

Does Size Matter?

Cardiac Arrest Survival to Discharge Based on the Number of Hospital Beds-AHA Midwest Affiliate



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Background and Objectives:

In-hospital cardiac arrest can be challenging. The frequency of events outside of the emergency department and critical care units is typically low which makes it a stressful event for staff.

There were greater than 200,000 in-hospital cardiac arrests in the United States in 2016. Only 24.9% survived!

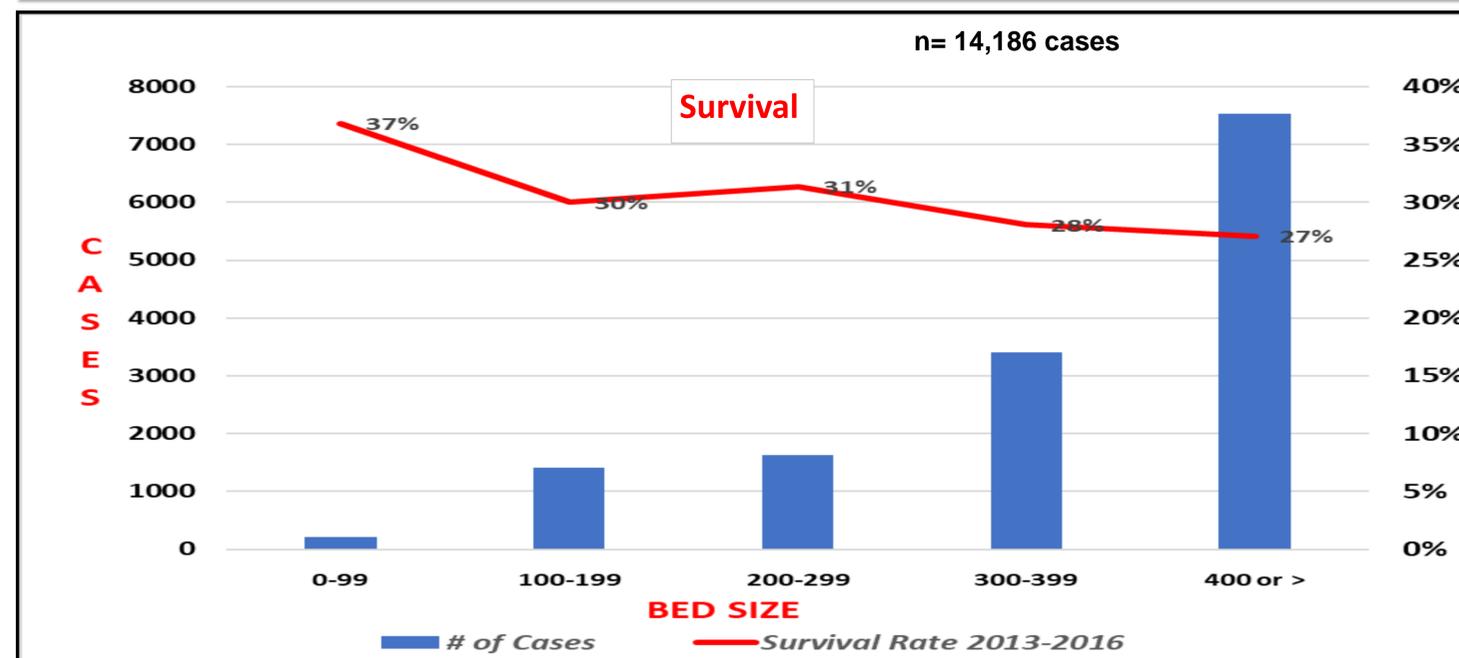
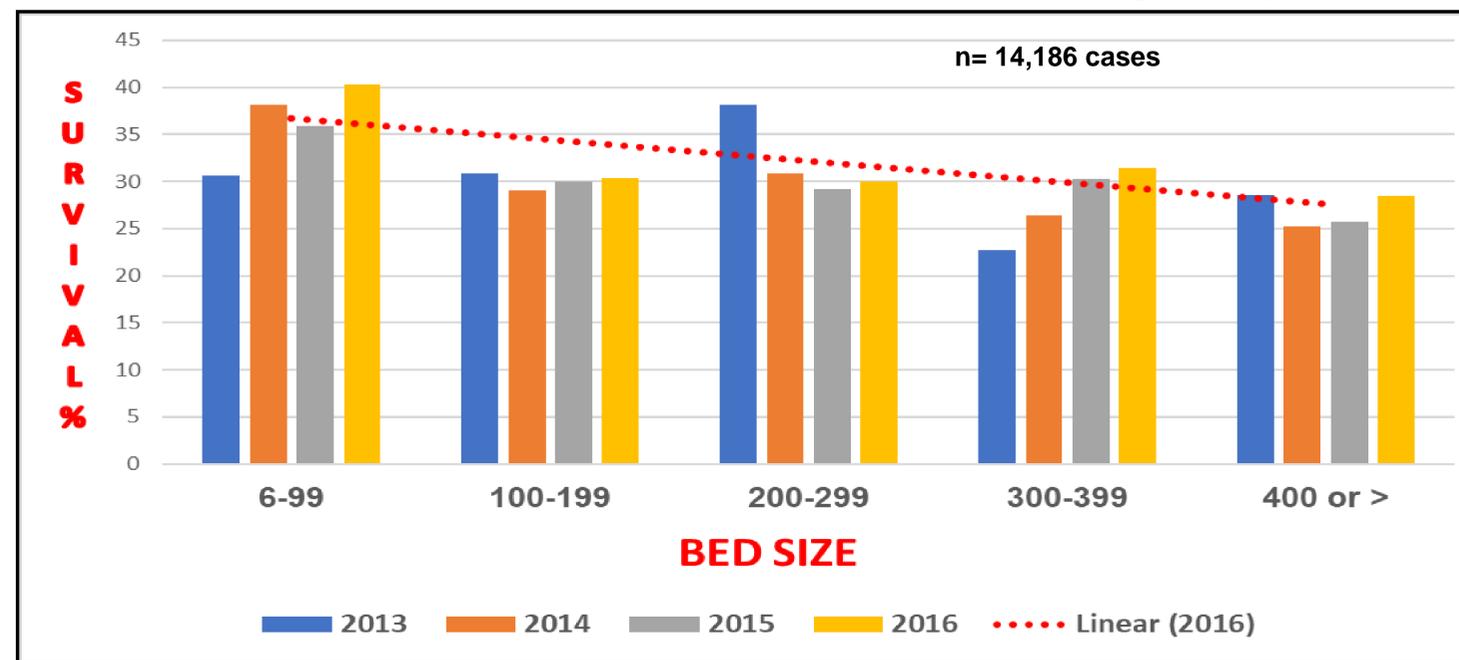
Get With the Guidelines-Resuscitation® is a quality improvement tool for hospitals to measure and evaluate their in-house codes and resuscitation rates. It may be assumed that survival rates are better at larger hospitals. The objective of this study was to examine the association between in-hospital cardiac arrest survival rates based on bed size.

