Family Witnessed Resuscitation in the Emergency Department in a Low-Income Country

Abstract

Cardiac arrest is often a sudden and traumatic event. Family witnessed resuscitation was first recommended by the American Heart Association over two decades ago, since then several global professional bodies have identified a range of potential benefits for relatives, however, it remains contentious. For nurses working in Emergency Departments (ED) in low-income countries, the evidence and experience of family witnessed resuscitation is limited.

This article critically appraises the literature relating to the perceptions of medical professionals and critically ill patients with their families about communication, family presence and their involvement during resuscitation in the ED. Three themes relating to family witnessed resuscitation in the ED were identified by a focused literature search, these were: leadership and communication, limitation of policies and guidelines and relatives' views. The recommendations from this review will be used to develop emergency and trauma nursing practice guidelines in Zambia, a low-income country in sub-Saharan Africa.

The Emergency Department (ED) is a fast-paced, complex area of nursing practice, in which nurses need to have the knowledge and skills to recognise and respond to the burden of critical illness and the high volume of patients (Mitchell et al., 2020). Cardiac arrest is a sudden, life-threatening situation, where speed of intervention is crucial, patients may arrive in the ED already in cardiorespiratory or peri-arrest while others may deteriorate during admission. Family witnessed resuscitation was identified as appropriate over 30 years ago (Doyle et al., 1987), then recommended by the American Heart Association in 2000. Since then international organisations have increasingly advocated the use of this practice (Bossaert et al., 2015. British Medical Association, 2016. Resuscitation Council (UK), 2021). However, it is a cause for concern that in many settings this has not become established practice with healthcare professionals still stating reservations (Grimes, 2020). For emergency nurses working in low-income countries (LIC), such as Zambia an additional challenge is the limited availability of evidence to support this intervention. Therefore, this article critically appraises the literature relating to the different professional perspectives regarding the family's presence during resuscitation in the ED.

Background

Pre-hospital and emergency service provision in many low- and middle-income countries (LIC / LMIC) are under-developed, with services covering huge geographical areas and dealing with high volumes of patients (Obermeyer et al., 2015). Recent infectious diseases such as Covid-19, Ebola, Cholera, and natural disasters have all confirmed the importance of functioning emergency services. Obermeyer et al (2015) point out a large proportion of deaths occur in EDs in LIC / LMIC, a finding supported by the World Health Organization [WHO] (2019), who recognised the

importance of strengthening emergency services in LIC / LMIC. They argue the need to improve outcomes, identifying emergency care as among the most cost-effective public health interventions. However, emergency nursing in sub-Saharan Africa is a new field of specialist nursing practice, with an urgent area for capacity building (Carter and Notter, 2022). In Zambia, an advanced diploma course in emergency and trauma was introduced in 2019 and a Bachelor of Science programme in 2023. In consequence, emergency nurses are now in a position to begin reviewing and developing their own evidence base.

Resuscitation is a procedure that improves oxygen delivery, optimizes tissue perfusion, and preserves the metabolic rate (Tam, et al., 2019). However, it causes a great deal of stress for physicians, nurses, patients, and families, requiring immediate sequencing of actions designed to reverse the adverse conditions and prevent death (Horowitz et al., 2021). In the ED, resuscitation attempts must be well-rehearsed scenarios with each successive intervention being planned in advance with flexibility such that when circumstances demand a different pathway the team is able to adapt and respond. During resuscitation the primary concern has to be the patient, with family members coming a close second. The concept of allowing families to be present during resuscitation efforts in the ED has been identified as one way to support the family. Family witnessed resuscitation is defined as the presence of relatives in the area of patient care where they can have contact with the patient during resuscitation (Pratiwi, 2018). Unexpected severe illness and death predispose individuals to developing complicated grief, the emergency nurse's role is first to care for the patients and then reduce or mitigate the psychological effects for the family.

Aim

To explore and appraise literature delineating the perceptions of medical professionals and families about their presence and involvement during resuscitation in the ED.

Focused Literature Search

A literature search was conducted using MEDLINE, PubMed, CINAHL, and the Cochrane Library. Inclusion criteria included articles published between 2016 and 2021, adults, and peer reviewed research articles published in English. Exclusion criteria included population of children or research not primarily related to critical care. Key search words included resuscitation, communication, decision making, families and psychological effects. The initial search identified 51 articles, of which 34 meet the inclusion criteria. Three themes relating to family witnessed resuscitation in the ED were identified: leadership and communication, limitation of policies and guidelines and relatives' views. For clarity these have been presented separately, however, in practice, they are interlinked.

