

Early Collaboration of Goal-Oriented Palliative Care of Patients Requiring ECMO Support to Reduce ICU Length of Stay

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PROBLEM STATEMENT

- In 2021, 98 patients were placed on extracorporeal membrane oxygenation (ECMO)
 - 65% of these patients died & 37.75% never received a palliative care consultation
- The average length on ECMO in the cardiothoracic intensive care unit (CTICU) was approximately 14 days
- The average length of stay (LOS) in the intensive care unit (ICU) was 27 days, and the average total hospital LOS was approximately 37 days
- The average total days from ECMO initiation to palliative care consultation is approximately 7 days
- The average total days from palliative care consultation to the patient's final outcome (discharge or death) is approximately 17 days

PROJECT PURPOSE

- The objective is to develop a protocol to immediately consult palliative care when ECMO is initiated on a patient
- The overarching aim patient is to reduce the patient's overall LOS in the ICU and/or hospital.
- Will early integration of a palliative care consultation in adult patients initiated on ECMO increase the number of patients on the palliative care service and decrease the LOS in the CTICU versus the usual practice over a three-month period?

MODEL/NURSING THEORY

- This project is a quality improvement project because its purpose is to improve patient outcomes, system performance, and effectiveness of care by using a systematic change method to redesign work processes and implement change
- The framework for this DNP project will be theoretically based using Donabedian's model. This model evaluates the quality of care using three components: structure, process, and outcome

Variable	Value
Patient	Ex: Smith
Age (years)	47 years old
Gender	Male
Diagnosis	Heart failure
Hospital Admit Date	5/14/23
ICU Admit Date	5/15/23
ECMO Implant Date	5/15/23
ECMO Type	VA
ECMO Duration (days)	10
Cannula Site	Central
Flow (LPM)	4
Sweep (LPM)	2
RPM	3000
LDH	200
Free hgb	<30
Anticoagulation	Heparin gtt
Palliative care consult	Yes/No, date consulted

Figure 1: Rounding sheet

Variable	Pre-Intervention	Post-Intervention	P-value
	No. (%)		
Male	19 (61)	18 (62)	0.9496
Female	12 (39)	11 (38)	0.9496
Caucasian	16 (52)	19 (66)	0.2788
Black	7 (23)	5 (17)	0.6013
Hispanic	8 (25)	4 (14)	0.2487
Asian	0 (0)	1 (3)	0.3011
	Mean (SD)		
Age	47 (17)	54 (15)	0.0971
Days on ECMO	12.1 (9.7)	12.2 (20.8)	0.9719
Days from Admit to PC	10.8 (7.9)	6.1 (17.4)	0.1776
Days from ECMO to PC	4.3 (5.8)	2.6 (18.7)	0.6324
Days from PC to Final Outcome	17.9 (20.5)	22.2 (25.4)	0.4751
ICU LOS	26 (29.6)	22.8 (22.7)	0.6426
Total LOS	31 (26)	27.3 (26.1)	0.5801

Table 1: Demographic and clinical variables

METHODS

- Subjects (Participants)**
 - Adults initiated on veno-venous (VV) or veno-arterial (VA) ECMO support
 - Only patients in the CTICU were included
- Setting**
 - Level-one trauma center in Tampa, Florida
 - 18-bed CTICU that cares for critically-ill patients that are in the post-operative cardiothoracic surgery phase
- Measurements**
 - Patient's hospital admit date, CTICU admit date, ECMO Implant date, palliative consultation date, the date the patient transferred out of CTICU, date of ECMO explant, discharge or death date, total ECMO duration, day from admit to PC consult, days from ECMO initiation to PC consult, days from PC consult to the final outcome, CTICU LOS, ICU LOS, and hospital LOS
- Intervention and Data Collection**
 - Palliative care was consulted upon or before ECMO cannulation
 - Data including the above measurements was collected over a three-month period

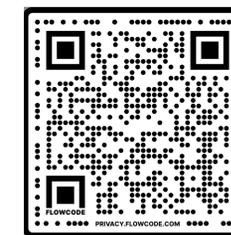
Limitations

- Small sample size

IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- Palliative care consultation at the time of ECMO implantation helps guide patients and their families through difficult decision making and symptom management
- Integrating a palliative care consult into the ECMO order set will make the consultation a standard or practice

REFERENCES



Adapted from Donabedian's Model

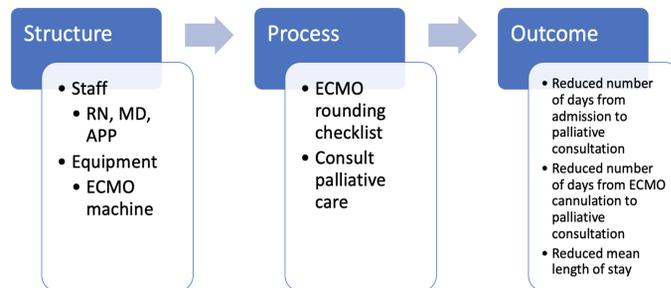


Figure 2: Adapted from (Donabedian, 1997).



Figure 3: Project Timeline

Overall hospital length of stay and ICU length of stay decreased.