Methods:

By using number of beds as a comparison and data from Get With the Guidelines-Resuscitation we sampled 46 hospitals in the eleven-state AHA Midwest Affiliate, (IL, IN, IA, KS, MI, MN, MO, NE, ND, SD, WI), comparing survival to discharge from cardiac arrest, with and without shockable rhythms from January 1, 2013-December 31, 2016. All patients are included in a risk adjusted formula within Get With the Guidelines-Resuscitation.

DISCLOSURE INFORMATION:

The following relationships exist related to this presentation:
R. Gueret, none; A. Miller, none; K. Thomas, none; G. Myers, none.



Results:

In our comparison, we included hospitals with licensed and/or staffed beds of less than 100, 100-199, 200-299, 300-399 and greater than 400 beds

The data showed that higher sustained return of spontaneous circulation rates with survival to discharge are not dictated by the size of the hospital. In all 4 years shown, successful resuscitation rates were higher at hospitals with fewer beds verses those with more beds.

The data also demonstrates that, although smaller hospitals have fewer total cases, and therefore a lower margin for error, there is correlation between fewer beds and higher survival rate.

Conclusions:

Does size matter? Not in the way one might assume. Survival to discharge from in-hospital cardiac arrest was not dependent on hospital bed size. It is important that hospitals collect and analyze data regarding in-hospital cardiac arrest to improve survival rates beyond 24.9%.

A further investigation looking at discharge destinations and CPC scores should be considered for a future study to better understand patient conditions at discharge.