Theme 1: Leadership & Communication

Leadership is a multi-dimensional, complex behaviour of certain traits that includes effective communication, efficiency, decision-making and resource management skills (Carter et al., 2021). Leadership is essential for a team to perform effectively, one team member should take up the role of the team leader at the start of the resuscitation attempt (Ford, et al., 2016). At the start of each shift in the ED, the shift leader must critically assess the department, and this includes overseeing team allocation, functions, and capability. This includes setting safe and effective team goals, identifying priorities, leading decision making and managing resources to achieve

and maintain safe delivery of services (Carter, et al., 2021). The ED setting also allows for prior allocation of roles during an emergency to maximise effective team communication and make rapid lifesaving decisions.

Effective leadership and teamwork may facilitate family involvement in resuscitation attempts, and is associated with better outcomes (Ford, et al. 2016). However, as Powers (2017) illustrates a lack of effective leadership was seen as a barrier in involving family in resuscitation, whereas effective leaders are more likely to involve family members and adhere to standards of care. Therefore, ED managers need to recognise the importance of effective leadership at all levels, readiness for implementation, training, formulation of protocols and guidelines to embed the possibility of family witnessed resuscitation (Sak-Dankosky, 2017).

The focus must remain on the provision of rapid, efficient, life-saving care with the need of overall situation awareness and good communication skills (Wang, et al., 2019). These encompass statements, requests, questioning and acknowledging responses, they need to be brief and direct, supporting rapid and efficient communication (Molyneux, 2020). Effective communication between clinicians and family members during resuscitation may improve outcomes, De Stefano et al, (2016) found that families present were able to communicate with the team, provide extra information about their loved one and act as their advocate. The Resuscitation Council (UK) (2016) argues that effective communication with family members and keeping them fully informed is an important component of high-quality health care.

Theme 2: Limited availability of Policies and Guidelines

Validation by the professional organisations on family witnessed resuscitation remains inconsistent (Kloeck, et al., 2017). This search also found a lack of consensus, with conflicting

regional guidelines (Guzzetta, 2016), and in practice, Adams (2016) found that even where there is a written policy regarding family witnessed resuscitation, 57% of staff were unaware of the policy existence.

Healthcare professionals' views of family witnessed resuscitation is variable, for example, Brasel, et al., (2016) conducted a study which explored the nurses' role and found it neither provokes interference nor hampers nurse's work. Instead it was viewed as beneficial, stress reducing and facilitates the grieving process. Healthcare workers often cite concern that family members may interfere with medical care, the experience may negatively affect them psychologically and their presence would not help the patient in any way (Bashayreh et al., 2015). Conversely, Barreto, et al., (2018) study into ED healthcare professional's views and attitudes of family presence during resuscitation reported that it was deemed controversial and a negative experience. The key barrier to the implementation of family witness resuscitation practices was the infrastructure, providing information and emotional needs to families and the lack of a policy. It is therefore a recommendation that hospitals have a specific policy whether family can or cannot be present during resuscitation. Considerations should also be applied to the ED design indicating where to place the family members during resuscitation.

Preparation of staff for dealing with family presence during resuscitation is essential in order for the team to understand each other's roles and how to manage family members presence (Calder, et al., 2017). In resource constrained settings, ideally the resuscitation teams will have practiced together, knowing, and understanding individual and team roles, enabling interventions to be undertaken quickly. In addition, the ED needs to have an adequate number of trained staff,

correct equipment, and emergency drugs, to facilitate efficient use of the limited staff and resources available (Molyneux, 2020).

Emergency Nurses work within their professional ethical code of practice, which should be supported by evidence-based recommendations and guidelines (Mentzelopoulos et al., 2018). However, in many LIC, including those in Southern Africa, there are no governing or regional professional organisations to publish evidence-based standards on resuscitation. Therefore, during a resuscitation attempt, health care professionals often differ regarding resuscitation sequences and techniques, resulting in poor team performance and poorer patient outcomes. To address this the Resuscitation Council of South Africa (RCSA) has commenced implementation of adult and paediatric Basic Life Support and Advance Life Support training. While data is sparse, the outcomes from this showed an improvement in clinical performance and patient outcome (Russell, 2020. Kloeck, et al., 2017).

