

# Evaluating the effectiveness of dispatch-assisted cardiopulmonary instructions using the ALERT protocol: preliminary results in Liege dispatching centre

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## Introduction

Early bystander cardiopulmonary resuscitation (CPR) is a key factor in improving survival from out-of-hospital cardiac arrest (OOH-CA).

The ALERT algorithm, a simple and effective compression-only phone CPR protocol has the potential to help bystanders initiate CPR.

This study evaluates the effectiveness of the implementation of this protocol in Liege dispatching centre.

## Methods

We designed a "before and after" study based on a 3-months retrospective assessment of the adults victims of OOH-CA in 2009, before the implementation of the ALERT protocol in Liege dispatching centre, and the prospective evaluation of the same 3-months period in 2011, immediately after the implementation of this protocol.

Data were extracted from ambulance, paramedical and medical intervention teams files, as well as the audio recordings of the dispatching centre.

## Discussion and conclusion

The 'dispatcher's window' is a precious time period during which dispatchers may help bystanders make a dramatic difference in victim's outcome.

Using the ALERT protocol in Liege dispatching centre significantly improved the numbers of patients in whom bystander CPR was attempted.

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## Results

- There were 233 OOH-CA detected in the first period and 235 in the second.
- Victims were predominantly male (59 %, both period), aged of 66 and 64 years, respectively.
- Callers were family members in 52 % in 2009 and 64% in 2011. In 2009, only 9.9% victims benefited from bystander CPR, while they were 22.5% in 2011 ( $p < 0.0002$ ).
- Reasons for protocol under-use were: assistance not offered (42,3%), caller remote from the victim (20.6%) or emotionally distressed (15.5%).
- Mean no flow time decreased from 253 sec in 2009 to 168 sec in 2011 (NS).
- Ten victims were admitted in ROSC at hospital in 2009 and 13 in 2011 ( $p = 0.09$ ).

Table1: Characteristics of the call and of the resuscitation

Variables	2008-2009 n = 233	2010-2011 n = 235	P-value
OOH-CA detected			
Age (median)	66	64	0,718
Gender : male (%)	59,85%	59,18%	0,871
Call duration in second			
Median (1st and 3rd quartile))	64 (51-87)	330 (65-625)	<0,001
Reasons for protocol ALERT under-use			<0,001
-Assistance not offered	Not evaluable	82 (42,3%)	
-Caller remote from the victim	Not evaluable	40 (20.6%)	
-Emotionally distressed	Not evaluable	30 (15.5%)	
Victims benefited from bystander CPR (n(%))	23 (9,87%)	53 (22,55%)	<0,001
Call by family member (n(%))	12 (52,17%)	34 (64,15%)	0.566
No flow time)in second			
Median (1st and 3rd quartile))	253 (0-360)	168 (0-276,5)	0,679
Chest compression performed by the witness (n(%))	20 (86,96%)	51 (96,23%)	0,133
Ventilation performed by the witness (n(%))	19 (82,61%)	19 (35,86%)	<0,001
Victims admitted in ROSC at hospital	10	13	0.090

## Perspective

Dispatchers must embrace this new opportunity to help callers and encouraged to accept the responsibility of initiating such assistance.

## Mots-clés

PHONE CPR  
CARDIAC ARREST

