

CPR Coach

C16528

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Unmet Need

CPR is a critical component to survival (38.6%) post cardiac arrest in a hospital. There are an estimated 357,900 adult and 19,900 pediatric in-hospital cardiac arrests with the number of adult cases increasing year over year from 2008 to 2017. Currently, CPR efficacy is less than 40% of the American Heart Association standards even with the addition of feedback devices.

Overall, it is exceptionally difficult (if not impossible) for a code team leader to simultaneously focus on high quality CPR, early defibrillation, ALS algorithms and identification of reversible causes of arrest. One of these foci is inevitably compromised, leading to a failure to reach AHA standards. There is a great need for a way to ensure the highest quality of CPR can be continually administered in the life-threatening situations that require it.

Technology ID

C16528

Category

Educational Materials

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Technology Overview

A researcher at Johns Hopkins developed an improved team-based CPR delivery system aimed at integrating a CPR Coach within the resuscitation team to increase the overall quality and compression depth of CPR. To maximize resource effectiveness through division of labor, the CPR Coach was instructed to focus on directing high quality CPR while the code team leader focused on the higher level problem solving of managing the patient according to the appropriate PALS algorithm and diagnosing reversible causes. The CPR coach can cognitively unload the code team leader so that instead of spending mental energy on monitoring quality, they can effectively run through H's and T's earlier in the resuscitation.

The team has created training material to help hospitals include this role and train the CPR Coach, which has yielded positive results in practice, increasing CPR quality and depth. A survey in combination with data exported from Zoll CodeNet Central v5.71 indicated those whom utilized a CPR coach saw higher efficacy, defined as chest compressions delivered to the AHA quality targets in depth and overall compressions.

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