Russell (2020) points out research on family witnessed resuscitation in South Africa supports the view that information from family members adds value to the resuscitation process, allows for the establishment of a good relationship and alleviates the grieving process. Challenges that hinder implementation of this practice are situation overload, shortage of staff and lack of space to accommodate family members. Emergency care in Zambia is limited with few fully functioning ED's nationally, and numerous priority areas still to be developed (Mwanza, et al, 2021).

Optimising resuscitation interventions and supporting the family should result in better quality end of life care and family comfort (Bradley, et al. 2017). Nevertheless, family witnessed resuscitation remains contentious in Zambia as for some professionals' family presence is seen as inappropriate. However, their view may be influenced by cultural and religious beliefs

(Sandroni and Nolan, 2015). Equal access to best quality care should have more standardised resuscitation practices, timely and highly quality resuscitation, and post resuscitation care. This includes the option of family presence and development of clinical expertise and facilitate delivery of specialist interventions (Soar, et al., 2019). For patients successfully resuscitated, the larger ED's are able to provide invasive ventilation, renal replacement therapy and ongoing critical care interventions within the resuscitation room, due to the limited availability of intensive care services. Therefore, emergency nurses need to have a range of skills that enable them to provide ongoing critical care.

Theme 3: Relatives Views

Garcia-Martinez and Meseguer-Liza (2018) argue that when considering family witnessed resuscitation respecting the cultural and social values of the family members and the professionals involved are crucial. Relatives' presence during resuscitation and providing them with psychological and mental support by experts and trained staff can play a vital role in reducing stress and psychological disorders. For those that have no support there is a higher incidence of anxiety, risk of depression and Post Traumatic Stress Disorder (PTSD) following resuscitation (Soleimanpour, et al., 2017). Family witnessed resuscitation has been shown in some instances to be traumatic for family members, it is therefore important that health professionals provide support and explain all that is being done if relatives decide to be present (Rose, 2018). Ideally a member of the nursing team should be designated for this role and remain with the family during this process (Rose, 2018). An emergency nurse should rapidly assess the situation and if appropriate the team leader should be consulted for approval, however, the patient's welfare and dignity remain the utmost priority (Afzali Rubin, et al., 2020). It is important

to point out that not all families wish to be present during resuscitation events, however, published evidence shows that the majority of families would have chosen to be present (Brasel, et al., 2016). Guzzetta (2016) found that family members would be more likely to be present if the situation arose again now that they had experienced it first-hand. However, it is important to note that this is often a retrospective question, nevertheless studies have identified they should be allowed to make the decision, regardless of whether they would choose to be present or not (Adams, 2016). In order to achieve this, ED's that have successfully implemented this have confirmed the need for a designated staff member to be available at all times (Brasel, et al., 2016). Family members overwhelmingly support being present during resuscitation as it can help them to know everything possible was done for their relative. This gives a feeling of maintaining family-patient relationships and closure on the life shared and fostering grieving (Leske, et al., 2017).

Conclusion

Currently in Zambia there is no written policy on family witnessed resuscitation and therefore there is an urgent need for this area to be explored within education and training developed for healthcare workers. Studies show that the outcome of resuscitation varies due to differences in emergency care organization, quality, availability, and allocation of resources. Current evidence identifies the need for good planning, leadership, teamwork, and communication during resuscitation (Soar, et al., 2019). Working in the ED, emergency nurses are challenging in the absence of policy and guidelines for or against families being present during resuscitation attempts. Resuscitation is a life changing event for both the patient and their family, regardless

of outcome, and the issue of family witnessed resuscitation needs addressing locally and nationally.

Key Points:

- Family Witnessed Resuscitation is increasingly recognised as an important aspect of family support.
- In low-income countries families witnessed resuscitation is not fully understood.
- Emergency nurses play a crucial role in resuscitation and the implementation of family witnessed resuscitation.
- Leadership, communication, training, and policies are crucial if family witnessed resuscitation is to become accepted practice.

Reflective Questions:

- Reflect on your views regarding family witnessed resuscitation.
- Identify and read your organisations policy guidelines regarding family witnessed resuscitation.
- How has this article changed your practice?

References

Adams, A. (2016). Family Presence during Resuscitation: An Evaluation of Attitudes and Beliefs. Acknowledge DNP project. 99.

