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Letter to the Editor

More patients could benefit from dispatch of citizen first responders to cardiac arrests



To the Editor,

European Resuscitation Council and American Heart Association resuscitation guidelines recommend dispatching first responders to out-of-hospital cardiac arrests (OHCA) to shorten no-flow time and increase survival.^{1,2} First responders are an addition to the traditional emergency medical service and are dispatched, if they are within close vicinity of a patient suffering OHCA.¹ They could be “citizen first responders” (i.e. laypersons and off-duty personnel) or “professional first responders” (i.e. police officers and firefighters on call).³

It came to our attention, that several regions (especially in the United States of America) are currently dispatching citizen first responders only to cardiac arrests occurring in public places.⁴ While this probably aims at protecting citizen first responders, patients and their relatives, it systematically denies a majority of cardiac arrest victims this potentially lifesaving intervention.⁴

There are three main reasons why citizen first responders should attend OHCA at private places: (i) Approximately 70% of all OHCA occur at private places. (ii) Cardiac arrests occurring at private places are associated with decreased survival compared to OHCA in public places. (iii) There are fewer automated external defibrillators (AED) in residential areas compared to public places; first responders could bring an AED and shorten the time until first defibrillation.

Safety of first responders, patients and their relatives is of paramount importance. It is imperative that citizen first responders are fully aware that accepting a mission is always voluntary.

We retrospectively analysed nearly 17 000 attended missions in four European countries over a time span of six years. The majority of first responders were dispatched to private places (63%–82.8%). [Table 1](#) shows the number of reported adverse incidents in relation to the number of missions attended by at least one first responder. However, we do not know how often citizen first responders declined a mission due to safety reasons. Most systems allow volunteers to decline or cancel a mission at any point without documentation of reasons.

In all systems included in this analysis citizen first responders are systematically not dispatched to emergencies involving suspected crime, weapons, violence, fire, traffic accidents or other potentially hazardous situations. A continuous link between dispatch centre and citizen first responder is recommended to cancel the mission, if the situation unexpectedly turns out to be dangerous. To increase the safety of patients and relatives, the dispatch centre informs the caller about the approaching first responders.

About 70% of Canadians and Americans interviewed stated that if they would suffer a cardiac arrest in a private setting, they would feel

Table 1 – Number of reported adverse incidents (violence, theft or threat to either first responders, patients or relatives) in relation to number of attended first responder missions.

Region	Number of missions attended by at least one first responder	Number of reported adverse incidents
Austria, Vienna	361	2 *
Germany, Freiburg	1 436	0
Germany, Vorpommern-Greifswald	195	1 **
Sweden, Hearrunner System	12 824	<50
Switzerland, Basel and Baseland	311	0
Switzerland, Geneva	215	0
Switzerland, Ticino	659	0
Switzerland, Valais	> 450	0
Switzerland, Vaud	531	1*

*cardiac arrest caused by suicide: weapon at private place; first responders did not feel compromised in their safety **cardiac arrest caused by substance abuse: syringes at private place; first responder did not feel compromised in her safety.

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(very) comfortable for a first responder to be dispatched to them.⁵ To increase patients' and relatives' safety, most systems require their citizen first responders to register with their names, addresses and qualifications and some systems request attendance of a face-to-face training.

Looking back at experiences from four different European countries over a time span of six years we suggest that potential risks of dispatching citizen first responders to private places can be managed, if safety precautions are taken.

Declaration of Competing Interest

MPM is member of the Executive Committee of the German Resuscitation Council (GRC); chair of the charitable organisation "Region of Lifesavers", which is responsible for operating a first responder system and is shareholder of SmartResQ ApS. MPM received speaker honoraria from Stryker, Duisburg/Germany. LS and DF are together with Karolinska Institutet Innovation shareholder of Hearrunner system. DF is operative manager of Hearrunner. All other authors state that they have no conflicts of interest.

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