variance and incidence rates can aid campaigns to improve survival. Data extraction and analysis on treatment prior to arrest and clearing of confounding factors might lead to more effective campaigns to improve survival.

REFERENCE


Conflict of interest None.

Funding None.

EVALUATION OF DISPATCH OUTCOMES AND STAFFING OF THE COPENHAGEN MOBILE HEALTH AND SOCIAL CARE UNIT

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Background The mobile health/social care unit (MHSCU) is a specialized unit within the Emergency Medical Services (EMS) in the Capital Region of Denmark. It provides acute social care for socially deprived citizens and is staffed with a social worker and a paramedic. This study was to evaluate the MHSCU-dispatch outcomes and the combination of paramedical and social effort.

Method Data on the total number of MHSCU dispatches and outcomes in 2016 and 2017 was retrieved from the dispatch system operated by EMS Copenhagen and descriptively analyzed.

Results MHSCU was dispatched 2976 times. Of these 384 patients (12.9%) were brought to a shelter. Referred from EMS was 41 (1.4%) referred to police was 13 (0.4%). In 1386 (46.6%) cases MHSCU were doing proactive work, citizen had left scene or MHSCU was cancelled. The remaining 342 (11.5%) were ‘unknown’.

Conclusion Based on the low referral to emergency ambulances and police, the dispatch of MHSCU seems well-prioritized. Dispatches-outcome also indicate the need for both paramedical and social staffing as there is an approximately even distribution between health related and social related referral. This study concludes that a MHSCU can serve as a valuable resource in EMS systems.

Conflict of interest None.

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DOES UNGUIDED CARDIO-PULMONARY-RESUSCITATION IN COPENHAGEN ACHIEVE HIGH QUALITY RECOMMENDATIONS?

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Background Survival from out-of-hospital cardiac arrest (OHCA) associated with the quality of cardio-pulmonary-resuscitation (CPR). The European Resuscitation Council (ERC) and American Heart Association (AHA) define high quality CPR as compression depth of 5–6 centimeters, compression rate of 100–120 compressions/minute, full recoil (>400 milliseconds) after each compression and a hands-on time (compression fraction) of at least 60% (ERC) or 80% (AHA). The aim of this study was to investigate if unguided CPR performed by Copenhagen Emergency Medical Services (EMS) meet these recommendations.

Method From October throughout December 2018, OHCA data were collected from ambulances within the Capital Region of Denmark using Zoll X-series defibrillator (without...
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CPR feedback dashboard or metronome). Only cases where EMS performed CPR were included. Data was uploaded to a central database and extracted to EXCEL for descriptive statistics and preliminary results.

**Results** EMS CPR was performed in 330 cases of which 252 were available for analysis. Mean (SD) compression depth was 5.6±1.7 centimeters, compression rate was 110±9.8 compressions/minute, release velocity was 410±125.1 milliseconds, compression quality (correct compression depth + correct compression rate) was 13.8%±15.6 and compression fraction was 69.7%±22.2.

**Conclusion** The quality of EMS-delivered CPR, unguided by feedback or metronome, was within recommendations for compression depth, compression rate and release velocity. CPR fraction was between ERC and AHA guidelines. Compression quality, which is not included in ERC/AHA recommendations, did not reach the manufacturers recommended >60%. Further work is ongoing to evaluate the effect of adding real-time feedback to guide EMS CPR.

**Conflict of interest** None.

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**38 IMPROVING BYSTANDER DEFIBRILLATION IN OUT-OF-HOSPITAL CARDIAC ARRESTS AT HOME**

**Background** Most out-of-hospital cardiac arrests occur at home with dismal bystander defibrillation rates (1–3). We investigated the proportion of home arrests potentially reachable with an automated external defibrillator (AED) before emergency medical service (EMS) arrival according to different bystander activation strategies.

**Method** We identified cardiac arrests in homes (private/nursing/senior homes) and registered AEDs in Copenhagen, Denmark (2008–2016). AED coverage (distance from arrest to AED) and accessibility at the time of arrest were examined according to route distance to nearest AED and EMS response time. The proportion of arrests reachable with an AED was calculated for two-way (from patient to AED and back) and one-way (from AED to patient) bystander response scenarios.

**Results** Of 1879 home arrests, AED coverage ≤100 m was low (6.3%) and nearly halved due to AED inaccessibility. A two-way bystander could potentially retrieve an accessible AED (≤100 m) prior to EMS in 31.1% (n=37) of cases. If a bystander only needed to travel one-way to bring an AED (≤100 m, ≤250 m and ≤500 m), 45.4% (n=54/119), 37.1% (n=196/529) and 29.8% (n=350/1174) could potentially be reached before EMS based on current AED accessibility. Assuming 24/7 AED accessibility, the proportions increased to 76.5%, 68.6%, 47.8%, respectively.

**Conclusion** Few home arrests would be reachable with an AED before EMS if bystanders need to travel to fetch the AED and back to the patient. However, nearly 1/3 of arrests ≥500 m of an AED could be reached by a bystander before EMS traveling one-way to the patient, increasing to nearly half of all home arrests if all AEDs were 24/7 accessible.

**REFERENCES**


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