

## Research

# The preparedness of emergency care providers to deal with death, dying and bereavement in the pre-hospital setting in Dubai

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## Abstract

### Introduction

This study sought to investigate how prepared emergency care providers are to deal with death, dying and bereavement in the pre-hospital setting in Dubai, and to make recommendations related to such events.

### Methods

A quantitative descriptive prospective design was utilised. Data was collected using an online self-report questionnaire sent to all operational emergency care providers in the Dubai Corporation of Ambulance Services. The data was analysed using the IBM Statistical Package for Social Sciences version 25.0.

### Results

Nearly 65% of participants (n=316) reported that they had not received any formal education or training on death, dying and bereavement. Those that did, reported that the training was conducted mainly by nursing (25.9%; n=124) and paramedic (13.6%; n=65) instructors. One-quarter of participants (25.4%; n=126) reported experiencing intrusive symptoms such as sleep loss, nightmares and missing work as a result of a work-related death or dying incident, but only 4.1% (n=20) had received professional counselling.

### Conclusion

This study found that emergency care providers are underprepared to deal with death, dying and bereavement. A comprehensive death education program encompassing the unique challenges that emergency and pre-hospital setting presents should be implemented to reduce emotional anxiety and help emergency care providers cope better with death, and decrease abnormal grief reactions of the bereft. Abnormal grief reactions can include restlessness, searching for the lost person and disrupted autonomic nervous system functions.

Keywords:

paramedics; death; prehospital emergency care

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## Introduction

Pre-hospital emergency care providers are exposed to incidents that can include motor vehicle accidents, murders, suicides, and child and infant deaths as part of their day-to-day work. Studies within the context of emergency medical care have focussed primarily on disaster and mass casualty situations and the psychological trauma and stress these cause (1-4). However, little attention exists related to the day-to-day encounters, particularly that of confronting death and dying, and the ensuing trauma experienced from these events (5-7).

The term 'dying' is used often when speaking about terminal illness, especially cancer. However, cardiovascular disease is the leading cause of deaths, followed by cerebrovascular disease, respiratory disease and cancer (8). Ischaemic heart disease was ranked as the leading cause of global mortality (9), accounting for 1.4 million deaths in the developed world and 5.7 million deaths in the developing regions (10). For health professionals working in the emergency department, deaths emanating from these conditions are often unexpected and therefore emergency medical staff, and the patient's family, are unprepared (11-14,15).

Regular exposure to death and trauma has been found to cause death anxiety in emergency nurses. Brady referred to death anxiety as a debilitating psychopathology that must be acknowledged in order to ensure the implementation of strategies to protect staff and improve care (16).

The emergency department is a unique environment in which the causes of unexpected deaths may vary substantially. It is also where medical staff are most likely to encounter the unexpected death of a child, which has been described as a 'critical incident stressor' (17).

Emergency physicians have to stabilise a patient's condition, provide analgesia and relieve discomfort, initiate or withhold resuscitation for patients suffering cardiac arrest or terminal illness, while being sensitive to the psychological needs of the family (15). The skills required to cope with the sudden death of a patient demand empathy, sensitivity and sound communication skills but are rarely dealt with in most medical institutions; nor have they been discussed in the literature (15).

The death of a patient in the emergency department can have a profound impact on the emergency physician, who is often ill prepared for the personal consequences of such a death (18). Many physicians are often reluctant to admit such psychological discomfort (15) and face the risks of burnout and compassion fatigue (19). The same can be said for emergency care providers within the pre-hospital setting, which is largely an uncontrolled environment. Thus, this study sought to investigate the preparedness of emergency care providers to deal with death, dying and bereavement in the pre-hospital setting and to make recommendations related to same.

## Background

At the beginning of this century, a majority of patients with cardiac arrest were transported to hospital so that physicians could perform the declaration and notification of death (20). However, currently, a large number of patients are declared dead by emergency care providers in the pre-hospital setting (21).

Pre-hospital emergency care providers also represent a key element in the organ donation process (22). A cross-sectional study conducted to assess the knowledge and personal views of healthcare professionals with regard to organ transplants, found that they had a lack of knowledge, which negatively influenced people's attitudes toward organ donation (22). The process of organ procurement is highly stressful and personal feelings of distress and negative attitudes to the issue of organ donation may be transmitted to others and undermine organ procurement efforts (23).

