



## SPECIAL ARTICLE

# Recommendations in dispatcher-assisted bystander resuscitation from emergency call center<sup>☆</sup>



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### KEYWORDS

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**Abstract** Dispatch-assisted bystander cardiopulmonary resuscitation in out-of-hospital cardiac arrest has been shown as an effective measure to improve the survival of this process. The development of a unified protocol for all dispatch centers of the different emergency medical services can be a first step toward this goal in our environment. The process of developing a recommendations document and the realization of posters of dispatch-assisted cardiopulmonary resuscitation, agreed by different actors and promoted by the Spanish Resuscitation Council, is presented.

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**PALABRAS CLAVE**

Reanimación  
cardiopulmonar;  
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**Recomendaciones para el soporte telefónico a la reanimación por testigos desde los centros de coordinación de urgencias y emergencias**

**Resumen** El soporte telefónico a la reanimación cardiopulmonar por testigos en casos de parada cardíaca extrahospitalaria se ha demostrado como una medida eficaz para mejorar la supervivencia de este proceso. El desarrollo de un protocolo unificado para todos los centros coordinadores de los diferentes servicios de urgencias extrahospitalarias puede ser un primer paso para conseguir en nuestro entorno dicho objetivo. Se presenta el proceso de elaboración de un documento de recomendaciones y su concreción en carteles o pósters de reanimación cardiopulmonar asistida por teléfono, elaborado y acordado por diferentes agentes e impulsado por el Consejo Español de Resucitación Cardiopulmonar.

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## Introduction

Out-of-hospital cardiac arrest (OHCA) is a public health problem in Spain and in the rest of Europe, and has been acknowledged as such by the European Parliament.<sup>1</sup> Since publication of the first article documenting the effectiveness of external cardiac massage,<sup>2</sup> many studies have been made with a view to improving the survival and neurological recovery of patients with OHCA.<sup>3</sup>

Over 50 years later, early intervention on the part of bystanders, starting patient resuscitation, has become established as one of the key determinants of final patient outcome.<sup>4-8</sup> However, despite its importance, early resuscitation by bystanders is performed less often than desired. Although the statistics vary greatly, such resuscitation is recorded in barely 30% of the cases of OHCA.<sup>9</sup> In our setting the figure is even lower.<sup>10-15</sup>

There are contrasted data in the literature showing that telephone support of resuscitation by bystanders (dispatcher-assisted bystander cardiopulmonary resuscitation [CPR]) in both adults and children improves survival following OHCA.<sup>16</sup> The resuscitation guides of 2010 recommend the adoption of protocols in the dispatch centers of out-hospital emergency medical services (EMS) designed to identify OHCA and provide first instructions for bystander resuscitation, based on a high level of evidence.<sup>16,17</sup>

Dispatcher-assisted CPR is defined as the series of instructions delivered by telephone from the EMS coordinating centers with the purpose of favoring collaboration and helping bystanders to apply basic life support measures.<sup>18-21</sup>

In Spain there has been a great increase in scientific production referred to OHCA in recent years. In addition to the results obtained, interest has focused on specific aspects of the different links in the chain of survival,<sup>22-31</sup> aspects related to the resuscitators,<sup>32</sup> and strategies following resuscitation (post-resuscitation care and non-heart beating donation programs).<sup>33-36</sup> Notoriously, however, no publications in our country have analyzed dispatcher-assisted bystander resuscitation. In fact, a recent survey of the Spanish public EMS conducted in 2013 has shown that only 12 out of 27 services have specific CPR protocols,<sup>37</sup> and each service has moreover developed its own protocol.

These data point to the possibility of improvement, reinforcing transit between the first and second link in the chain of survival by adopting a simple organizational intervention. Clear and homogeneous dispatcher-assisted CPR protocols are needed that are easy to apply in all urgency and emergency care coordination centers in our country. Such protocols should be accompanied by specific training of the dispatchers in identifying OHCA and providing instructions referred to basic life support maneuvers.<sup>9,38</sup>

## Objective

The aim of the present project was to develop an expert document on recommendations for promoting dispatcher-assisted bystander cardiopulmonary resuscitation from the EMS coordination centers.

## Methods

The Spanish Cardiopulmonary Resuscitation Council (*Consejo Español de Resucitación Cardiopulmonar*, CERP) is a non-profit scientific-healthcare association founded in 1999 and constituted by different scientific societies, public institutions and EMS with accredited activity in the field of cardiac arrest, life support and CPR.

The CERP impeded the creation of a specific work group in urgency and emergency care coordination. The group was formed by the representatives in the CERP of the EMS belonging to Andalusia, Asturias, Galicia and Madrid (*SAMUR-Protección Civil*). In accordance with the established aim, the group developed a document and a poster draft following a MEDLINE (<http://www.ncbi.nlm.nih.gov/PubMed/>), EMBASE (<http://www.embase.com>) and IME-Biomedicine search (<http://bddoc.csic.es:8080/index.jsp>) of articles published between February 2010 and October 2014. The search terms were "dispatch-assisted", "cardiopulmonary resuscitation" and "emergency medical system". Some articles were not identified in a first search but were obtained from the references found in that search. A first proposal was forwarded to a panel of experts composed of representatives of the EMS; participants in the Out-of-Hospital Spanish

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