



Debriefing after a resuscitation attempt in the hospitalized patient: Is the rate of survival increased?

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Introduction

Cardiac arrests occur in all in-patient hospital units and research has shown that despite widespread CPR training the survival rate is less than 36%⁵. It is also well documented that high-quality CPR provides the greatest chance of survival following a sudden cardiac arrest^{2,5}. Debriefing is not routinely performed following a code blue despite the fact that the American Heart Association (AHA) recommends this following any situation where ACLS protocols are used⁶. As nurses in the MIMCU where code blues occur quite frequently, we were interested in discovering whether or not debriefing following cardiac arrest improves patient outcomes and survival rates.

PICO Question

Population: Patients requiring CPR and resuscitation measures

Intervention: Debriefing following a resuscitation attempt

Comparison: Patients that had debriefing performed post resuscitation and those that did not.

Outcome: The survival rate of patients in hospitals where debriefing is routinely performed

Question: Debriefing after a resuscitation attempt in the hospitalized patient: Is the rate of survival increased?

Methods

A literature search was conducted using CINAHL, EbscoHost, MEDLINE and PubMed databases.

Keywords: cardiac arrest, debriefing, resuscitation, outcomes, survival

Inclusion Criteria: Articles within 5 years, inpatient hospital, cardiac arrest patients

The initial search yielded 231 articles, 5 were included for this project.

Results

Article	Methods	Results
Sutton, R.M, Nadkarni, V., Abella, B.S. (2012)	Literature review of 112 case studies that investigated multiple variables related to patient cardiac arrests. Out of the 112, 8 studies looked solely at how debriefing post resuscitation affected patient outcome. Of these 8 studies, 3 were case studies and 1 was a case control study. Measurements that were included: the percentage of ROSC post resuscitation and quality of chest compressions given during CPR.	One case control study stated a "...33% increase in ROSC" after debriefing was initiated in it's facility. Other studies stated a better quality of compressions, including improved rate and depth.
Edelson, D. P., et. al (2008)	Case-Control study with physicians attending weekly debriefing sessions to discuss patient resuscitations. 123 patient resuscitation cases were examined in the sessions and compared to 101 patient cases where debriefing was not performed.	For patients where debriefing was done, there was an increase in the rate of ROSC from 44.6% (baseline) to 59.4% (Intervention). There was no statistically significant increase in overall survival to discharge.
Andreatta, P., et. al. (2011)	2228 physicians were trained using monthly simulations of cardiac arrests including debriefing sessions over the course of 2 years at a pediatric hospital. Actual patient outcomes were simultaneously recorded over these 2 years	Patient survival rates post cardiac arrest increased from a baseline of 33% during the first year of this program's implementation to 50% after 1 year of simulated cardiac arrests.
Couper, K. et. al. (2013)	Meta analysis of 20 studies that advocated for the use of debriefing after patient emergencies. 4 studies focused on debriefing after a cardiac arrest.	This review of studies indicated improvements in the CPR process and immediate patient outcomes. It was stated that there was no improvement on long term patient survival.
Dine, J.C., et al. (2008)	Randomized controlled trial involving 80 nurses. Two groups each went through simulated patient cardiac arrests. One group had audio and visual feedback about their technical skills during the event along with a full debriefing. The second group had a short debriefing with no technical feedback post simulation.	In the group with both audio and visual feedback, improved compression rate and depth. In the other group, compression depth was increased. Both groups experienced an improvement in CPR skills with debriefing. This improvement can be expected to increase patient survival, as better compression rate and depth helps circulate blood flow and improve chance of ROSC.

Discussion

The use of CPR-sensing technology and post-resuscitation debriefing has been shown to improve short-term patient survival and the rate of ROSC in cardiac arrest patients by enhancing the quality of CPR and resuscitation measures^{1,2,3,4,5}. Multiple studies have shown, however, that there is little to no effect on long-term patient survival in settings where debriefing is routinely used^{2,4,5}.

Conclusions

Our research has revealed that debriefing following resuscitation attempts does indeed improve patient outcomes. It may be difficult to implement debriefing immediately following resuscitation attempts due to the documentation and clinical work required following these events, however, research reveals that debriefing on a weekly basis is sufficient enough^{2,4,5}. Many of the debriefing processes utilized in our research used feedback from defibrillators equipped with the ability to sense and record compression rate and depth to provide feedback on the quality of CPR^{2,4,5}. Utilizing defibrillators equipped with this technology to provide feedback on the quality of CPR along with open debriefing sessions can help improve outcomes in our patients

References

- 1.Sutton, R.M, Nadkarni, V., Abella, B.S. "Putting it all together" to improve resuscitation quality. *Emergency Medicine Clinics of North America*. (2012). 30, p. 105-122.
- 2.Edelson, D.P., et. al. (2008). Improving in-hospital cardiac arrest process and outcomes with performance debriefing. *Archives of Internal Medicine*. 168 (10), p.1063-1069
3. Andreatta, P., Saxton, E., Thompson, M., Annich, G. Simulation-based mock codes significantly correlate with improved pediatric patient cardiopulmonary arrest survival rates. (2011). *Pediatric critical care medicine*. (1529-7535), 12 (1), p. 33.
- 4.Couper, K., Salman, B., Soar, J. Finn, J. & Perkins, G.D. Debriefing to improve outcomes from critical illness: A systematic review and meta-analysis. (2013). *Intensive Care Medicine*. 39, p. 1513-1523
- 5.Dine, J.C., et. al. Improving cardiopulmonary resuscitation quality and resuscitation training by combining audiovisual feedback and debriefing. (2008). *Critical Care Medicine*. 36 (10), p.2817-2822