

## AP034

### The Langeland AED project—FirstAED—Incorporates emergency dispatch, GPS technology, first responders with distinct roles, smartphones and an AED network

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**Purpose:** FirstAED is meant as a supplement to the existing emergency response systems. The purpose is to shorten the first responder response times at emergency calls to below 5 min on the island of Langeland characterized by 13,000 inhabitants, long ambulance response times, and long distances to the nearest hospitals. The FirstAED project defines a new way to dispatch the nearby first responders and organize their roles in the hope of reducing response times and improving survival rates.

**Materials and methods:** First aid and cardiopulmonary resuscitation is provided by 205 trained volunteer first responders who use their rescuer smartphone (iPhone 4S). The population purchased 92 automated external defibrillators (AEDs) which are available around the clock and placed less than two kilometres apart. FirstAED is an auxiliary to the public services and it enables the emergency dispatcher to send an organized team of first responders with distinct roles to the scene. FirstAED global positioning system (GPS)-track the nearby first responders who can choose to accept or reject the alarm. FirstAED chooses the 3 most optimally located first responders who have accepted the alarm. FirstAED organizes the three first responders in a team with distinct roles: no. 1 reaches the patient to give first aid/cardiopulmonary resuscitation; no. 2 brings the AED; and no. 3 is the onsite coordinator.

**Results:** In April 2012 the FirstAED system was implemented. During the first year the FirstAED alarm system was used 318 times. Three first responders arrived in 90% and two first responders in 8% of the cases, they arrived before or at the same time as the ambulance in 89% or 10% of the cases. FirstAED entailed a significant reduction in first responder median response time from more than 8 min before to 4 min 23 s after. The first responder was on site in less than 5 min in more than 60% of the cases. The AED was on site within a median time of 6 min and 12 s. During the first year, the first responders were involved in 5 cardiac arrests (2 patients survived, 1 more than 30 days), 2 hangings (1 patient survived more than 30 days), 3 patients with serious respiratory insufficiency (2 patients survived more than 30 days).

**Conclusions:** GPS-tracking reduces the response times, and the quality of the effort improves as all the first responders who accept the FirstAED alarm have distinct roles.

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## AP035

### Feedback to bystanders after performing CPR in out of hospital cardiac arrest (OHCA)

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#### Purpose of study

Demography, n = 33	n (%)
<b>Layperson gender</b>	
F	16 (48)
<b>Layperson's role in OHCA situation</b>	
Caller	12 (36)
CPR performer	9 (27)
Caller and CPR performer	10 (30)
AED provider	2 (6)
<b>Layperson's experience with HLR</b>	
Attended a CPR-course	22 (67)
Never attended a CPR-course	4 (12)
Unknown	7 (21)
<b>Patient gender</b>	
F	16 (48)
<b>Patient age<sup>b</sup></b>	
Younger	3 (10)
Older	30 (90)
<b>Patient's primary outcome</b>	
ROSC at scene	12 (36)
Declared dead at scene	17 (52)
Unknown	4 (12)
<b>Patient's relation to the Layperson</b>	
Friend	2 (6)
Colleague	2 (6)
Neighbor	6 (18)
Person seen before by the layperson	11 (33)
<b>Randomly bypassing person</b>	12 (36)
Median duration of feedback interview in minutes <sup>b</sup> (range)	15 (6–39)

<sup>a</sup> Reported by the laypeople interviewed

<sup>b</sup> Calculated from length of tape recording

Laypeople play an essential role in terms of identifying cardiac arrest, calling the Emergency Medical Services (EMS), performing telephone guided CPR and using an AED (1–3). Feedback to laypeople from Emergency Medical Dispatch (EMD) personnel is not systematically performed, and methods for doing so have not previously been described.

The aim of this study was to develop a concept for systematic feedback to laypeople by exploring laypeople's need for feedback-interviews after performing CPR and by identifying practical and legal barriers to provide systematic feedback.

**Materials and methods:** We developed a guide for giving feedback, adapted from a debriefing model from medical simulation. During a test period of three months, 12 medical dispatchers from the EMD performed feedback interviews. For every OHCA call the medical dispatchers asked the caller if he/she was interested in feedback as a part of this project and further if anyone else at scene would be interested in feedback. For ethical reasons, known relatives were excluded in the test period. Laypeople were called for a feedback-interview within 2–4 days after the incident.