

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 qualified 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 and blood by-products, (3) medication delivery, and (4) maintenance of appropriate anticoagulation.

The Respiratory Therapist's education provides extensive training in the maintenance of normal acid-base balance, oxygenation, and oxygen delivery, ventilation, and cardiopulmonary anatomy, physiology, and pathophysiology. Equipment troubleshooting is another key attribute in the training of the Respiratory Therapist. These fundamentals of Respiratory Care education make the Respiratory Therapist uniquely qualified to undertake further education as an ECMO Specialist. Additionally, the Respiratory Therapist's ability to function in multiple clinical settings among all age groups enhances his/her value as an ECMO Specialist, allowing for the care of all patient populations in a variety of critical care environments.

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 (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."

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