Department:	Medical Management	**Original Approval:**	06/09/2016
Policy #:	MM148	**Last Approval:**	05/08/2018
Title:	Extracorporeal Membrane Oxygenation Therapy		
Approved By:	UM Committee		

BACKGROUND

The purpose of this clinical policy is to ensure compliance with the final determinations of the Washington State Healthcare Authority's Healthcare Technology Assessment Program regarding coverage of Extracorporeal Membrane Oxygenation therapy.

Summary from: WA HTA 20160318A – Extracorporeal Membrane Oxygenation Therapy (ECMO)

https://www.hca.wa.gov/about-hca/health-technology-assessment/extracorporeal-membrane-oxygenation

Extracorporeal membrane oxygenation (ECMO) is a form of life support that provides cardiopulmonary assistance outside the body. ECMO may be used to support lung function for severe respiratory failure or heart function for severe cardiac failure. An ECMO circuit can be set up as veno-venous (VV) or veno-arterial (VA). VV-ECMO provides external gas exchange, bypassing the lungs and protecting them from high tidal volumes of ventilation that would otherwise be needed to oxygenate and ventilate the patient. VV-ECMO is indicated for patients with potentially reversible respiratory failure, including those with severe acute respiratory distress syndrome (ARDS), primary graft dysfunction following lung transplant, and trauma to the lungs.

VA-ECMO provides the same external gas exchange as VV-ECMO, but also augments blood flow in settings of severe cardiac injury. VA-ECMO is indicated for patients with cardiac failure, including cardiogenic shock unresponsive to typical intensive care medicines and cardiac arrest that does not respond to cardiopulmonary resuscitation (CPR). VA-ECMO may also be used for patients following heart surgery or as a bridge to heart transplantation. Finally, both VA- and VV-ECMO may be used intraoperatively as a planned alternative to traditional cardiopulmonary bypass in selected patient populations (e.g., lung or heart transplantation). Other external gas exchange systems provide similar functions without the pump component of VV- or VA-ECMO. These arteriovenous extracorporeal lung assist (pECLA) devices bypass the lung, but not the heart, and use the patient's blood pressure in order to sustain circulation of the externally oxygenated blood. Because of the requirement for adequate cardiac function, these systems have more limited application.

ECMO is a well-established treatment for infants with lung and heart failure and has become a standard of care in many pediatric care centers. In contrast, the evidence base for its use among adults is still emerging. Early studies of ECMO in adults found ECMO to be associated with poor survival rates. However several developments have prompted renewed interest and wider utilization of ECMO in recent years. First, technological advancements have improved the safety of the technique and

broadened the application to include ambulating patients. Technological improvements include heparin-coated cannulae, new oxygenators, and pumps. Second, more recent clinical trials have shown improved survival without severe disability with ECMO compared to conventional ventilator support. Finally, the 2009 H1N1 pandemic spurred increased demand for ECMO at rates higher than previously seen, resulting in additional evidence of a survival benefit.

DEFINITIONS

This policy pertains to Washington Apple Health members and to Medicare members. (There is no Medicare NCD or LCD, and ECMO is not addressed in MCG.)

INDICATIONS/CRITERIA

MediCAID Members	***Continue to criteria for approval below.***
MediCARE Members	

Extracorporeal membrane oxygenation therapy is a **covered benefit with conditions.** Coverage is limited to the following clinical indications:

- In patients with severe life-threatening, but potentially reversible, acute respiratory or cardiac dysfunction unresponsive to conventional management.
- As a bridging therapy for patients in pulmonary failure who are on a pulmonary transplant list.
- As a bridging therapy for patients in cardiac failure who are eligible for a ventricular assist device or cardiac transplantation.

Procedures will be covered only when performed at a facility participating in the Extracorporeal Life Support Organization (ELSO) case registry.

SPECIAL CONSIDERATIONS

None.

LIMITATIONS/EXCLUSIONS

Please refer to a product line's certificate of coverage for benefit limitations and exclusions for these services:

PRODUCT LINE	LINK TO CERTIFICATE OF COVERAGE
MEDICARE ADVANTAGE	http://healthfirst.chpw.org/for-members/resource-library/handbooks-and-guides
WASHINGTON HEALTH PROGRAM	http://chpw.org/our-plans/apple-health/

Citations & References

CFR		
WAC		
RCW		
Contract Citation	☒ WAH	http://chpw.org/our-plans/apple-health/
	☒ IMC	
	☐ MA	http://healthfirst.chpw.org/for-members/resource-library/handbooks-and-guides
Other Requirements		
NCQA Elements		

Revision History

Revision Date	Revision Description	Revision Made By
06/09/2016	New policy written	Kate Brostoff, MD
06/28/2016	Approval	MMLT
06/13/2017	Minor editing	Cyndi Stilson, RN
06/15/2017	No Changes	LuAnn Chen, MD
06/16/2017	Approval	MMLT
03/27/2018	Changed from UM158 to MM148	Cindy Bush
04/05/2018	Transferred to new template	Cindy Bush
05/02/2018	Clarified that these same criteria apply to Medicare members. MCG was removed as guideline for ECMO for Medicare members.	LuAnn Chen, MD
05/08/2018	Approval	UM Medical Subcommittee