

Conclusion One in six ambulance conveyances to ED were deemed non-urgent. The younger population had the largest amount of preventable conveyance by ambulance with diagnoses which could be treated and discharged on-scene. Pathways and interventions would provide a larger patient benefit if they were designed around patient populations as opposed to disease specific.

Conflict of interest None

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60 CPR IN HOSPITAL – IS IT GOOD ENOUGH?

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Aim Data from the past three years from defibrillators located at the Odense University Hospital (OUH) indicate below standard performance of CPR by service assistants external to the emergency department (ED). ED service assistants (EDs) are trained in CPR several times a year, however CPR is also delegated to external service assistants (non-EDs) who only participate in OUH's mandatory training once every three years, besides having to pass an e-learning resuscitation program once every year.

Method To assess the quality of CPR performed at the OUH in relation to the level of training, by evaluating CPR data readouts from a test taken by OUH service assistants. Performances were evaluated in adherence to ERC guidelines (100–120 presses/min, compression depth 5–6 cm and reConflict of interest position), furthermore participants filled out an accompanying questionnaire.

Results Nine ED service assistants and thirty-eight non-ED service assistants participated. Among EDs the pressing frequency was correct in 100% of cases, among non-EDs 55%. In the ED group the applied compression was correct in 78% versus 49% of cases, while there was full reConflict of interest in 45% versus 54% of cases. Surprisingly, it was found that a large proportion of all service assistants had not completed the mandatory e-learning program.

Conclusion Non-EDs who only receive practical training once every 3 years frequently did not perform CPR to the standards of the ERC guidelines. This indicates that experience and frequent practical instruction would increase the quality of CPR at the OUH.

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61 AED ACCESSIBILITY AND BYSTANDER DEFIBRILLATION IN OUT-OF-HOSPITAL CARDIAC ARREST

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Aim Inaccessibility of publicly available automated external defibrillators (AEDs) is an issue recently emphasised;^{1,2} however, knowledge of the impact of inaccessibility on bystander defibrillation remains sparse.

Method We identified all public out-of-hospital cardiac arrests (OHCAs) registered by the Copenhagen Mobile Emergency Care Unit physicians (2008–2016), and all publicly available AEDs in Copenhagen (2007–2016) from the Danish AED Network. All recorded OHCAs and AEDs were geocoded, and the true route distances between OHCAs and AEDs were calculated. A covered OHCA was defined as an OHCA with an AED located ≤ 200 m and AED accessibility was assessed for every AED at the exact time of OHCA.

Results In total, 1,830 AEDs were registered in Copenhagen. Out of 643 public OHCAs, 261 (40.6%) were covered by a registered AED ≤ 200 m (median distance: 107.6 m (interquartile range [IQR]: 58.6–146.7)). Of the covered OHCAs, 156 (59.8%) occurred ≤ 200 m of an accessible AED, and in 105 OHCAs (40.2%) the AED was inaccessible. Compared with OHCAs near an inaccessible AED, OHCAs near an accessible AED were more likely to receive bystander defibrillation (25.0% vs 13.3%, $p=0.02$) and achieve 30 day survival (49.7% vs 38.0%, $p=0.08$).

Conclusion The chances of receiving bystander defibrillation nearly doubled if the OHCA was covered by an accessible AED ≤ 200 m, and the proportion of cases that achieved 30 day survival tended to be higher compared to OHCA cases covered by an inaccessible AED.

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62 THINKING ON SCENE: USING VIGNETTES TO ASSESS THE ACCURACY AND RATIONALE OF PARAMEDIC DECISION MAKING

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Aim Paramedics make important decisions on-scene as to whether a patient requires transport to hospital, referred, or discharged on scene. Research shows that nearly 20% of patients brought to ED by ambulance, could be treated elsewhere. This study aims to investigate the accuracy of conveyance decisions made by on-scene paramedics.

Method Individual real-patient vignettes were created using linked ambulance, ED and GP data and used in an online survey to paramedics in Yorkshire. Half the vignettes were categorised as clinically necessary attendances at the ED and the other half were categorised as clinically unnecessary. Vignettes were validated by a small expert panel. Participants were asked to determine the appropriate conveyance decision and to explain the rationale behind their decisions using a free text box.