

Available online at www.sciencedirect.com

Resuscitation

journal homepage: www.elsevier.com/locate/resuscitation

Letter to the Editor

Italian in-hospital emergency number: A call for action



Cardiac arrest represents the worst in-hospital emergency that can occur within the healthcare organization. According to a multicenter study, the average observed is 1.53 in-hospital arrests per 1000 patients in Italy¹ and the survival rate does not exceed 20% all over the world.²

The majority of in-hospital cardiac arrests occur in non-intensive wards¹ because the absence of continuous monitoring of the vital signs may delay the recognition and management of the situation.³

The assumption of a single standardized call number like 2222, proposed at European level since 2006, can lead to an increase in patient effectiveness, efficiency and safety avoiding delays in emergency management. At the same time this could be a guarantee for the healthcare professional who may change hospitals and cities, thus reducing confusion and potential adverse events.⁴

Following these considerations, we carried out an observational study, between 15th January and 15th March 2019, through a national telephone survey with convenience sampling, contacting the Departments of 152 Public Hospitals all over Italy (at least one for each province), with the main objective of knowing the number and the ways of activation for in-hospital emergencies.

This research showed that only 2.6% of hospitals used 2222 as the only number for in-hospital emergencies while 97.4% used other numbers, consisting of two figures in 1.3%, three in 10.1%, four in 81.8% and five in 6.8%. Furthermore in 2% the number to contact is different during the day and the night. In-hospital emergencies are managed by a doctor working in intensive care unit (77%), in emergency room (6.6%), in high-care medicine ward (1.3%) or by the consultant in charge in the ward where the emergency happens (15.1%). Medical staff answering emergency calls are not exclusively dedicated to this service in 89.5% of hospitals.

This survey provides a realistic picture of the organization of in-hospital emergencies in Italy, highlighting that some of the difficulties found in the study by Rothwell et al. on the creation of a telephone number dedicated to in-hospital emergencies were only partially solved.⁵ In fact, even if an emergency response number has been activated in various hospitals, this is nearly always different from structure to structure, creating those difficulties that have been

overcome by the only number dedicated to out-of-hospital emergencies, such as 112 in Europe or 911 in the USA.

Because of the heterogeneity level of organization and logistic found, we believe it is necessary to proceed with an important improvement process for the uniformity of the in-hospital emergencies activation in Italy.

REFERENCES

1. Radeschi G, Mina A, Berta G, et al. Incidence and outcome of in-hospital cardiac arrest in Italy: a multicentre observational study in the Piedmont region. *Resuscitation* 2017;119:48-55, doi:<http://dx.doi.org/10.1016/j.resuscitation.2017.06.020>.
2. Morrison LJ, Neumar RW, Zimmerman JL, et al. Strategies for improving survival after in-hospital cardiac arrest in the United States: 2013 consensus recommendations: a consensus statement from the American Heart Association. *Circulation* 2013;127:1538-63, doi:<http://dx.doi.org/10.1161/CIR.0b013e31828b2770>.
3. Sandroni C, D'Arrigo S, Antonelli M. Rapid response systems: are they really effective? *Crit Care* 2015;16:104, doi:<http://dx.doi.org/10.1186/s13054-015-0807-y>.
4. Whitaker DK. Establishing a standard "Cardiac Arrest Call" telephone number for all hospitals in Europe-2222. *Resuscitation* 2016;105:e25, doi:<http://dx.doi.org/10.1016/j.resuscitation.2016.05.011>.
5. Rothwell PM, Udawadia ZF, Jackson EA, Lawler PG. Cardiac arrest telephone numbers. *Lancet* 1990;335:1407, doi:[http://dx.doi.org/10.1016/0140-6736\(90\)91292-l](http://dx.doi.org/10.1016/0140-6736(90)91292-l).

Gian Domenico Giusti*

Department of Anesthesia, Intensive Care and Emergency, Azienda Ospedaliera Universitaria, Perugia, Italy

Bianca Reitano

Azienda Ospedaliera Senese, Siena, Italy

Maura Lusignani

Department of Biomedical Sciences for Health, University of Milan, Milan, Italy

Laura Rasero

*Dipartimento di scienze della salute UNIFI UOC ricerca e sviluppo
clinical practice AOU Careggi, Florence, Italy*

Alessandro Galazzi

*Department of Anesthesia, Intensive Care and Emergency,
Foundation IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan,
Italy*

* Corresponding author.

E-mail address: giandomenico.giusti@unipg.it (G. Giusti).

Received 9 May 2019

<http://dx.doi.org/10.1016/j.resuscitation.2019.05.011>

© 2019 Elsevier B.V. All rights reserved.