

## Do not resuscitate orders: practice vs. medical record notes

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### Abstract

**Objective:** To evaluate the accuracy of pediatric patients' death records of a tertiary care center, comparing these records with data from a previous study.

**Methods:** Death records entered on the medical charts of non-resuscitated patients between 1999 and 2001 were compared with the medical procedure during cardiac arrest, which was described based on the Utstein-style guidelines. Our results were compared (using the chi-square test for equality of distributions) with the results of a previous study, which revealed a significant discrepancy between the medical procedure and the death record entered on the medical chart.

**Results:** The data analysis revealed agreement between the medical procedure and the medical record notes in 86.5% of the cases. The agreement rate in the previous study was only 27.5%.

**Conclusions:** There was a significant reduction of discrepancy between the medical procedure during a cardiac arrest and the death record entered on the medical chart.

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### Introduction

The term cardiopulmonary resuscitation (CPR) is used to describe several procedures aiming at preventing the death of a patient with severe impairment of the vital functions.<sup>1</sup> CPR is usually administered in situations involving quick functional damage, but it does not mean that patients with previously impaired health status do not receive CPR. In such situations, the prognosis is uncertain,<sup>1,2</sup> and the medical team has to face a moral

and ethical dilemma in terms of making the best decision for the patient and his/her family.

Within such a context, researchers have been increasingly concerned about accurately establishing in which situations the use of CPR is recommended. In 1976, the first guideline on the do not resuscitate order was published in the international medical literature.<sup>3</sup> Intense debates have been held since then, and there has been

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The present study was carried out at Faculdade de Medicina, Universidade de São Paulo (USP), São Paulo, SP, Brazil.

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substantial progress in terms of reducing the trend of universal application of CPR for the dying patients.<sup>3</sup>

The do not resuscitate order for terminal patients is a morally and ethically supported procedure; however, there are still some obstacles to be overcome. In Brazil, this procedure has not been institutionalized and its legal acceptance is not unanimous.<sup>4</sup> In face of such a situation, physicians are cautious regarding not administering resuscitation procedures to terminal patients because they are afraid that legal punishments could be imposed. Another aspect that contributes to make the issue even more complex is the fact that there are few national data available about the implementation of formal do not resuscitate orders and CPR restrictions.

Torreão et al.<sup>4</sup> assessed an indirect indicator that could help to understand the difficulty of the medical team in dealing with death. Based on the Utstein-style guidelines, the cardiac arrest cases that occurred at a tertiary pediatric hospital were analyzed during 1 year. The authors found 176 cardiac arrests. Among these cases, 47 individuals were not resuscitated. Of these cases, the cardiac arrests analyzed by the investigators were compared with the data entered on the medical charts by the physicians who witnessed the patients' death; in 11 cases (27.5%), the description entered on the medical chart was "patient was declared dead," and in the other 29 (72.5%) cases the description was "failure of resuscitation procedures." The authors concluded that the discrepancy found in their study could be caused by the physicians' fear of legal consequences of such medical conduct. This study was published in the year 2000 on *Jornal de Pediatria*; however, its results were disclosed in the hospital during 1999. Based on the results, the Bioethics Committee of the hospital held several meetings with the purpose of providing physicians with some guidelines on how to make the decision of recommending or not resuscitation procedures and advising them to inform this decision in a correct and honest manner on medical charts.

Therefore, the objective of the present study is to conduct a retrospective evaluation of the accuracy of the information on the patients' death entered on the medical charts of a tertiary pediatric hospital and to assess the change in the medical record notes after the intervention by the Bioethics Committee in 1999.

## Methods

### Setting

This study was carried out at the tertiary pediatric teaching hospital Instituto da Criança, Hospital de Clínicas, School of Medicine, Universidade de São Paulo, São Paulo, Brazil.

## Study design

After being approved by the Bioethics Committee of the institution, an investigator analyzed the medical charts of those patients who had cardiac arrest and did not receive CPR from October 31, 1999 to September 30, 2001. These cases were retrieved based on the study by Perondi et al.,<sup>6</sup> a prospective, randomized, double-blind trial conducted at the same hospital. This study analyzed the data from all patients who had cardiac arrest, including those who received or not resuscitation procedures. Cardiac arrest cases were reported using the Utstein-style guidelines,<sup>5</sup> according to which CPR procedures are collected in a prospective and systematic manner and the use of CPR is defined based on the administration of thoracic compression.

