on problems in filling out the death certificate carried out in Minas Gerais showed that the main difficulties encountered by physicians were: lack of knowledge about the importance of correctly filling out the fields of the form, little use of the technical instruction manuals provided by the Ministry of Health, lack of knowledge about the importance of detailing and the adequacy of the chain of pathological events in the field of possible causes of death, which was a cause that was widely found in this study, such as lack of nexus and wrong order in the diagnoses. (Mendonça; Drumond; Cardoso, 2010)

CONCLUSION

The study points out that the prevalence of inadequately filled out declarations is quite expressive, totaling 41.1% of the total, showing that the most common type of error was lack of nexus and wrong order, appearing in 49 (9.7%) declarations. It also showed that of the total gaps to be filled (3,042) in the 507 statements analyzed, 1,212 spaces were empty, this value corresponds to 39.8% of "blank" space.

For future studies, it is recommended to evaluate the way this topic is taught in colleges, standardize a way where data are easier to access and analyze and, finally, seek continuing education that is accessible to doctors.

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