The Association for Death Education and Counselling identified the following six categories which are considered fundamental to thanatology: namely, dying; end-of-life decision making; loss, grief and mourning; assessment and intervention; traumatic death; and death education (19). A useful definition of dying is "the physical, behavioural, cognitive and emotional experience of living with life threatening/life limiting illness" (19). In the context of this study, dying refers to the time in a person's life when that person develops a fatal condition, when it is recognised by a physician, when knowledge of that condition is communicated to the person involved, when the person realises and accepts the facts of his or her condition, or when nothing more may be done to reverse the condition or preserve life (24).

Corr and many other thanatologists emphasise that the dying person is still living and therefore continues to experience a broad range of needs, desires, plans, projects, joys, sufferings, hopes and anxieties (24,25,19). Death may be simply defined as the end of life, while dying is the process of approaching death (26).

## Attitudes toward dying

The inevitability of death creates some degree of anxiety in individuals at some stage in their lives (27). This anxiety may be borne out of the fear of pain and suffering, the loss of self, the welfare of surviving family members, annihilation or simply the unknown (27-29). Several studies were conducted in an effort to measure various forms of death anxiety and to compare variables that do or do not influence such anxiety. The findings from these studies have highlighted the complexity of the subject with researchers acknowledging that it is not yet fully understood (24,25).

In addition to death anxiety, individuals experience death denial, death avoidance and death acceptance. Nevertheless, whichever way we perceive death, our attitude towards death and dying may have an impact on both our wellbeing and our definition of personal meaning and may also determine how we

live our lives (28,30,31). Death denial and avoidance are futile as various events in life, such as a terminal illness, an unexpected death of a loved one, or a disaster will force us to confront the stark reality of mortality (31). Despite our efforts to suppress and repress death awareness, anxiety about one's demise may still manifest itself through worries, stresses, depression and conflicts (32).

### **Emergency care providers and bereavement**

Pre-hospital emergency care providers are in a unique position to influence the grieving process (33). The grief that occurs after a suicide, murder or unexpected violent or accidental death as commonly experienced by pre-hospital emergency care providers may differ from normal grief (34). Terms such as catastrophic grief, traumatic grief and chronic sorrow have been used to describe a natural grief reaction that is not final and continues to be present in the life of the griever (34-37).

The evidence suggests that the way in which death notifications are conducted may seriously affect the way in which loved ones will cope and grieve (38). Although much of the research in this context has been conducted in emergency departments, it does, nevertheless, also apply to the pre-hospital setting and should, therefore, be acknowledged (39). It would appear that education, training and, ultimately, preparation for the task of notifying the family that their loved one has died and then dealing appropriately with their reactions is severely lacking for emergency physicians, nurses and, in particular, pre-hospital emergency care providers (4,38,40-42).

## **Methods**

A quantitative research approach using a descriptive cross-sectional survey was used to conduct the study. The survey was undertaken in The United Arab Emirates (UAE). At the time of the study, the staff comprised 823 emergency care providers who were mainly expatriates, with a unique blend of various professional qualifications, nationalities and cultures. The ambulance services in the UAE are run by two major organisations: the Dubai Corporation of Ambulance Services (DCAS) and the National Ambulance Company. The DCAS was the most accessible environment in which to conduct the study. The target population for the study was all the emergency care providers actively involved in patient care. Non-probability sampling was employed, with the survey being sent out to emergency care providers working in the field. The survey was sent to all 823 emergency care providers using the survey software package Grapevine Surveys for distribution.

### **Ethics**

Ethical clearance was obtained from the Institutional Research Ethics Committee (IREC) of the Durban University of Technology. The study was allocated ethic clearance number IREC 134/17. Letters of information and consent were sent via email with a link to the survey. Participation in the survey was voluntary.

### **Inclusion criteria**

All the participants were emergency care providers who had come into direct contact with patients as part of their duties. These emergency care providers had a minimum of one year's continuous, full-time experience with patient care and dealt with experiences of death and dying during their employment.

The questionnaire was based on surveys that have already been published and have produced reliable and valid data in similar studies. Templer's Death Anxiety Scale is a popular measure of death attitudes (43,44). This scale, together with Bugen's Coping with Death Scale, has also led researchers to develop other tools, such as Wong's Death Attitude Profile – Revised, and Robbin's Death Competence Scale (19,45). The questionnaire also included demographic questions as well as certain questions related specifically to the research topic. A pilot test of the questionnaire was undertaken with a sample of similar participants before it was implemented in the current study.

### **Data analysis**

The data from consenting participants (n=496) was analysed using the IBM Statistical Package for Social Sciences (SPSS) version 25.0. The expertise of a professional statistician was secured to assist with the data analysis. Descriptive statistics are presented in the form of graphs, cross tabulations and other figures for the quantitative data that was collected. Inferential statistic techniques such as correlations and chi-square test values were used and interpreted using the p-values.

