

Paramedic Preparedness for Delivering Death Notifications

Paramedic Mini CAT – Fanshawe College

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Clinical Scenario:

Paramedics are dispatched code 4 to a rural residence for a 55-year-old unresponsive female. Upon arrival, her son and husband inform that she has been complaining of nausea, back pain and feeling generally unwell since last night. Making patient contact, the paramedics recognize that the patient is in cardiac arrest and begin providing treatments according to their medical cardiac arrest directive. Three analyses pass without any defibrillation delivery and the presenting rhythm remains asystole. A patch is made to the BHP and a medical TOR is granted following the fourth analysis. Paramedics stop resuscitation measures and record the time. Immediately, the son and husband become very distraught and plead with the paramedics to continue CPR.

This scenario alludes to a common reality faced by EMS professionals when encountering patients with obvious signs of death or those unable to be resuscitated during cardiac arrest. Death notifications are difficult tasks which affect those delivering the message just as much as those who receive the information. Due to the unpredictable, and at times traumatic prehospital environment, the stress and anxiety brought on by death notification deliveries becomes exacerbated.

PICO (Population – Intervention – Comparison – Outcome) Question:

In paramedics, does additional training for delivering death notifications result in lower rates of burnout?

Search Strategy: (paramedic OR ems OR emergency medical service OR prehospital OR pre-hospital OR ambulance OR emergency medical technician OR emt) AND (death notification OR death notice OR notify)

Limits: last 5 years, peer-reviewed journals, English language

Search Outcome: MEDLINE 52 results, CINAHL 32 results

Inclusion Criteria: Studies must include data about death notifications by EMS providers; include comparisons between EMS providers of varying levels of training; be conducted in, or relevant to, a prehospital environment

Relevant Papers: 3 papers were chosen as relevant for this CAT.

Author, Date	Study design & LOE	Population	Intervention & Comparison	Results	Strengths & Weaknesses
Campos et al. (2020)	<p>Retrospective cohort study (LOE 2)</p> <p>Electronic survey invitations were delivered via email to a randomly selected cohort of 19330 individuals across U.S.A.</p> <p>This large number was based on an <i>a priori</i> sample size calculation; due to an expected low response rate, many surveys were administered to ensure an adequate sample size for a 95% confidence interval.</p>	<p>Respondents totalled 1514 nationally certified U.S. EMS professionals with the following characteristics:</p> <ul style="list-style-type: none"> • Currently practicing • Non-military • Certified at the EMT level or higher <p>Those practicing at the EMR level were excluded.</p>	<p>Intervention: No intervention.</p> <p>Comparison: Respondent data was sorted based on certification level, into advanced life support (ALS: AEMT/paramedic) and basic life support (BLS: EMT). Characteristics were compared between ALS and BLS respondents, including:</p> <ul style="list-style-type: none"> • Age, sex, minority status • Years of experience • Type of agency or service • Community size • Weekly call volume • Adult death notifications in the past 12 months • Level of comfort or preparedness in delivering death notifications • Work-related burnout • Death notification training as part of their initial EMS education • Death notification training as ongoing/continuing EMS education 	<p>Demographics: A greater proportion of ALS respondents reported delivering a death notification within the past 12 months compared to BLS respondents (77% ALS vs 33% BLS, $p < 0.001$).</p> <p>Death notification training: About half of respondents reported receiving training during their primary EMS program, with no observed difference between BLS and ALS respondents. More ALS respondents reported receiving ongoing training as part of their continuing education than BLS respondents (44% ALS vs 30% BLS, $p < 0.001$).</p> <p>Preparation/comfort in delivering death notifications: A greater number of both BLS and ALS respondents reported feeling prepared to deliver death notifications with prior training, compared to BLS and ALS respondents who did not receive training (BLS: 68% trained vs 24% untrained, $p < 0.001$) (ALS: 87% trained vs 56% untrained, $p < 0.001$).</p> <p>Work-related burnout: More ALS respondents appeared to experience work-related burnout than BLS respondents (41% ALS vs 25% BLS, $p < 0.001$). As the number of death notifications delivered within the past 12 months increased, the odds of work-related burnout also increased, for both BLS and ALS respondents. Among respondents who delivered at least 1 death notification within the past 12 months, a significant reduction in odds of burnout was associated with death notification training in their continuing education (aOR 0.71 (0.51-0.98)). Death notification training received during a primary EMS program was not associated with a significant reduction in odds of burnout (aOR 0.84 (0.62-1.16)).</p>	<p>Strengths:</p> <ul style="list-style-type: none"> (+) Good sample size and <i>a priori</i> calculations (+) Sent survey invitations to a randomly selected cohort, allowing for a multitude of demographics in the respondents, throughout all the United States (+) Attempted to reduce potential selection bias by not including the study topic in the email invitation (+) Used multivariable logistic regression modelling to adjust for confounding variables <p>Weaknesses:</p> <ul style="list-style-type: none"> (-) Data collected relied on the recall abilities of respondents for the past 12 months – introduced recall bias (-) Survey invitations sent out via email introduced voluntary response bias

