

The REBECCA checklist to determine reversible causes during out-of-hospital cardiac arrest

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Objectives

In patients suffering from out-of-hospital cardiac arrest (OHCA), detection and treatment of reversible causes, besides adequate cardiopulmonary resuscitation (CPR) and defibrillation improves patients' survival.^{1,2} Team leading on scene can be demanding due to several circumstances and thus be associated with an increased cognitive load.^{3,4} The aim of this study was to design a checklist to determine the reversible causes during OHCA.

Methods

We designed an interactive mobile checklist for reversible causes of OHCA (Figure 1) within a focus group of ten emergency physicians at the Medical University of Vienna. Furthermore, 20 emergency physicians analysed the usability of the interactive checklist through questionnaires.

Results

Of all participants, 70% were specialists with a median time working on the emergency response vehicle of 2.0 (1.0 - 4.3) years. Most participants were confident about their level of experience with OHCA and yet still, 85% of participants found the checklist to be helpful. The majority preferred the digital checklist over a paper-based and liked the fact that it was linked to the point-of-care ultrasound (POCUS) application. Many participants appreciated the colour-coding but stated against adding an acoustic alarm in case when a reversible cause is detected. Although there was no significant need for further details on most causes, a small majority favoured more information on intoxication and electrolyte disorders.

Conclusion

Our study showed that the majority, regardless of their training level, found the REBECCA checklist helpful, while there was almost no need for further detailed information on the reversible causes in particular. This underlines the importance of reducing cognitive load by preparing clear instructions that allow to stay focused. The wish for more information on relatively rare reversible causes may reflect their often-versatile presentation, making diagnosis even harder.

Figure 1: The REBECCA interactive checklist

References

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