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## Code events: intensivist presence linked to better outcomes



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To better support the highest function of the Johns Hopkins Hospital (JHH) adult code and rapid response teams, a team leadership role was created for a faculty intensivist in order to integrate and improve processes of care delivery, documentation, and decision-making. The introduction of the intensivist's role has the potential to improve patient care while offsetting costs through improved billing capture, according to Johns Hopkins research published in the journal *Critical Care Clinics*.

Rapid response teams (RRTs), also called code teams or medical emergency teams, have generally shown benefit through reductions in cardiopulmonary arrest (CPA) and in-hospital mortality. However, the factors associated with optimal rapid response system function are still being elucidated. Some analysts say team leadership may affect RRT effectiveness and patient outcome, but research on RRT leadership has generated conflicting results.

JHH employs separate code teams and RRTs for adult medicine, surgery, and neurosciences. The composition of the RRT for each department is similar and employs an intensive care unit (ICU) charge nurse, a resident or fellow, and a nursing shift coordinator who are specific to the department. Each department also maintains their own code team, which includes a member of the RRT and several other staff members. The medical intensive care senior resident is a member of all 3 code teams and responds to all events, regardless of department. In addition, a pharmacist and respiratory therapist are required to attend all code calls. A security officer responds to all code events to manage safety and coordinate expedited hospital transport if necessary.

In October of 2013, the central intensivist physician (CIP) was added as the team leader to all adult code team and RRT events. In addition to managing the team, the CIP also serves as the airway management expert and critical care proceduralist at critical events.

Approximately 40% of CPAs at JHH take place outside of a critical care location. The leadership and technical for the CIP are likely to have the greatest value in this large number of CPAs. For this study, researchers compared the survival to return of spontaneous circulation (ROSC) following CPA of greater than 20 minutes between events taking place in the ICU to those that took place outside of an ICU. After implementation of the CIP programme, acute survival of the patients suffering CPA outside the ICU is equivalent to the survival of those in the ICU (ICU, 73.2% [64.3%–84.4%]; non-ICU, 73.0% [70.0%–90%];  $P = .51$ ).

Documentation of events that take place during a resuscitation is a key component of the learning healthcare system. The researchers hypothesised that including code documentation as part of the responsibilities of the CIP would improve the quality of event documentation and that it would also be an indicator of the participation of the CIP in team management. Before the CIP Implementation, notes describing clinical events and clinicians' thinking were usually absent or of poor quality following code team and RRT events. There was, however, a meaningful increase in the physician documentation as the CIP programme progressed.

Before the involvement of the CIP in the code team, leadership completely depended on the medical housestaff. The addition of the CIP allows senior housestaff at JHH to function to the level of their abilities and confidence, while providing them with an experienced consultant to ensure proper process and decision-making. Situation monitoring, mutual support, communication, and the ability to adapt are central team skills and the CIP role ensures these components, which, the authors believe, ultimately enhances the role of the senior residents.

"Although it is plausible that attending intensivist presence at a code event improves outcomes after cardiac arrest, there are inadequate data to conclusively prove this hypothesis. Indeed, the CIP is only one component in the quality improvement and data collection arms of the RRT programme that have taken place at JHH over the last few years. At the same time, improvement in documentation would not be possible without the presence of an attending physician," the authors write.

Source: [Critical Care Clinics](#)

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