



Shaping healthcare through innovation, expert leadership and collaborative partnerships



Amy Litwinovich, MBA, RN Director of Nursing; Christopher Lindsey, BSN, RN, CVICU Manager; Jamie Stebler, MBA, CCP, ECMO Coordinator; Amber Ganoe MSN, RN, ECMO Supervisor

Morgantown, West Virginia

Introduction

Establishing positive staff morale with safe patient management in the face of a pandemic became a high priority that changed the way healthcare facilities operate all over the world. At WVU Medicine, our collaborative partnerships and expert leadership influenced our multidisciplinary team approach, transforming the nursing care model and positively impacting our patient outcomes. Within the Heart and Vascular Institute at WVU, our Extracorporeal Membrane Oxygenation program (ECMO) implemented the most up to date treatment modalities along with creating a supportive staffing model to meet the high demands of this critically ill patient population.

Methodology

In 2017, our program instituted a Perfusion oversight model utilizing ECMO Specialist who are trained Registered Nurses (RN) and Respiratory Therapists (RT). This highly trained group, with Perfusion availability 24 hours a day/ 7 days a week, have a ratio of 2:1 along with having the direct care nurses maintaining a ratio of 1:1. In 2020, when the pandemic hit its peak within our organization, staffing was supplemented from an outside company to maintain the staffing model set forth. Creative incentives and bonuses were also established for direct care employees participating in patient care during this on-going high crisis time.



Results

Since May of 2020, our ECMO program has cannulated over 54 COVID positive patients who have been placed on ECMO and is still ongoing. Using several data platforms specific to our ECMO patient population, our outcomes continue to be well above the national benchmarking averages. COVID positive patients placed on ECMO at WVU thus far show a survival to discharge rate of 75%. This is compared to the Extracorporeal Life Support Organization's (ELSO) national data value of 48%. A cost comparison matrix of Perfusion versus ECLS Specialist based ECMO run programs was also developed. From an institutional standpoint, our current staffing model was significantly more cost effective, giving higher overall revenue (Dhamija, A. et al, 2021).



Conclusion

Our mantra, "Cannulate, Extubate, and Ambulate" is what we attest to our overall achievements. Supporting a staffing model as described has shown to be overly successful in giving us the ability to execute both our mantra and successfully take patients off ECMO support. The overall cost effectiveness and achievable revenue of the program, along with maintaining positive staff morale has also shown to contribute to our continuing positive patient outcomes.

References

Dhamija, A., Kakuturu, J., Schauble, D., Hayanga, H. K., Jacobs, J. P., Badhwar, V., & Hayanga, J. W. A. (2021). Outcome and Cost of Nurse-led versus Perfusionist-led Extracorporeal Membrane Oxygenation. *The Annals of Thoracic Surgery*. <https://doi.org/10.1016/j.athoracsur.2021.04.095>

