

Taking the Tablet: Improved Resuscitation Performance and Documentation



Documenting in-hospital cardiopulmonary resuscitations in real time simulations on a tablet-based app improved both clinical performance and documentation quality when carried out by the resuscitation team leader. The study from Germany is published in the [Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine](#).

Tobias Grundgeiger PhD, of the Institute Human-Computer-Media, Julius-Maximilians-Universität Würzburg, with colleagues from the Department of Anaesthesia and Critical Care/Section Emergency Medicine, University Hospital of Würzburg, compared concurrent and final documentation on a tablet-based app with post-event documentation on the hospital information system (HIS). The study was conducted at the hospital's simulation centre on 1 of 2 scenarios: acute pulmonary embolism with rapid deterioration, or consecutive cardiac arrest and acute cardiac arrest resulting from hyperkalaemia. The content of the app and the HIS system were the same; the app group received 3 minutes of training. The app group were asked to document as many interventions as possible, while the HIS participants had to memorise the intervention and associated times and document them after the resuscitation event.

See Also: [Evaluating Teamwork in Medical Emergencies](#)

The comparison points for documentation were how precisely the intervention delivery times were recorded, if the documentation was complete and how long the documentation took. For clinical performance, the researchers compared adherence to the European Resuscitation Council (ERC) guidelines for defibrillation and adrenaline administration, the no-flow fraction, and the time to first defibrillation.

Results

The tablet-based app more precisely recorded the intervention delivery times, and was faster for documentation. The app group had a shorter no-flow fraction. There were no differences between the app and the HIS for documentation completeness, adherence to guidelines for defibrillation and adrenaline administration, and time to first defibrillation.

Next Steps

Given the improved quality of documentation, possible benefits for some aspects of clinical performance and the ability to be used in real-time the authors recommend the use of apps to document resuscitation events in hospital. In the simulated scenarios overall time of resuscitation was short, and the authors suggest that an even larger benefit of the app would be expected in real clinical settings when resuscitation takes longer. They are in the process of implementing the app and plan to see if the benefits observed in the simulation study are confirmed in real settings.

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