# SÉMINAIRE AR n AIDE AU TÉMOIN ; DE L'ARM AU MÉDECIN RÉGULATEUR ; QUI FAIT QUOI?



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# Déclaration de conflits d'intérêt



Aucun

# Implementation d'une chaine de soins « Cardiac resuscitation system of care »



MISSION: LIFELINE RESUSCITATION PROGRAM

### <u>Circulation</u>

#### **AHA SCIENTIFIC STATEMENT**

### **Out-of-Hospital Cardiac Arrest Resuscitation Systems of Care**

A Scientific Statement From the American Heart Association

Circulation. 2018

### Increase training of laypeople

How to perform bystander CPR Provide dispatcher/telecommunicator instructions for CPR Improve layperson and first responder use of AEDs. = components of the implementation of a cardiac resuscitation system of care

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### **Open Access**

Open Access

**BMJ Open** Effect of national implementation of utstein recommendation from the global resuscitation alliance on ten steps to improve outcomes from Out-of-Hospital cardiac arrest: a ten-year observational study in Korea

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Research

#### BMJ Open 2017

	<b>Control Phase</b>	Phase 1	Phase 2		
UTIS CPR programs	2006 2007 2008	2009 2010 2011	2012 2013 2014 2015		
✤ OHCA registry	КОН	HCAR (CAVAS) + KOHCAR-EMS + KOHCAR-Dispatch			
✤ Telephone CPR		Т-С	PR program + QA program		
✤ High performance CPR			Pilot		
✤ Rapid dispatch			Pilot Two tiered		
✤ Measuring professional CPR			Pilot		
<ul> <li>✤ First responder AED</li> </ul>			Pilot		
✤ Smart CPR technology			Pilot		
✤ Mandatory CPR training	First	Responder CPR Program + Good Sama	ritan Law + School CPR Program		
✤ Accountability	Publi	ic Report + Annual Symposium + Natio	nal Statistics + Feedback to Provinces and Locals		
✤ Cultural excellence		Мес	lical oversight for all OHCA case		





ORIGINAL ARTICLE

#### Mobile-Phone Dispatch of Laypersons for CPR in Out-of-Hospital Cardiac Arrest

Mattias Ringh, M.D., Mårten Rosenqvist, M.D., Ph.D., Jacob Hollenberg, M.D., Ph.D., Martin Jonsson, B.Sc., David Fredman, R.N., Per Nordberg, M.D., Hans Järnbert-Pettersson, Ph.D., Ingela Hasselqvist-Ax, R.N., Gabriel Riva, M.D., and Leif Svensson, M.D., Ph.D.



Emergency Medical Service Dispatch Cardiopulmonary Resuscitation Prearrival Instructions to Improve Survival From Out-of-Hospital Cardiac Arrest

A Scientific Statement From the American Heart Association

Lerner Circulation 2012

• RCP par témoins : 2004 vs 2010 (RCP guidée par téléphone). (Japon 4995 AC extra-hospitaliers)

- 24% vs 42 % \*
- Refus : 44% vs 26 % \*

Impact sur la survie à J30
 OR = 1.81 (95% CI= 1.20-2.76)

Tanaka Y Resuscitation 2012

MCE exclusif « Pousser au milieu du thorax fort et vite »



L'ARM doit systématiquement faire initier le processus de massage par le témoin Médecin régulateur impliqué ou pas ? From the Department of Medicine, Center for Resuscitation Science, Karolinska Institutet, Solna (M. Ringh, J.H., M.J., D.F., P.N., I.H.-A., G.R., L.S.), the Department of Clinical Sciences, Danderyd University Hospital, Karolinska Institutet, Danderyd (M. Rosenqvist), and the Department of Clinical Science and Education, Karolinska Institutet, Södersjukhuset (H.J.-P.) — all in Stockholm. Address reprint requests to Dr. Svensson at the Center for Resuscitation Science, Södersjukhuset Sjukhusbacken 10, 118 83, Stockholm, Sweden, or at leif.svensson@ ki.se.

N Engl J Med 2015;372:2316-25. DOI: 10.1056/NEJMoa1406038 ORIGINAL ARTICLE

### Mobile-Phone Dispatch of Laypersons for CPR in Out-of-Hospital Cardiac Arrest

Mattias Ringh, M.D., Mårten Rosenqvist, M.D., Ph.D., Jacob Hollenberg, M.D., Ph.D., Martin Jonsson, B.Sc., David Fredman, R.N., Per Nordberg, M.D., Hans Järnbert-Pettersson, Ph.D., Ingela Hasselqvist-Ax, R.N., Gabriel Riva, M.D., and Leif Svensson, M.D., Ph.D.

