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## Letter to the Editor

# Laypersons frequently ask questions during adult basic life support trainings: Qualitative study



To the Editor,

Each year, over 1300 people suffer cardiac arrest in Philadelphia (Pennsylvania, US), yet bystander cardiopulmonary resuscitation (CPR) is performed in only 11% of these cases, resulting in a 30-day survival rate of just 8%.<sup>1</sup> In response to these statistics, the Mobile CPR Project<sup>2</sup> was launched with the goal of providing free, non-certification training to laypersons, empowering them to recognize cardiac arrest, emergency medical response services, and perform high-quality bystander CPR.

In this qualitative study, we collected data from individuals participating in a 60-minute-long adult Basic Life Support (BLS) training course. Laypersons initially watched two videos produced by the American Heart Association which reviewed adult and pediatric BLS, followed by a hands-on BLS training session. Each training concluded with laypersons performing hands-only CPR on Mini Anne manikins (Laerdal Medical, Norway). Questions asked by laypersons were collected throughout the training and recorded in Google Sheets (Google Inc, USA). Qualitative data were analyzed by two authors (NF, TB) using thematic analysis and presented through a chain of survival visualization, illustrating its four key links: the first link, "Early recognition and call for help"; the second link, "Early CPR"; the third link, "Early defibrillation"; and the fourth link, "Post-resuscitation care".<sup>3</sup> Results were visualized using area-proportional circle, with a base area of 1000 square units representing 100%. Circle links were calculated based on proportional areas and arranged sequentially in Microsoft 365 apps for Enterprise (Microsoft Corporation, US) with slight overlaps to form a chain.

From October to December 2024, we organized six adult BLS trainings. A total of 55 participants attended the trainings, with a median of eight participants per training. The group sizes ranged from a minimum of four to a maximum of 19 participants. Laypersons asked 51 questions in total: 42 on adult BLS and 9 on pediatric BLS. 'Early CPR' was most emphasized (30/51; 59%), followed by 'Early recognition and call for help' (14/51; 28%), 'Early defibrillation' (6/51; 12%), and 'Post-resuscitation care' (1/51; 2%). Questions about checking breathing, providing rescue breaths, using an

automated external defibrillator (AED), and obtaining certification were the most asked (Fig. 1).

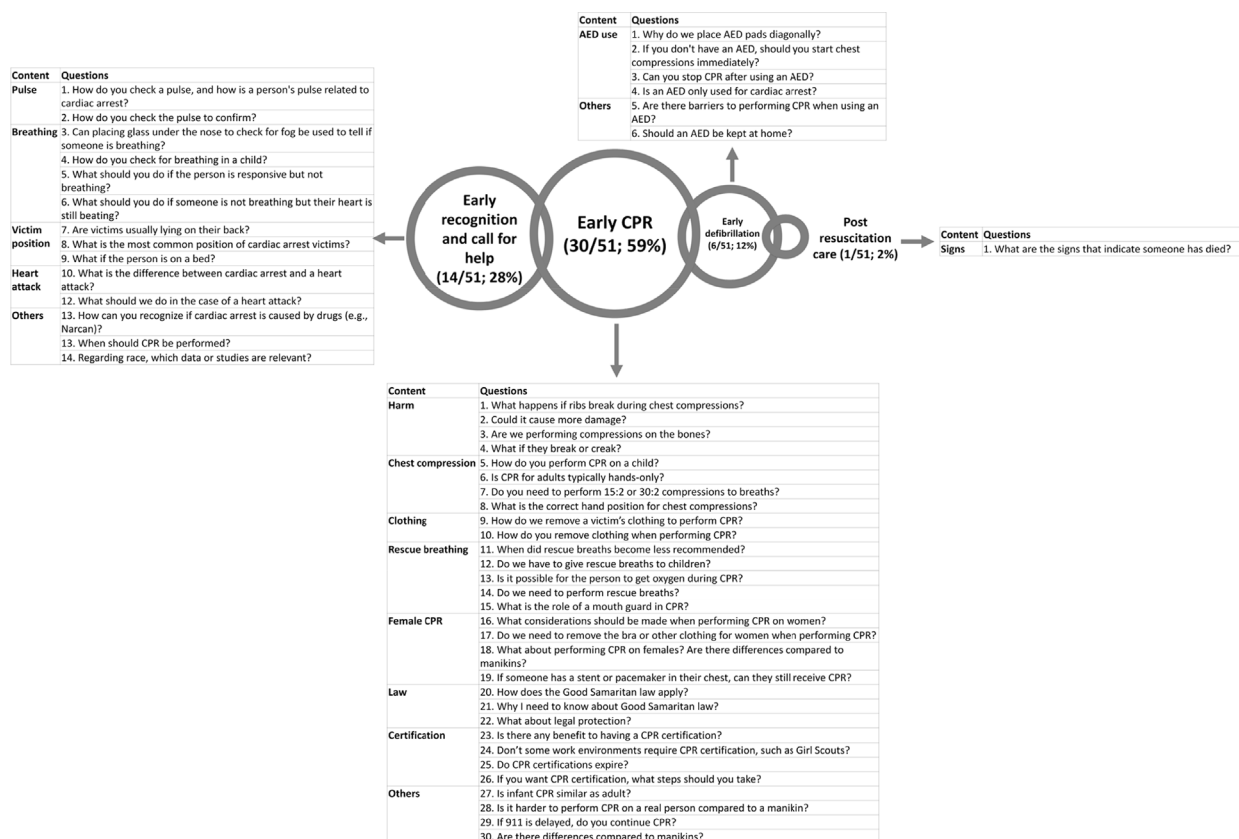
Our results showed that laypersons most frequently asked questions about performing CPR, including whether rescue breaths are necessary, reflecting ongoing concerns despite the 2017 removal of rescue breaths from the American Heart Association guidelines, which recommended not performing rescue breathing for adult BLS by laypersons.<sup>4</sup> These questions could be incorporated into training design, with emphasis placed on addressing them to reduce layperson concerns. Our research has limitations, including the possibility that some questions were influenced by lecture and the exclusion of practical AED training from the adult BLS curriculum. Future adult BLS training could include AED usage and place greater emphasis on recovery and rehabilitation following out-of-hospital cardiac arrest.<sup>4</sup> This could be achieved by incorporating a third video illustrating the outcomes when CPR is performed versus when it is not.<sup>5</sup>

## Conflict of interest

Nino Fijačko is a member of the ERC BLS Science and Education Committee. Other authors declare that they have no conflict of interest.

## CRediT authorship contribution statement

**Nino Fijačko:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Taylor Brothers:** Data curation, Formal analysis, Investigation, Writing – review & editing. **John Charles Greenwood:** Investigation, Visualization, Writing – review & editing. **Joshua Glick:** Investigation, Visualization, Writing – review & editing. **Benjamin S Abella:** Funding acquisition, Investigation, Resources, Writing – review & editing.



**Fig. 1 – Summary of the most frequently ask questions during adult basic life support trainings.**

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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