



Abstract

SG-iSRRS1085

Qualitative Word Cloud Analysis of Healthcare System Safety Themes Identified Through Mock Code Simulations

¹Huong-Tram Duran,²Ryan Lapointe,³Lillian Emlet

¹Critical Care Medicine, University of Pittsburgh Medical Center, United States

²Critical Care Medicine, University of Pittsburgh Medical Center, United States

³Critical Care Medicine, University of Pittsburgh Medical Center, United States

Objectives:

Mock code rapid response team activation simulations were used in our healthcare system to identify latent threats and provide continuous quality improvement feedback to hospitals and healthcare providers. Our goal was to analyze the mock code reports to identify common themes.

Methods:

We examined, collated and de-identified all consecutive Mock Codes run across our health care system from 2015-2018. We use the R program to create a word cloud with some sentiment analysis.

Results:

Our total number of Mock RRT events for the three-year period 2015-2018 was 95. The majority events were ventricular fibrillation arrest and a minority were rare clinical situations, including difficult airway and malignant hyperthermia.

There were a total of 1594 words included from the mock code reports, which was analyzed in a WordCloud. The relative size of the word in the analysis represents the frequency of the appearance of the word; with the larger the word, the more frequent it appeared in the mock reports. Color coded relationship of positive vs negative words were analyzed. With medical context, the relationship of the negative and positive words shows that the majority of the words used in the mock reports were positive.

Conclusions:

Using a large systems mock code trends can help smaller, novice programs develop robust systems by focusing on a few core areas. Common problems and focus points we discovered in our analysis were: First 5 minutes, Stroke, closed loop, elevators, condition criteria, AED use. Qualitative analysis of mock reports shows that Word Cloud is an alternative method for depicting themes and relationships within reports of simulations. Further, color coding of the words can add an extra layer of comparison between trends. Word Cloud is a useful tool to visualize the frequency of certain themes that occur in the dissection of the simulations.