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Mains & Jones (2018)	<p>Focus group qualitative study (LOE 3)</p> <p>Two focus groups consisting of six paramedics recruited through advertisements sent out via the ambulance service internal email system.</p> <p>Each focus group held two consecutive 45 min semi-structured discussions on:</p> <ul style="list-style-type: none"> • Care of family during resuscitation • Breaking bad news (BBN) 	<p>Participants totalled 12 paramedics from the NHS ambulance service. Six male and six female participants were present, 3 in each focus group. Participants varied in level of emergency ambulance experience, from 3-16 years.</p>	<p>Intervention: No intervention.</p> <p>Comparison: No comparison.</p>	<p>Key themes during discussion: In the focus groups, paramedics generally agreed upon the following ideas:</p> <ul style="list-style-type: none"> • A preference for family members remaining outside the room during resuscitation efforts • Using distractive tasks during resuscitation efforts to manage the family members • The use of 'warning shots' during resuscitation efforts to prepare the family for receiving bad news • A lack of sufficient preparedness by their initial EMS programs in managing family members during out-of-hospital cardiac arrests • Ultimately learning how to manage family members when delivering bad news by observing their more experienced colleagues 	<p>Strengths: (+) Anonymity of focus group participants</p> <p>(+) Good direct responses of participants embedded throughout.</p> <p>Weaknesses: (-) Only two focus groups of 6 individuals were assembled – not representative of entire target population.</p> <p>(-) No collective summaries/tables of responses by participants for the various topics were included (i.e., # of participants with a certain response). This made the article data appear disorganized and was difficult to analyze.</p>

Author, Date	Study design & LOE	Population	Intervention & Comparison	Results	Strengths & Weaknesses
Tataris et al. (2017)	<p>Retrospective cohort study (LOE 3)</p> <p>Written surveys were distributed to 3500 Chicago EMS providers.</p>	<p>Respondents totalled 2309 Chicago EMS providers and included:</p> <ul style="list-style-type: none"> •firefighter/EMT-Basic •firefighter/EMT-Paramedic •Single role paramedic 	<p>Intervention: No intervention.</p> <p>Comparison: Respondent data was arrayed into four categories:</p> <ul style="list-style-type: none"> • EMS provider position • Career experience with OHCAs • Career experience with TORs • Career experience with delivering death notifications <p>Across these four groupings, respondent data was compared by:</p> <ul style="list-style-type: none"> • how respondents felt towards barriers to out-of-hospital TORs • if/how often respondents encountered various barriers in death notification delivery <p>As a collective whole, respondent data also outlined where EMS providers had received prior training, if any, on delivering death notifications.</p>	<p>Barriers to out-of-hospital TOR: Scene safety, particularly the reaction of the family in response to the TOR, was the most reported safety concern by respondents (68%). Notably, as the number of OHCAs or TORs experienced in respondent's career increased, the proportion of respondents reporting feeling threatened by family members also increased. As well, single role paramedics were shown more likely to feel threatened by family members than firefighter/EMT-Bs.</p> <p>Barriers to delivery of death notifications: Across all EMS providers surveyed, the most frequently reported barriers to death notification delivery were:</p> <ul style="list-style-type: none"> • feelings of discomfort or threat from possible family reactions (52%) • inadequate training (39%) • discomfort in delivering death notifications in the field (28%) <p>Respondents with higher positions and greater numbers of experienced OHCAs, TORs, and death notification deliveries were more likely to feel uncomfortable/threatened from family response to death notifications. Conversely, the same respondents were less likely to feel uncomfortable/unprepared in delivering death notifications.</p> <p>Prior death notification training: Multiple different methods of prior training on delivering death notifications were reported by respondents:</p> <ul style="list-style-type: none"> • fellow paramedics or on-the-job training (37%) • initial EMT or paramedic courses (25%) • continuing education modules (22%) • initial workplace orientation (13%) • self-study (10%) • courses on death disclosure (4%) • no training/knowledge (36%) 	<p>Strengths: (+) Good sample size for the cohort studied</p> <p>Weaknesses: (-) Limiting the respondent pool to EMS providers in Chicago, Illinois introduced regional bias.</p> <p>(-) Data collected relied on the recall abilities of respondents over the course of their careers, of which may vary greatly in duration. This introduced recall and chronological biases.</p> <p>(-) The notably high response rate (66%) of the survey may have been a result of undue influence (see comments section).</p>

Comments:

There were limited studies directly involving paramedic training/preparedness in delivering death notifications and managing grieving family members in the prehospital environment. Of the articles in this review, only one took great care to adjust for confounding variables and regional bias. Notably, all the studies in this review were subject to recall bias.

In the Tataris et al. study, the notably high response rate (66%) of the survey raised my suspicions. After some investigation into the backgrounds of the authors, particularly one Pete Lazzara, it was revealed that Mr. Lazzara has held various positions in the Chicago Fire department from 1990 to 2019 (Danny Did Foundation, 2018). At the time of this study, he held the rank of Ambulance Commander (Danny Did Foundation, 2018). His high standing as Ambulance Commander may have caused undue influence in this study surveying Chicago EMS providers. According to the Government of Canada, undue influence in research occurs when "prospective participants are recruited by individuals in a position of authority" (Government of Canada, 2018). For instance, the Canadian government cites that ethical concerns in research can arise when "commanding officers" recruit their soldiers as participants. In the Tataris et al. study, the study's respondents—who are Chicago EMS—may have been recruited by Ambulance Commander Mr. Lazzara. Thus, undue influence may have been brought into the study due to the Chicago EMS staff feeling professional pressure to oblige their Ambulance Commander, which explains the high response rate. If this is the case, then consent to participate could not have been given voluntarily, and undue influence jeopardizes the reliability of the evidence since the participants did not answer freely (Government of Canada, 2018).

Clinical bottom line:

There were limited studies directly involving paramedic training/preparedness in delivering death notifications and managing grieving family members in the prehospital environment. Ultimately, greater unpreparedness/lack of training in delivery of death notifications was shown to increase the risk of burnout among EMS providers. The consensus among paramedics is that they received inadequate training for delivering death notifications in their initial EMS schooling. Existing data affirms that paramedics benefit greatly from ongoing education and training. However, more research is needed to determine the best methods to manage a grieving family or deliver a death notification in the prehospital environment, such that the psychological burden felt by EMS providers is minimized.

References

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