Afzali Rubin, M., Svensson, TLG., Herling, SF., Jabre, P., Møller, AM. (2023). Family presence during resuscitation. Cochrane Database of Systematic Reviews. 5. Art. No.: CD013619. DOI: 10.1002/14651858.CD013619.pub2.

American Heart Association in collaboration with the international liaison committee on Resuscitation (ILCOR). Guidelines 2000 for Cardiopulmonary Resuscitation: part 2. Ethical aspects of CPR and ECC. Circulation. 102 (Suppl): I12-I21.

Barreto, M., Garcia-Vivar, C., Mitchell, M., Marcon, S. (2018) Family presence during resuscitation in Emergency Departments' attitudes in Brazil, Int Nur Rev. 65 (4): 567-576. Doi: 10.1111/inr.12490

Bashayreh, I., Saifan, A., Batiha, AM., Timmons, S., Nairn, S. (2015). Health professionals' perceptions regarding family witnessed resuscitation in adult critical care settings. J Clin Nurs. 24 (17-18): 2611-9. Doi: 10.1111/jocn.12875.

Bossaert, K.K., Perkins, C.D., Askitopoulou, H. Raffay, V.I., Greif. R, et al. (2015). European Resuscitation Council Guidelines for Resuscitation 2015. Section 11. The ethics of resuscitation and end-of-life decisions. Resuscitation. 95. 302-311

British Medical Association, Resuscitation Council UK, Royal College of Nursing. (2016). Decisions relating to cardiopulmonary resuscitation. https://www.resus.org.uk/library/publications/publication-decisions-relating-cardiopulmonary

Bradley, S., Lui, W., Chan, P., et al., (2017), Duration of resuscitation efforts for in-hospital cardiac arrest by predicted outcomes: Insights from get with the guidelines – Resuscitation. Resuscitation 113: 128-13434.

Brasel, K., Entwistle, J. and Sade, R. (2017). Should Family Presence Be Allowed During Cardiopulmonary Resuscitation? Ann Thorac Surg; 102(5): 1438-1443.

Calder, L., Mastoras, G., Rahimpour, M., Sohmer, B., Weitzman, B., Cwinn, A., Hobin, T. and Parush, A. (2017). Team communication patterns in emergency resuscitation: a mixed methods qualitative analysis, International Journal of Emergency Medicine, 10:24. doi.org/10.1186/s12245-017-0149-4

Carter. C. Rooney M. Notter J. (2022). Critical Care Nurse Leadership. In Carter C. Notter J. (2022). Covid-19 Critical Care Textbook. Elsevier, UK

Carter C. Notter J. (2022). Evaluation of an international health partnership to capacity build emergency, trauma and critical care nurse education and practice in Zambia: An experience from the field. Int Nurs Rev. 70(3): 266-272

De Stefano, C. Normand, D. Jabre, P. Azoulay, E. Kentish-Barnes, N. Lapostolle, F. Baubet, T. Reuter, P.G. Jauvad, N. Borron, S. et al (2016) Family presences during resuscitation: a qualitative analysis from a national multicentred randomised clinical trial. PLOS one. 11(6): e0156100. doi: 10.1371/journal.pone.0156100

Doyle CJ, Post H, Burney RE, Maino J, Keefe M, Rhee KJ. (1987). Family participation during resuscitation: An option. Annals of Emergency Medicine. 16(6): 673-675.

Ford, K., Menchine, M., Burner, E., Arora, S., Inaba, K., Demestriades, D. and Yersin, B. (2016). Leadership and Teamwork in Trauma and Resuscitation. West J Emerg Med. 17(5): 549-56

Garcia-Martinez, A. L and Meseguer-Liza, C. (2018). Emergency Nurses' Attitudes towards the Concept of Witnessed Resuscitation: Review Article. Rev Lat Am Enfermagem. 26: e3055. doi: 10.1590/1518-8345.1382.3055

Grimes C. (2020). The effects of family-witnessed resuscitation on health professionals. Br J Nurs. 29(15): 892-896.

