Abstract
Introduction: Although rapid response systems (RRS) have been shown to decrease the incidence of cardiac arrest (CA), there are no studies evaluating optimal staffing. We hypothesize that there are no outcome differences between ICU physician and senior resident led events. Methods: A retrospective study of the RRS database at a single, academic hospital was performed from July 1, 2006 to May 31, 2010. Surgical patients and those in the ICU were excluded. Daytime (D) was defined as 7 am-5 pm Monday through Friday, and weekends were defined as 5 pm on Friday to 6:59 am on Monday. The nurse to patient ratio is constant during all shifts. An ICU physician leads daytime events on weekdays whereas night/weekend (NW) events are led by residents. NW events were compared against D events using chi square or Fischer’s exact test. Significance was defined as p<0.05. Results: A total of 1404 events were reviewed with 534 (38%) D and 870 (62%) NW events. Respiratory and staff concerns were more likely during NW compared to D (50% vs. 39% and 46% vs. 34%, p<0.001, respectively). Following RRS activation, no difference was noted between D and NW periods in the incidence of progression to CA, transfer to ICU, or hospital mortality. Invasive procedures were more common in the NW period. Conclusion: Resident-led RRS may have similar outcomes to attending intensivist led events. Prospective studies are needed to determine the ideal team composition. © 2012 Elsevier Ireland Ltd.

Author Keywords
Medical emergency team; Rapid response system; Rapid response team

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