Position Statement

Respiratory Therapists as Extracorporeal Membrane Oxygenation (ECMO) Specialists

The American Association for Respiratory Care endorses the use of qualified and appropriately educated Respiratory Therapists as Extracorporeal Membrane Oxygenation (ECMO) Specialists.

ECMO is a modified cardiopulmonary bypass technique used for the treatment of life threatening cardiac or respiratory failure. An ECMO Specialist is the technical specialist educated to manage the ECMO system including blood pump, tubing, artificial oxygenator, and related equipment. The ECMO Specialist, under medical direction and supervision, is also educated to be responsible for the clinical needs of the patient on ECMO which can include: (1) maintenance of normal acid-base balance, oxygenation, and ventilation, (2) administration of blood by-products, (3) medication delivery, (4) thermoregulation and (5) maintenance of appropriate anticoagulation.

The Respiratory Therapist’s education provides extensive training in maintenance of normal acid-base balance, oxygenation and oxygen delivery, ventilation, cardiopulmonary anatomy, physiology, and pathophysiology. Equipment trouble shooting, transport of critically ill patients, familiarity with diverse patient populations and disease management are key attributes for training of the Respiratory Therapist. These fundamentals of Respiratory Care education and clinical practice make the Respiratory Therapists uniquely qualified to understand further education as an ECMO Specialist.

The requisite qualifications for educating a Respiratory Therapist to be an ECMO Specialist should include: (1) the successful completion of an accredited respiratory care educational program, (2) an earned Registered Respiratory Therapist (RRT) credential from the National Board for Respiratory Care (NBRC), (3) a state license (where required), and (4) clinical experience in critical care. Education as an ECMO Specialist should be in accordance with the Extracorporeal Life Support Organization’s (ELSO) document entitled “Guidelines for Training and Continuing Education of ECMO Specialists.”

1
References:

1. [https://www.elso.org/portals/0/igd/archive/filemanager/97000963d6cusersshyerdocumentselsoguidelinesfortrainingandcontinuingeducationofecmospecialists.pdf](https://www.elso.org/portals/0/igd/archive/filemanager/97000963d6cusersshyerdocumentselsoguidelinesfortrainingandcontinuingeducationofecmospecialists.pdf)

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