Guzzetta, C. (2016) Family presence during resuscitation and invasive procedures. Critical Care Nursing. 36(1): 11-14

Horowitz, JM., Owyang, C., Perman, SM., Mitchell OJL., Yuriditsky, E. Sawyer KN., Blewer, AL., Rittenberger, JC., Ciullo, A., Hsu, CH., Kotini-Shah, P., Johnson, N., Morgan, RW., Moskowitz, A., Dainty, KN., Fleitman., J. Uzendu, AI., Abella, BS., Teran, F. (2021). The latest in Resuscitation research: Highlights from the 2020 American Heart Association's Resuscitation Science Symposium. J Am Heart Assoc. 11(19): e026191. doi: 10.1161/JAHA.122.026191

Kloeck, D., Meaney, P. and Kloeck, W. (2017) Resuscitation in Resource-Poor Setting- A Southern Africa Experience: ICU Management and Practice. 17(2): 96-98

Leske. J., McAndrew, N. and Feetham, S. (2017), Family Presence during Resuscitation after Trauma. J Trauma Nurs. 24(2): 85-96

Mentzelopoulos, SD., Slowther, AM., Fritz, Z., Sandroni. C., Xanthos, T., Callaway, C., Perkins, GD., Newgard, C., Ischaki, E., Greif, R., Kompanje, E., Bossaert, L. (2018). Ethical challenges in resuscitation. Intensive Care Med. 44(6): 703-716.

Molyneux, EM. (2020) Cardiopulmonary Resuscitation in poorly resourced setting: better to pre-empt than to wait until it is too late. Paediatrics and International Child Health, 40(1): 1-6

Mitchell, OJL., Edelson, DP., Abella, BS. (2020). Predicting cardiac arrest in the emergency department. J Am Coll Emerg Physicians Open. 1(4): 321-326. doi: 10.1002/emp2.12015

Mwanza, K., Stassen, W., Pigoga, J. and Walis, L. (2021) The views and experiences of Zambia's emergency medicine registrars in South Africa: Lessons for the development of emergency care in Zambia. African Journal of Emergency Medicine. 11(1): 65-69

Obermeyer, Z., Abujaber, S., Makar, M., Stoll, S., Kayden, SR., Wallis, LA., Reynolds, TA. (2015). Acute Care Development Consortium. Emergency care in 59 low- and middle-income countries: a systematic review. Bull World Health Organ. 93(8): 577-586G

Powers, K.A. (2017). Barriers to family presence during resuscitation and strategies for improving nurses' invitation to families. Appl Nurs Res. 38: 22-28. doi: 10.1016/j.apnr.2017.08.007

Pratiwi, I., (2018) Family presence during resuscitation: patient and family members' preferences and attitude: International Journal of Research in Medical Sciences. 6(2): 394-400.

Resuscitation Council of UK. (2016). Immediate Life Support, 4th Edition. www.resus.org.uk

Rose, S. (2018) Supporting relatives who choose to witness resuscitation attempts. Nursing Times. 114(3): 30-32.

Resuscitation Council (UK). 2021). Ethics Guidelines. https://www.resus.org.uk/library/2021-resuscitation-guidelines/ethics-guidelines

Russell, H. (2020), Exploring the perception of medical officers and registered nurses about family presence during cardiopulmonary resuscitation. Stellebosch University, South Africa.

Sak-Dankosky, N., Andruszkiewicz, P., Sherwood, P.R. and Kvist, T. (2017). Health care professionals' concerns regarding In-hospital family-witnessed cardiopulmonary resuscitation implementation into clinical practice. Nursing in Critical Care, 23(3): 134-140.

Sandorni, C., Nolani, J. (2015). Neuro-prognostication after cardiac arrest in Europe: new timings and standards. Resuscitation 90: A4-A5. doi: 10.1016/j.resuscitation.2015.02.020

Soar, J., Maconochie, I., Wyckoff, M., Olasveengen, TM., Singletary, EM., Grief R., et al. (2019). 2019 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. Resuscitation. 145: 95:150

Soleimanpour, H., Tabriz, JS., Rouhi, AS., Golzari, SE., Mahmoodpour, A., Esfanjani, RM., and Soleimanpour, M. (2017). Psychological effects on patient's relatives regarding their presence during resuscitation. J Cardiovasc Thorac Res. 9(2): 113-117.
Tam, C., Kumar, S. and Ivascu, N. (2019). Pharmacology and Physiology for Anaesthesia: Foundations and Clinical Application. Second edition. Elsevier.

Wang, C-H., Chang W-T., Huang, C-H., et al. (2019). Factors associated with the decision to terminate resuscitation early for adult in-hospital cardiac arrest: Influence of family in an East Asian society. PLoS ONE 14(3): e0213168. doi: 10.1371/journal.pone.0213168.

World Health Organization. (2019). Emergency and trauma care. 72nd World Health Assembly. A73/31. www.who.int