

Critical Care Outcomes

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UTILIZING ROBOTS AND AN ICU TELEMEDICINE PROGRAM TO PROVIDE INTENSIVIST SUPPORT FOR RAPID RESPONSE TEAMS

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PURPOSE: The Institute for Healthcare Improvement has identified Rapid Response Teams (RRT) as an intervention that improves the care of hospitalized patients. Many RRTs utilize nurses and respiratory therapists because of the limited availability of physician support. We proposed using our remote intensivist in conjunction with a mobile telemedicine presence for real-time support to our RRTs.

METHODS: Our remote tele-intensivist currently covers 44 ICU beds in 5 hospitals with a combined hospital bed capacity of 752. Intensivist support for the system-wide RRT was initiated in October 2005 utilizing robots that are brought to the patient's bedside along with the RRT team. The tele-intensivist can visualize the patient and any bedside monitors and can be seen and heard by the patient and care-givers in the hospital. We evaluated the preliminary outcomes and nursing satisfaction to this new RRT methodology.

RESULTS: There were 64 RRT calls from med/surg floors over the first 16 weeks of the program. Preliminary results found that the remote intensivist provided immediate care orders in 70% of the cases, and 55% of the cases required transfer to another hospital unit (ICU or telemetry). Since initiating this program, out of unit cardiac arrests have declined from a nine-month prior average of 38% to currently 28%. A nine-month prior average of codes per 1000 discharges has dropped from 11% to 8.7%. Nursing satisfaction scores averaged 4.7-5.0 (1-5 scale, with 5 strongly agrees) for improved communication and collaboration and better patient outcomes.

CONCLUSION: Mobile telemedicine units in conjunction with a remote intensivist can provide expert support to multiple hospitals RRTs concomitantly. Intensivist assessments and orders provide more timely urgent care interventions. This program has positively impacted preliminary data on out of unit cardiac arrests, codes per 1000 discharges and nursing satisfaction.

CLINICAL IMPLICATIONS: Use of telemedicine technology can provide intensivist coverage to multiple hospitals from a central location and represents a significant capability for extending intensivist care out to floor-based patients in need.

DISCLOSURE: Brian Youn, None.