

G. M. Eastwood  
R. Bellomo

### Comments on Efendijev et al.: Temporal trends in cardiac arrest incidence and outcome in Finnish intensive care units from 2003 to 2013

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Dear Editor,  
In their retrospective cohort study, Dr. Efendijev and colleagues [1] report a decrease in the incidence of intensive care unit cardiac arrest (ICU-CA) in Finnish ICUs between 2003 and 2013. Strikingly, these investigators report a high crude incidence of 29 in-ICU cardiac arrests/1,000 ICU admissions. The

authors suggested that the decreased ICU-CA incidence rate was attributable to technical developments, more effective treatments and reflects a similar reduction in overall hospital mortality over time. However, we are concerned that the findings may not represent worldwide trends in ICU-CA or even represent advancements in technology and treatment.

Recently, we reported an ICU-CA incidence rate of 6.28/1,000 ICU admissions for patients admitted to an Australian tertiary ICU [2]. This represents a fivefold decrease compared to the Finnish cohort [1]. Furthermore, two previous large single-centre retrospective studies have reported even lower rates of ICU-CA, at 4.02/1,000 admissions [3] and 4.44/1,000 admissions [4], respectively. Together these findings suggest that lower ICU-CA incidence rates may be more closely aligned to healthcare system differences and more proactive decisions about “not for resuscitation” orders, as well as improvements in medical practice,

critical care nursing education levels and nurse to patient ratios.

### References

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G. M. Eastwood (✉) · R. Bellomo  
Department of Intensive Care, Austin  
Hospital, Melbourne, Australia  
e-mail: [glenn.eastwood@austin.org.au](mailto:glenn.eastwood@austin.org.au)