Multidisciplinary Collaboration To Improve Early Mobility Utilizing An Embedded Therapy Model In Multiple Intensive Care Units

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Purpose: 1) Improve multidisciplinary collaboration with an embedded therapy model. 2) Improve patient and institutional outcomes. 3) Increase therapist productivity in the intensive care unit (ICU) with utilization of a therapy technician. 4) Create a new critical care therapy structure.

Description: This quality improvement project involved a multidisciplinary team of physicians, nurses, physical, occupational and respiratory therapists, a therapy technician and hospital administration. Planning began in March of 2014 with a series of phases allowing utilization of Plan-Do-Study-Act cycles. These systematic stages allowed for continual assessment and improvement which quickly disseminated to other disciplines and their administration. Embedded therapy pilots were completed in two different ICUs each lasting four months in duration: first in a 21 bed combined surgical and medical ICU followed by a 24 bed medical ICU. These units were chosen as they represented a smaller ICU (approximately 1,600 admissions per year) and a larger ICU (approximately 3,000 admissions per year). The remaining nine ICUs were each assessed for five days to ensure accuracy of data extrapolation to develop a new critical care therapy structure and staffing proposal.

Summary of Use: The first embedded therapy pilot focused on changing the ICU culture along with improving outcomes for the patient and institution. Patient and institutional outcomes were collected on all 427 patients admitted to the ICU during a 4 month period. Baseline data was collected via a retrospective medical record review of the 415 patients admitted during the prior four months. Patients achieving ability to transfer into standing at first therapy session improved by 20% (P = 0.01). Discharge location improved with a 4.6% increase of patients discharging to home and a 4.1% decrease of patients discharging to a skilled nursing facility (P = 0.17). Days
on ventilator decreased by 42% and total length of stay decreased by ¾ of a day (P = 0.21).
These outcomes were achieved with staffing of 0.5FTE PT, 0.25FTE OT, Monday - Friday.
Significant momentum was gained as key figures within the departments' administration became engaged. For the first time, physical therapy achieved membership within critical cares’ clinical practice subcommittee. A second embedded therapy pilot was then completed with a focus on staffing. Therapist productivity improved with an increase of 75 billable minutes utilizing a therapy technician 4 hours in the morning. As this is the largest ICU, data helped establish the staffing ceiling. Currently the data is being extrapolated to create a staffing proposal and brief assessments of the remaining 9 ICUs will be utilized to ensure accuracy.

**Importance to Members:** The results of this project highlight barriers and solutions for improving early mobility in all ICUs at a large medical center. Pending further analysis and completion of a staffing proposal, to be completed by fall of 2015.