Lay volunteers who were trained in CPR were re- cruited through advertising campaigns and at CPR training courses. We called these volunteers "short-message-service lifesavers.

Table 2. Primary and Secondary Outcomes.*								
Outcome	Intervention Control		Difference (95% CI)	P Value				
	no. of patien	ts/total no. (%)	percentage points					
Primary outcome: bystander-initiated CPR	188/305 (61.6)	172/360 (47.8)	13.9 (6.2 to 21.2)	<0.001				
Secondary outcome								
30-day survival	32/286 (11.2)	28/326 (8.6)	2.6 (-2.1 to 7.8)	0.28				
Return of spontaneous circulation	90/306 (29.4)	105/361 (29.1)	0.3 (-6.5 to 7.3)	0.93				
Shockable rhythm: ventricular fibrillation or ventricular tachycardia	58/301(19.3)	60/347 (17.3)	2.0 (-4.0 to 8.0)	0.52				
Bystander-initiated CPR including CPR performed with telephone instructions	196/305 (64.3)	197/360 <mark>(</mark> 54.7)	9.5 (2.0 to 16.9)	0.01				



### Dans cette étude il n'y avait pas de RCP guidée par téléphone pour les témoins qui appelaient









Variable	Intervention (N=306)†	Control (N=361)†	All Suspected Out-of-Hospital Cardiac Arrests (N=861)
Cases of out-of-hospital cardiac arrest in which volun- teers were <mark>located within 500 m</mark> — no. (%)			
No volunteers	57 (19)	83 (23)	124 (14)
1–3 volunteers	86 (28)	135 (37)	236 (27)
4–9 volunteers	86 (28)	89 (25)	289 (34)
>10 volunteers	77 (25)	54 (15)	212 (25)
Volunteer action — proportion of cases (%)			
1 or more volunteers responded to SMS or voice alarms	199 (65)	NA	595 (69)
Volunteers reached scene	180 (59)	NA	520 (60)
Volunteers arrived at scene before EMS personnel and first responders	70 (23)	NA	202 (23)
Volunteers started CPR	40 (13)	NA	NA



Clinical paper

A smartphone application for dispatch of lay responders to out-of-hospital cardiac arrests

Ellinor Berglund<sup>a</sup>, Andreas Claesson<sup>a</sup>, Per Nordberg<sup>a</sup>, Therese Djärv<sup>a</sup>, Peter Lundgren<sup>b,c</sup>, Fredrik Folke<sup>d</sup>, Sune Forsberg<sup>e,f</sup>, Gabriel Riva<sup>a</sup>, Mattias Ringh<sup>a,\*</sup>

Lay responders were recruited through e-mails, advertisements in social media, in newspapers and via CPR-training companies.

During the runin period of February to August 2016 the number of lay responders increased from 17,206 to 23,097.

Lay responders arrived at the scene in 116 cases (58%), and prior to EMSs in 51 cases (26%)

An AED was attached in 17 cases (9%) and 4 (2%) were defibrillated

Lay responders performed CPR in 54 cases (27%)

Median distance to the OHCA was 560 m (IQR 332–860 m), and 1280 m (IQR 748–1776 m) via AED pick-up



BJA

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## Use of a hand-held digital cognitive aid in simulated crises: the MAX randomized controlled trial

R. Lelaidier<sup>1,2,\*</sup>, B. Balança<sup>1,3,4</sup>, S. Boet<sup>5,6</sup>, A. Faure<sup>1,2</sup>, M. Lilot<sup>1,7,8</sup>, F. Lecomte<sup>8</sup>, J.-J. Lehot<sup>1,4,8</sup>, T. Rimmelé<sup>1,2,10</sup> and J.-C. Cejka<sup>1,2</sup>

Technical performance



### Le smartphone peut aider le témoin à mieux faire

Non-technical performance





# Questions

Prise de conscience et entrainement Amélioration de l'alerte et de la détection MCE assisté par centre de réception des appels Appli smartphone à mieux définir

Multifaceted intervention for increasing performance of cardiopulmonary resuscitation by laypersons in out-of-hospital cardiac arrest. A stepped wedge cluster randomized controlled trial DISPATCH.

Pr G Debaty, Grenoble