Mobile versus fixed automated external defibrillators (AED deployment in a geographically dispersed population: analysis of the girona territori cardioprotegit project

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Introduction/Aim: Public defibrillation doubles out-of-hospital cardiac arrest survival. However, the best way to provide public defibrillation coverage to geographically dispersed populations remains unknown. The aim of this study is to compare usage rates and effectivity between mobile versus fixed Automated External Defibrillators (AED).
Methods: This project is a prospective registry of the usage rate of public AED (542 fixed AED, 241 mobile AED) and the analysis of the electrocardiographic traces, from June 2011 until December 2019. We compared the usage rate, the proportion of shockable rhythms and defibrillation success between fixed versus mobile AED.
Results: Of 566 registered usages, we obtained 494 electrocardiographic traces, of which 108 (21%) were from fixed AED. The usage rate of fixed and mobile AED were 0.022use/AED-year and 0.177use/AED-year respectively. In Fixed AED group we observed a higher proportion of shockable rhythms (34.2% vs. 20.3%, p=0,01) and higher defibrillation success (79% vs. 63%, p=0,02). The proportion of patients with shockable rhythms who were transferred to a hospital were 62.1% and 50% in Fixed AED and Mobile AED group respectively (p=0,306).
Conclusions: In Fixed AED group we observed more shockable rhythms and higher defibrillation success rates. Mobile AED were 8 times more used.