## **Results**

### **Qualifications**

A majority (55%; n=265) of the participants held a nursing qualification as their main qualification, with a small portion (6.6%; n=32) holding an emergency medical services (EMS) qualification. Approximately 40% (n=185) reported having both a nursing and an EMS qualification. Two-thirds (65%; n=307) reported holding a Basic Emergency Medical Technician Certificate, with smaller numbers for each of the other options (p<0.05). Only 11.9% (n=56) of the participants reported having a Bachelor's degree in EMS. All the participants (n=496) listed having additional certifications such as basic life support, advanced cardiac life support, paediatric advanced life support, basic and international trauma life support, and other certificate courses ranging in duration from 1 to 3 days.

### **Death, dying and bereavement in the workplace**

Eighty percent of the participants (n=396) reported working with the emergency response ambulances posted across Dubai; 2.1% (n=10) worked with helicopter emergency medical services; and 0.6% (n=3) with the doctor response unit. Almost one-third (74.1%; n=364) reported being able to recall their first emergency response that involved a dead or dying patient. Of these, only 11.9% (n=59) reported not feeling adequately prepared to deal with dead or dying patients.

Almost 60% of the participants (58.7%; n=288) reported being allowed to declare death in the field and 41.3% (n=203) reported that they were not allowed to do so. Of these, 44.8% (n=220) reported feeling comfortable making death notifications, while 40.4% (n=198) were not. Only 15% (n=73) expressed uncertainty in this regard.

Almost 83% (n=433) stated that they had a protocol, guide or procedure to follow when dealing with death in the field, while 12% (n=58) reported not having one. Almost 70% believed that counselling services should be provided by their employer to help them following an experience with death. Cross-sectional studies have shown that approximately one-quarter to one-third of emergency care providers have severe or high trauma symptoms, consistent with a diagnosis of post-traumatic stress disorder (24,37,38). About 25% of the participants (25.4%; n=126); reported experiencing intrusive symptoms such as losing sleep, having nightmares, missing work or experiencing some significant effect in response to a work-related death or dying incident. About 20% (n=25) of the affected participants stated that they had experienced these effects 6 months before answering the questionnaire.

### Training on death, dying and bereavement

Of those who had received training on death, dying and bereavement (35.6%; n=175), 23.1% (n=110) reported that it had formed part of a specific module in their studies, while just 6.5% (n=31) indicated that they had attended a specific course on death, dying and bereavement. More than half (56%; n=98) reported that the topic of coping with death and dying had been covered during their training (Table 1). Only 4% (n=7) reported that death notification was covered, 8% (n=14) reported that end-of-life decision making and death documentation were covered, and 12.6% (n=22) reported that the topics of loss, grief and mourning, and declaration of death as having been covered; 5% (n=24) of participants did not answer this question.

Table 1. Pre-hospital workers who had received training on death, dying and bereavement

Topic	Frequency	Percent
Coping with death / dying	98	20.8
Assessment / intervention	31	6.6
Loss, grief and mourning	22	4.7
Declaration of death	22	4.7
End-of-life decision making	14	3.0
Death documentation	14	3.0
Death notification	7	1.5
Critical incident debriefing	6	1.3
Not applicable	258	54.7
Total	472	100.0

More than 75% (n=377) of the participants reported not having participated in a simulation involving a conscious terminally ill

or dying patient; 23.5% (n=116) reported participating in same. A majority (86.6%; n=427) reported not having participated in a simulated death notification scenario, with just 13.4% (n=66) reporting that they had done so. Less than 1% (n=3) of participants did not answer this question.

More than half of the participants (52.1%; n=257) reported that they did not undertake any other graded assessments on death and dying during their studies, while 13.6% (n=67) stated that they had been required to do so.

More than half of the participants (55.4%; n=275) reported that they would attend a course on death, dying and bereavement, if it was available; 33.5% (n=165) stated that they would not attend; and 10.8% (n=53) were unsure about whether they would attend a course on death, dying and bereavement, reflecting discomfort with this topic.

## Discussion

The experience of dying is not exclusive to a patient with a life threatening or limiting condition. It impacts on people close to the person such as family, friends, colleagues, and people within the person's community and social circles, including healthcare providers and carers. This is usually difficult and stressful terrain for most people and the array of reactions, and efforts to offer support or help may be shrouded in uncertainty, thus resulting in unhelpful communication, inappropriate or insensitive gestures and a mixture of emotions. These reactions are unpredictable and are influenced by various factors that may be overwhelming for the person who is coping with the realisation of their mortality as well as for those around them. The family, helpers and healthcare professionals all share in the experience of dying. This experience encompasses the psychological, physiological, social and spiritual dimensions at the interface of death and dying.

