Piloting a Compassionate Extubation Protocol

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Background

Compassionate extubation (CE) is the process of removing mechanical ventilation and allowing a patient to die peacefully at the end of life.[1] Despite the intent to relieve sufferings, around 30% of the patients undergoing compassionate extubation experience distressing respiratory symptoms after ventilator withdrawal.[2,3] In our previous study, we found a significant variability in the patient care delivered during ventilator withdrawal.[2] Therefore, we developed a CE protocol to address the gaps in the clinical practice. The primary aim of this quality improvement (QI) project was to pilot the use of a protocol-based approach to improve the process of CE among adult patients.

Methods

Based on the baseline data (n=62), a CE protocol was designed to include key drivers of change: 1) identify patients at high risk of dyspnea associated respiratory distress, 2) improve ventilator weaning process and symptom management, and 3) increase chaplain and physician presence during ventilator withdrawal. The protocol was piloted in the medical intensive care unit from November 2020 to February 2021. All adult patients who underwent CE during the pilot period were enrolled. Manual chart review was performed to gather demographic data, ventilator settings, and symptomatology. A Likert scale was used to assess Respiratory Therapists' (RT) level of emotional discomfort during CE. Our QI goals were to reduce the presence of agonal breathing by 12%, increase ventilator weaning by 39%, increase physician presence by 11% and increase chaplain presence by 31%. Results were analyzed using descriptive and Chi-square statistics.

Results

In this pilot study, 15 patients underwent CE. As compared to the pre-cohort, physician presence was increased by 7.3% (19.4% vs 26.7%), chaplain presence increased by 13.9% (19.4% vs 33.3%), ventilator weaning increased by 49% (11.3% vs 60%) and the incidence of agonal breathing was reduced by 5.6% (32.2% vs 26.6%). Among RTs, level of emotional discomfort during CE increased by 31.2% (35.5% vs 66.7%). There were no statistical differences noted among these changes.

Conclusions

Utilizing a QI process to address variability in the practice of CE, we developed a CE protocol. Implementation of this protocol was shown to be feasible, and we made progress toward our goals of increasing ventilator weaning frequency and reducing agonal breathing and increasing physician and chaplain presence during CE. Next steps in the QI process include performing a root cause analysis to assess why the chaplain and MD presence did not increase our goals, updating and re-evaluating the protocol. Further evaluation as to the cause for increase in RT emotional discomfort is also warranted.

References

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Disclosures

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