

**Control #: 43 Eleanor Huff**

**Category:** Quality improvement (Systematic and continuous actions leading to measurable improvement in health care service and/or health status)

**Title:** System ECMO Collaborative: Breaking Down Silos Improves Patient Outcomes

**ABSTRACT BODY**

**Background**

In a healthcare landscape increasingly focused on measuring and producing high-quality outcomes, existing health system structures are being examined to ensure appropriate regionalization of services. Given the intensive resource requirements of providing an extracorporeal membrane oxygenation (ECMO) program, our health system asked us to examine operations, practices and quality outcomes at four internal hospitals providing ECMO services to surface and reduce clinical variation.

**Methods**

Through a multidisciplinary quality project engaging all ECMO system stakeholders, an extensive site by site assessment was performed. Project teams focused on ECMO data collection, data storage, existing treatment protocols, equipment, transfer and transport operations, ELSO outcomes, financial impact at four hospitals. The unique challenges of this journey include the large size of the organization, high level of acuity/complexity of ECMO population and application of change management techniques deployed to address internal “silos”. After prioritization of variations, the teams began to host targeted and robust discussions on how to align best practices in all 8 categories.

**Results**

Implementing standardized system ECMO guidelines, an internal database and transport process improvements resulted in positive trends in quality metrics: average days on ECMO and survival at discharge (9.3 days vs 7.0 days,  $p=0.37$ ; 41% vs 51%,  $p=0.07$ ). Volume metrics including total volume, VV ECMO, and ECPR increased, while VA ECMO and transport volume requiring cannulation on-site decreased. The success of the change management approach resulted in routine collaboration across the enterprise that didn't exist prior to project initiation.

**Conclusions**

This large-scale system quality improvement project provided valuable insights into building a foundation for introducing change and mobilizing alignment. This approach enabled system consensus on guidelines, protocols, process improvements and enhanced teamwork. Positive trends in our ECMO quality outcomes illustrate that this template to leading healthcare transformation is a model worth replicating in other improvement initiatives.

**Clinical Implications:** Efficiently design, lead and sustain large scale CV transformation efforts using key project and change management techniques.