



Insights from Get With The Guidelines-Resuscitation



Approximately 200,000 patients suffer from in-hospital cardiac arrest (IHCA) annually in the US, with in-hospital mortality of nearly 80%. Airway management is a critical component of resuscitation care. However, it is unclear whether endotracheal intubation improves patient survival. The process often involves the cessation of chest compressions, which could result in delays in timely defibrillation or epinephrine administration. Therefore, avoiding intubation could minimise interruptions in the provision of high-quality resuscitation care.

Current resuscitation guidelines support the use of invasive or non-invasive approaches to ventilation and oxygenation in the management of cardiac arrest. Prior patient-level studies suggest a negative association between endotracheal intubation and patient survival but very little is known about hospital practices in airway management during CPR. Greater insight is needed on resuscitation practices and how to improve patient survival.

Data from the Get With The Guidelines-Resuscitation (GWTG-R) was analysed to describe rates of endotracheal intubation during IHCA and to evaluate the association between hospital rates of intubation and survival outcomes. Association between airway management and patient outcomes by initial arrest rhythm and presence or absence of respiratory failure was also assessed.

The analysis revealed significant variation in hospital intubation rates during CPR. Rates differed by the presence or absence of respiratory failure and presenting arrest rhythms. The association between hospital and endotracheal intubation was modified by the presence of respiratory failure. Patients without respiratory failure were more likely to survive IHCA with low rates of tracheal intubation use, but the same was not observed in patients with respiratory failure. This inverse association between intubation rates and survival was observed for both ventricular tachycardia or ventricular fibrillation and PEA/asystolic cardiac arrests.

Hospitals with lower rates of tracheal intubation use were associated with better patient survival as compared to hospitals with more frequent usage. Again, this association was modified by the presence or absence of respiratory failure, and lower rates of usage were associated with better survival in patients without respiratory failure. However, there is still a need to better understand optimal airway management strategies in patients suffering an in-hospital cardiac arrest.

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