Besides the death record form, we also analyzed the last report from the nursing team, the last analysis of the patient's medical status and the last medical prescription. The data entered on the medical charts were compared with the death record form obtained from the study by Perondi et al.<sup>6</sup> Our results were compared with the results of the study by Torreão et al.<sup>4</sup> (using the chi-square test for equality of distributions), which had revealed a significant discrepancy between the medical procedure and the death record entered on the medical charts.

## Results

There were 185 cardiac arrests. Of these, 118 (63.8%) received CPR procedures and 67 (36.2%) did not receive CPR. The population analyzed in the present study includes these 67 children who were not resuscitated. The coherence analysis was carried out in these 67 medical charts; however, in 15 of them there was lack of information regarding cardiac arrests or CPR procedures due to the complete or partial absence of the medical chart from the medical filing service.

There was a prevalence of female patients, which accounted for 55% of the cases. The median age was 4 years and 3 months, and the mean age was 6 years and 11 months. The length of hospital stay ranged from 0 to 45 days. In 85% of the deaths, one of the members of the medical team that was responsible for the patient was present at the death moment; 70% of the patients had their cardiac functions monitored, 60% were receiving mechanical ventilation, and 51% were using vasoactive drugs.

With regard to the immediate cause of death, 40% of the patients had septic shock, 34.5% had respiratory failure, and 4.5% had cardiogenic shock. The most common underlying disease was cancer, with 43% of the patients having this disease, followed by liver disease in 21%, and heart and neurologic disease in 7.5%. There was no

underlying disease in 4.5% of the patients. Sixty-three percent of the patients died at the ICU, 16.5% at the emergency room and 15% at a hospital ward.

Data about the death of those nonresuscitated patients were entered on 52 medical charts. In 45 (86.5%) of them, the information included was "patient was declared dead," and in seven (13.5%) cases there were descriptions that reported failed attempts of resuscitation. Therefore, the analysis of data revealed agreement between the medical practice and the information entered on the medical chart for 86.5% of the cases, in comparison with a rate of only 27.5% in the previous study ( $p < 0.0000001$ ).

## Discussion

The present study demonstrated that there was a significant reduction in the discrepancy between the medical procedure and the death record entered on the medical chart. Such finding suggests that there was a change in the understanding of how medical interventions may be performed regarding terminal patients.

The profile of the patients seen at the hospital did not change, and there were no significant differences regarding their demographic and epidemiologic characteristics in comparison with the study by Torreão et al.<sup>4</sup> Among the nonresuscitated patients, only 4.5% did not have an underlying disease; therefore, most of the patients who were in critical health conditions and did not receive CPR had an underlying disease, and the majority of them had cancer (43%). These patients were severely ill, and approximately 63% of them died at the ICU and 60% were breathing with the help of mechanical ventilation. The percentage of patients who did not receive CPR in the present study (36.2%) is similar to the percentages found in other health care centers in Brazil, the Latin America and the USA.<sup>7-9</sup>

The do not resuscitate order is only one of the limitation of life support (LLS) measures that can be taken regarding terminal patients; however, it is the most common measure at all health care centers around the world.<sup>7,9</sup> Within the pediatric context, this procedure has also become more common, mainly at palliative care centers.<sup>10</sup> Some authors have suggested that the term "do not resuscitate order" should be changed to "allow natural death," therefore it would not be misunderstood as an omission.<sup>10</sup>

During the last few decades, there have been countless technological advances in the health area, which enabled the cure of many patients who would not have survived without these new technologies. At the same time, it is necessary to consider the appropriate use of such technologies when a more well-balanced relationship between the patient, his/her family and the physician

becomes extremely important. The traditional medical ethics, based on the Hippocratic model, is strongly characterized by a paternalist aspect. Up to the first half of the 20th century, any medical procedure was assessed taking into consideration only the morality of the person responsible for the action, regardless of the patients' values and beliefs. Only after the 1960s, the professional codes of ethics started to consider the patient as an autonomous agent.<sup>11</sup>

Based on the results of the present study, we believe that these concepts are widely spread among physicians. The institutional support received by the health professionals from the teaching hospital where this study was carried out made physicians feel more comfortable to report their therapeutic practice in an accurate manner during these end of life situations. The result of the present study enabled us to identify a positive change that is beneficial for the patient. Even without specific laws in Brazil that are able to regulate the medical practice at the end of life, the decision of not causing needless suffering to the patient is sovereign. Nevertheless, we should not feel satisfied by such specific empirical results. Further regulations are needed so that such beneficial practice can be more widely spread and overcome the inappropriate practices.

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