

Design Features of Automated External Defibrillators Affecting User-friendliness and Operational Outcomes: A Mixed Methods Study

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Early defibrillation by bystanders with automated external defibrillators (AEDs) is a crucial factor for improving survival following out-of-hospital cardiac arrest (OHCA). However, layperson use of AEDs for OHCA remains low despite broad availability. This study aimed to identify key design features and instructions in commercially available AEDs that affect user-friendliness and operational outcomes for untrained laypersons.

This mixed-methods study included young laypersons (n=14, age: 18--64), elderly laypersons (n=12, age: ≥65), and expert users (n=13, paramedics). All participants were tested in simulated OHCA scenarios with three different AEDs in a randomised sequence. All scenarios were video recorded to evaluate time to defibrillation and electrode positioning. After this, we conducted semi-structured, individual interviews to identify how AED design features affect the perceived user-friendliness.

Data collection has been completed and is currently being analysed.

Results will be presented at the congress.

Conclusion is pending and will be presented at the congress.

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