May 14th, 11:30 AM - 1:30 PM

Who codes in the NICU: an analysis of differences between neonatal code blue events and rapid responses and subsequent outcome

Danielle N. Gonzales
Children's Mercy Hospital Kansas City, dgonzales@cmh.edu

Who codes in the NICU: an analysis of differences between neonatal code blue events and rapid responses and subsequent outcome

Background: Regarding code blue (CB) and rapid responses (RR) in the NICU, there is limited data available that have determined the differences in neonatal populations that have had a CB versus a RR.
Objective: The goal of our study was to analyze CB/RR events that took place at Children's Mercy Kansas City (CMH) from 2012-2014 to determine whether there are identifiable differences between those who have a RR event and those with a short or long CB event. Additionally, we looked to determine factors post-event that may impact survival to discharge.
Methods: We performed a retrospective review of all CB/RR events that took place at CMH from 2012-2014 (n=154). We categorized a rapid response as a resuscitation event that does not require chest compressions, a short code does require chest compressions for less than 60 seconds and a long code requires chest compressions for more than 60 seconds. We collected data on variables such as respiratory severity score (RSS), presence of positive cultures 48 hours prior to the event, including the source of the culture and the organism, medications the neonate received 12 hours prior to the event, urine output for 24 hours before and after the event, and kidney function 24 hours before and after the event. Chi-square and Kruskal Wallis tests were used to compare groups.
Results: Preliminary data analysis is as follows. The majority of our events were rapid responses (54%) with the remaining 26% long and 20% short code blue events. Having a positive culture (from any source) within the preceding 48 hours was significantly related to the type of event (p=0.02). Only 8% of RRs have a positive culture prior to the event, while 25% of long codes and 26% of short codes had a positive culture prior to the event. There was not a significant difference in RSS between the 3 event types. (p=0.26).
Conclusion: Among those who had a CB/RR between 2012-2014, our data shows that there was a significant relationship between positive cultures and a CB versus a RR event. There was no significant difference between RSS and a CB or RR event. Our group is continuing to collect data to expand our data set to include CB/RR events from 2012-2017 and will include analysis of additional factors such as medications, urine output and kidney function, as well as further divide data to include the source of the culture and type of organism.

Characters (including spaces): 2525 (limit 2600)

Danielle Gonzales, MD. Danielle Reed, MD.