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Letter to the Editor

Food-riders may improve the chain of survival in out-of-hospital cardiac arrests by delivering CPR and AEDs



Sir,

Treatment of Out-of-Hospital Cardiac Arrest (OHCA) requires prompt interventions; in fact, briefer response times are associated with greater survival and better neurological outcomes¹. The food delivery sector is in continuous and rapid expansion in Italy as well as in other countries. More than 3000 food-riders deliver door-to-door each day throughout Milan, the second-most populous city in Italy with a 1,370,074 population over 181 square kilometres. Landoni et al. in 2007 anticipated in this Journal the potential role of smartphones in out-of-hospital emergencies and indeed the use of mobile apps to dispatch laypeople to nearby OHCA² is becoming widespread in numerous countries. These location-aware mobile applications activated by emergency medical services (EMS) dispatch centres are used to locate and direct CPR-trained laypeople to nearby suspected OHCA for performing early cardiopulmonary resuscitation (CPR) and retrieving automated external defibrillators (AEDs). Citizens inside the lay-responder network are geo-located and the latest reported location is tracked and saved in a database. In case of OHCA the distance between event location and lay-responders location is calculated. Normally, lay-responders located within maximum 1 km of the cardiac arrest are asked to either accept or decline the mission. Training everyday citizens working as food-delivering riders to correctly perform CPR and defibrillation would empower them to provide life-saving manoeuvres to cardiac arrest victims. If the cardiac emergency occurs in a public place,

previously described applications could alert CPR-trained riders in the immediate vicinity of an OHCA along with the dispatch of the conventional EMS response (Fig. 1). There are 800 defibrillators publicly available and ready to use in the city of Milan. Trained food-riders, through a dedicated app, would reach the closest public access defibrillator (PAD) and deliver it to the location of the cardiac arrest victim and begin high-quality CPR (or continuing bystanders' efforts guided through Telephone-CPR) using the defibrillator. Another, albeit more difficult to achieve, option is that food-riders carry an AED, which weighs about 1.6 kg, in their bags or in their bicycle. Food-riders, normally not older than 30 years old and physically fit, are used to operate with dedicated applications for receiving orders and delivering to customers. Among the advantages of relying on food-riders are the knowledge of the roads, the ability to get through narrow streets, pedestrian areas, and the greater speed of movement through traffic that would not be easily achieved by ambulances during peak times. One option to incentivize food-riders joining the fight against the burden of cardiac arrests could be to offer free bicycles equipped with an AED. This method we suggest could be a unique opportunity to reduce collapse-to-CPR and collapse-to-defibrillation times and to improve outcomes by enabling trained food-riders to deliver CPR and defibrillators to OHCA victims. This will also contribute to civic engagement and a culture of positive action in our community.

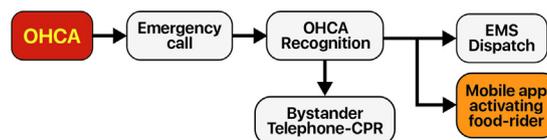


Fig. 1 – In case of suspected out-of-hospital cardiac arrest (OHCA) lay-responder food-riders trained in cardiopulmonary resuscitation (CPR) and located in the immediate vicinity of the emergency event are alerted by emergency medical services (EMS) dispatcher through the dedicated mobile application while giving telephone-assisted CPR instruction and dispatching EMS ambulances.

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