

AP042

The Langeland AED project – Incorporates emergency dispatch, FirstAED GPS technology, Smartphones, first responders with distinct roles, and an AED network



Finn Lund Henriksen*, Henrik Schakow, Mogens Lytken Larsen

Odense University Hospital, Department of Cardiology, Odense, Region of Southern Denmark, Denmark

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. 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 215 first responders who use their smartphone (iPhone 4S/5). The population purchased 95 AED's 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 9 nearby first responders. FirstAED chooses the 3 most optimally located first responders who have accepted the alarm. FirstAED organizes the three first responders in a team: no. 1 reaches the patient to give cardiopulmonary resuscitation; no. 2 brings the AED; and no. 3 is the onsite coordinator.

Results: During the first 17 months the FirstAED GPS system was used 513 times. Three first responders arrived in 90% of the cases, and they arrived before the ambulance in 95% of the cases. FirstAED entailed a significant reduction in median response time from more than 8 min before to 4 min 6 sec 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 10 s.

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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AP043

Impact of a public awareness campaign promoting bystander-CPR: Results from a representative survey



Peter Brinkrolf^{1,*}, Roman Lukas¹, Andreas Bohn³, Marko Heyse², Thomas Dierschke², Hugo Van Aken¹, Klaus Hahnenkamp¹

¹ Department of Anesthesiology and Intensive Care, University Hospital Münster, Münster, Germany

² Institute of Sociology, University of Münster, Münster, Germany

³ Emergency Medical Directorate, City of Münster, Münster, Germany

Introduction: About 75,000 patients face a pre-clinical cardiac arrest in Germany each year. An early cardio-pulmonary resuscitation (CPR) by lay people can increase the chance of survival by a factor of up to four.¹ Nevertheless, a bystander CPR is undertaken in only about twenty percent of cases.² To increase this low proportion, in September 2013 the so-called "Week of Resuscitation" took place in Germany. Accompanying this nationwide

public-awareness campaign we investigated, how it alters peoples' knowledge and attitude towards CPR.

Methods: About two month before and after the campaign, we questioned the population of Münster, one of the action weeks' major spots. Using computer-assisted telephone interview (CATI) technology, 2004 people were interviewed by a standardized questionnaire. A random representative sample was drawn by the random last digit-method (Gabler-Häder-design).

Results: In the follow-up survey, 58,6% of the interviewees reported that they realized the "week of resuscitation". This post-intervention subgroup's results ("post-group") were compared with those of the initial inquiry ("pre-group") to assess the action week's impact.

Asked about the accurate action in case of cardiac arrest, 58% of interviewees in the pre- but 73% in the post-group named "thoracic compressions". In the pre-group, 10% of participants choose the correct frequency of thoracic compressions and 53% the correct depth. In the post-group, correct answers to these questions were given by 30% and 70%, respectively. In the pre-group 49% of interviewees stated they would detect a cardiac arrest and 55% believed they knew what to do in such a scenario. These self-perception's results increased to 64% and 72% after the "week of resuscitation".

Interpretation: These results show a significant impact of the action week on both, the knowledge and the self-perception, in Münster's population of about 300.000 inhabitants. They should encourage undertaking further efforts in promoting bystander-CPR. Future analysis of the German Resuscitation Registry should reveal the campaign's effect on the actual rate of bystander-CPR.

References

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2. Grasner JT, et al. *AIN* 2012;47:724–32.

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AP044

School children learn BLS better and in less time than adults



Enrico Baldi*, Daniele Bertaia

Robbio nel Cuore, IRC-COM Training Center, Robbio, Italy

Purpose: It has already been shown that school children are able to learn and perform CPR, but their long-time retention of knowledge is not known. We want to assess children's knowledge of the BLS sequence one year after the BLS course and compare it to that of an adult group.

Methods: A group of Italian school children who did a 1-hour BLS course were, one year later, given an anonymous questionnaire with three multiple-choice questions on the first two rings of the Chain of Survival. The first question was about recognizing a person in cardiac arrest, the second was about the importance of the early activation of the emergency system and the third was about the correct compression:ventilation ratio. We gave the same questionnaire to a group of Italian lay adults a year after completing a 5-hour BLS-D course.

Results: The school children group comprised 70 subjects (50% males), mean age 13.2 ± 0.6 years. The adult group comprised 43 subjects (62.8% males), mean age 38.4 ± 12.4 years. In the school children group, the first question was answered correctly by 85.7%, the second by 48.6% and the third by 94.3%. Comparing these results to those of the adults, there was no significant difference in the first question (83.7% vs 82.4%, $p = 0.99$) or in the second (48.6% vs 62.8%,