

For Immediate Release

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Banner – University Medical Center Phoenix’s ECMO program reaches 10-year milestone

Growing program highly sought to help treat COVID-19 patients

PHOENIX (June 22, 2020) – In the last 10 years, a team of doctors and nurses at Banner – University Medical Center Phoenix has grown and expanded what is now one of the largest ECMO programs in Arizona and the southwest region of the nation. Extracorporeal membrane oxygenation, or ECMO, is a life-saving therapy used to help patients with acute respiratory failure who have not responded to the usual lifesaving treatments like a breathing machine. ECMO therapy has been used to assist patients who are experiencing severe heart failure that required stabilization. It has also allowed for patients to recover from heart or lung complications, and in other cases, it has given doctors and nurses additional time to provide further advanced therapies.

Given the complexities of treating each patient with COVID-19, the ECMO program has been especially helpful in treating several people who are critically ill with the virus.

"We've (also) been able to help a lot of people with diseases like influenza, Valley fever, severe asthma exacerbations, other types of lung injury from aspiration pneumonias, or lung scarring from other bacterial pneumonias," said Dr. Jennifer O'Hea, intensivist at Banner – University Medical Center Phoenix.

An ECMO circuit is a machine that will perform the function of the failing organs during cardiogenic shock or acute respiratory failure. Use of the ECMO circuits during the 2009 H1N1 influenza pandemic helped to serve as a learning opportunity.

"After the influenza pandemic, we were looking for a therapy we could use when conventional methods, like a ventilator or high doses of medications for blood pressure, aren't enough to support the patient," said Stacy Gerle, ECMO program coordinator at Banner – University Medical Center Phoenix.

The hospital's program started with two circuits and 22 ECMO-trained registered nurses. Within the first year, these trained specialists were able to place six patients on a circuit. In the last year alone, the ECMO program treated 79 patients. Today, the program includes several ECMO circuits and 83 highly trained ECMO specialists. All nurses in the program work in the intensive care unit where each of them is trained to care for a patient on ECMO and monitor and troubleshoot the circuits.

The team extended its ability to provide care by starting a mobile ECMO program this year. When a patient is too sick to be transported from another hospital, a specialized team consisting of several ECMO specialists and

doctors travel to that location. The team places the patient on ECMO so he or she can be taken to Banner – University Medical Center Phoenix for additional specialized care.

"Through the ECMO program, I have been able to expand my emotional intelligence so I can better explain the physiological experience of the treatment to families in times of crisis," said Lindsey Medeiros, an intensive care unit nurse at Banner – University Medical Center Phoenix.

Becoming an ECMO specialist involves extensive training requirements and ongoing education.

"Being part of the ECMO team has provided me with a new sense of self as an individual and as a nurse," said Melody Nungaray-Ortiz, an intensive care unit nurse at Banner – University Medical Center Phoenix.

In 2018, the program received the ELSO Award for Excellence in Life Support for the dedicated patient care invested by the team of physicians and nurses.

What is ECMO therapy?

There are two types of ECMO used for patient care. VenoVenous ECMO, or "VV," is for patients who need respiratory support. It works by removing deoxygenated blood from a vein near the heart. As the blood moves through the circuit, oxygen is added, and carbon dioxide is removed. The oxygenated blood is returned to a vein near or in the heart. The patient must have good heart function in order to pump the oxygenated blood to their tissues. By performing the functions that sick lungs are unable to do so, ECMO provides time for the lungs to rest and heal. The circuits at Banner – University Medical Center Phoenix are currently in use providing VV ECMO treatment to COVID-19 patients.

VenoArterial ECMO, or "VA," is for patients who need heart and lung support. VA ECMO removes deoxygenated blood from a vein near the heart. As the blood moves through the circuit, oxygen is added, and carbon dioxide is removed. The blood is returned to the aorta bypassing the heart. This circulates oxygenated blood to the tissues when the heart is too weak to pump. ECMO is a supportive therapy and cannot heal the heart, but it can perform the *function* of the heart, which allows it to rest, healing to occur or advanced therapies like a ventricular assist device, artificial heart or transplant to be planned.

About Banner – University Medical Center Phoenix

Banner – University Medical Center Phoenix is a large teaching hospital that has provided medical care to Arizona and the Southwest since 1911. It is part of Banner – University Medicine, a premier academic medical network. The institution, which has trained thousands of doctors over decades as a teaching hospital, is the academic medical center for The University of Arizona College of Medicine – Phoenix. The hospital, recognized by *U.S. News and World Report* as one of the nation's best hospitals, specializes in heart care, cancer care, high-risk obstetrics, neurosciences, organ transplants, medical toxicology and emergency care, including a Level I trauma center. Banner – University Medical Center Phoenix is part of Banner Health, a nonprofit health care system with 28 hospitals in six states. For more information, visit <http://www.bannerhealth.com/universityphoenix>.

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