

Rush ECMO Program

ECMO Program

The Rush University Medical Center extra-corporeal membrane oxygenation (ECMO) program offers a comprehensive, multidisciplinary, patient-centered approach to the management of neonates to adults with severe cardiopulmonary failure not responsive to conventional therapy.

We work diligently to create individualized care plans for each patient with a focus on early extubation, progressive mobility, and physical rehabilitation to assist in bridging to a higher quality recovery. For years, our survival percentage has met or exceeded the international average for both respiratory and cardiac ECMO.

Historically ECMO was thought of as salvage therapy; however, due to our innovative approach, the majority of ECMO patients at Rush survive to discharge from the hospital. Please call us early for consultation or referral.

ELSO Designation

Rush University Medical Center was the first medical center in the state of Illinois to receive designation from the Extracorporeal Life Support Organization (ELSO) as a Center of Excellence in Life Support for both adult and pediatric ECMO patients.



This award signifies that we are distinguished leaders in critical care, providing state of the art healthcare with high quality standards, specialized equipment and supplies, defined patient protocols, and advanced education of all staff members.

The ELSO Award of Excellence is recognized by the *US News & World Report* and *Parents* magazine as one criterion for top institutions.

To refer patients

For external referrals:

Contact Rush Transfer Center

Call (312)-NOW-RUSH to speak directly to a registered nurse who will initiate the patient transfer process

For general inquiries regarding the ECMO program:

Contact Erica Bak, ECMO Program Manager

Call (312) 563-4324

Email: Erica_I_Bak@rush.edu

Our team

Our ECMO leadership team includes specialists from both adult pulmonary, critical care and cardiac surgery, and pediatric surgery and critical care.

Our multidisciplinary team includes representatives from multiple medical subspecialties and care teams working collaboratively to provide the highest level of care.

All members of the team are specially trained to care for ECMO patients

ECMO Utilization

Most of our ECMO patients have complex cardiovascular or pulmonary issues which are not responding to optimized conventional therapy.

Some indications for ECMO include:

Pulmonary

Etiologies range from ARDS, pneumonia, noxious inhalation, asthma, etc. for pediatric and adult patients to meconium aspiration, PPHN, RDS and congenital diaphragmatic hernia for neonatal patients.

Indications for consultation commonly include:

- Refractory hypoxemia ($\text{PaO}_2 / \text{FiO}_2$ ratio < 150 on $> 90\%$ FiO_2)
- Refractory hypercapnia ($\text{pH} < 7.20$ with $\text{Pplat} > 30$) despite appropriate vent settings
- Concern for rapid decompensation

Cardiovascular

- Cardiogenic or septic shock despite adequate intravascular volume, inotropic and vasopressor support, and mechanical IABP therapy
- Failure to wean from cardiopulmonary bypass

ECMO utilization continues to rise every year with increasingly positive outcomes due to improved management strategies and early implementation in the disease course before irreversible end organ failure occurs. Based on standardized severity scoring, expected mortality approaches 80 percent for these patient populations. Comparatively, greater than 60 percent of patients supported on ECMO are discharged home.