Although Doka (29) recommended preparation and training to deal with this experience, the reality is that this often does not take place. It is crucial that healthcare professionals and emergency care providers particularly be capacitated to be sensitive to needs of families who have an experience of death or dying and can offer support to prevent or limit their exhaustion (25).

Self-care and stress management are essential to prevent or minimise some of the harmful and negative aspects that may be experienced (46). These include stress, anxiety, compassion fatigue and burnout (35).

Although the death notification may cause a great deal of anxiety for the emergency care provider, for the recipient of the news it will "probably be one of the defining moments of their lives" (47). Emergency care providers do not know whether the death notification will elicit a hysterical or violent reaction, how much

emotion family members may display, or how much they should say and whether they will be able to answer questions about autopsies, organ donation, funeral arrangements and the myriad of issues that may follow their notification (38). However, many of these fears may be overcome through education and the use of tools or protocols that have been developed (38). Specific knowledge, skills and protocols may be helpful in assisting the emergency care provider to deal with the bereft (16,33,38,41,47-48).

Emergency care providers who have been trained in how to manage family-witnessed resuscitation and death notification may decrease trauma and enhance the ability of family members to cope with the loss of a loved one (33,49-50). Less than one-fifth of students in the health professions are offered a full course on death, while the rest are typically provided with death-related content across a few lectures (51). Although the need to include instruction on death and dying in medical education curricula has been well established (52,53), healthcare education has been slow to design and implement such courses (4,33). This means that healthcare graduates are entering their professions inadequately prepared to care for dying people and their families or to counsel bereaved or suicidal people (51).

Contemporary studies of death, dying and bereavement are remarkable in both scope and range and, yet, this knowledge has not had a significant impact on the curricula of healthcare professions (51) with the majority of courses and programs focussing on the transmission of knowledge with little attention to helping individuals to address their own anxieties and develop empathy. The methods used to teach death education across healthcare curricula have been found to be either absent or ineffective (54).

Commonly prescribed textbooks used for emergency care training have fewer than two pages dedicated to the topic of death and dying and, typically, cover the stages of grief only (51,55,56). However, knowing the stages of grief may not be effective for emergency care providers as they do not witness the later stages of grief such as acceptance (4). Formal education should be implemented to reduce the stress that emergency care providers may experience when communicating death notifications. This will also benefit the bereaved (42).

It is essential that death education courses for emergency care providers differ from those offered to other healthcare professionals while they should “encompass the diversity of the different types of death, yet focus specifically on the differences between hospital and pre-hospital death” (4). However, specialised training such as critical incident stress debriefing is designed to mitigate the effects of traumatic stress on emergency care providers (57-58).

Emergency care providers are accustomed to learning practical skills, utilising mnemonics and using simulations in their education. Mnemonic based strategies such as

GRIEVING, SEGUE and SPIKES provide a planned structure for communication and interpersonal relations in the context of death notification and terminal illness (50,59-60).

Simulation experiences have started to replace traditional models for teaching the skills required to effectively and empathically deliver bad news in medical education (54). An inter-professional death notification simulation was developed and implemented with nurses and social workers. The results were found to be positive with participants reporting increased confidence, decreased anxiety and increased awareness of the resources required in the death notification process (61). Undergraduate nursing students in Northern Ireland were also introduced to simulation using high fidelity patient simulators in order to develop confidence and proficiency without compromising patient safety (62). The students reported that simulations were a valuable experience which highlighted gaps in their knowledge, but also improved their confidence levels for future clinical practice (62).

The goal of death education is to reduce the stress suffered by both newly bereaved persons and emergency care providers and it should, thus, result in death competence. Death competence is, however, a complex task and a multidimensional approach to death education is therefore required.

## Conclusion

This study has shown that there are several factors that may contribute to the preparedness of emergency care providers to deal with death, dying and bereavement in the pre-hospital setting. Although their exposure to work related death and dying is unavoidable, a combination of personal, educational and professional factors may contribute to their being able to deal safely, sensitively and efficiently with death, dying and bereavement. Death education, death attitude and the personal variables of the emergency care provider may be linked to preparedness. Death education is crucial to ensuring increased cognitive and emotional competence which in turn may reduce death related anxiety and aid with coping in a pre-hospital environment context. To this end a planned program that covers communication skills, the ability to deliver bad news empathically and sensitively is crucial to ensure preparedness of emergency care providers.

## Competing interests

The authors declare no competing interests. Each author of this paper has completed the ICMJE conflict of interest statement.

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