The Langeland AED project – FirstAED

Incorporates emergency dispatch, GPS technology, first responders with distinct roles, smartphones and AED network

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Background – the Langeland Island
- Part of the peripheral Denmark
- ~ 13,000 inhabitants.
- Long distances to the nearest hospital (55 km).
- Long ambulance response times (50% ≥ 15 minutes, 25% ≥ 20 minutes).
- Bystander CPR provided by 210 trained first responders.
- 92 AED’s purchased by the population.
- All AED’s available around the clock.
- General “first responder” response times (8-10 minutes).

Methods:
- An IT-system combining ideas from the AED center and modern information and communication technology (FirstAED app).
- All first responders are provided with a rescuer smartphone (iPhone 4S/5).
- FirstAED organizes the three first responders in a team with distinct roles.
- The IT-system activate the AED cabinets (unlock, sound & flash light).

Action: Emergency call
- Dispatch Center iPad – GPS-tracking
  - All first responders (n= 210 (purple pushpins) (GPS-tracking)
  - AED’s (n= 92 (green pushpins)

Action: GPS tracking
- Emergency Call
- Dispatcher Centers
  - GPS tracking will immediately find the geographically closest responders.

Key results of the first 12 months – Cardiac Arrest Call
- 5 Cardiac arrests
  - 2 survived, 1 survived more than 30 days
- 3 Respiratory insufficiency
  - 2 survived more than 30 days
- 1 dies at the hospital.
- 2 Hangings
  - 1 survived more than 30 days.
  - 1 died.
- 2 Suicides
  - 2 survived, AED monitoring (sinus bradycardia).

Key results of the first 12 months – First Person On Site (PPOS)
- FirstAED
- Ambulance (estimated)

Perspectives:
- The Langeland AED project developed the FirstAED in the hope to get shorter response times.
- FirstAED GPS app technology entails a significant reduction in first responder median response times from more than 8 minutes before to 4 minutes 23 seconds after.
- FirstAED organizes the three first responders in a team with distinct roles.
- FirstAED activate the AED cabinets (unlock, sound & flash light).