WOMAN SAVED BY QUICK THINKING AND COLLABORATION BETWEEN THREE TWIN CITIES HOSPITALS

An outside-of-the-box solution by doctors from three hospitals kept Atsede Engidasew alive after she suffered a pulmonary embolism and went into cardiac arrest following the birth of her child.

Atsede Engidasew (right) poses with her husband, Miheret and daughter. When Atsede suffered a pulmonary embolism shortly after giving birth, a medical team rushed specialized life support equipment from University of Minnesota Medical Center to Fairview Ridges Hospital to keep her alive.

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Atsede Engidasew was nursing her newborn baby last October at Fairview Ridges Hospital when her world went black.

Within minutes, she was in full cardiac arrest. A team led by University of Minnesota Health Heart Care Cardiologist Greg Helmer, MD, responded to an emergency call. At Atsede’s hospital bedside, they tried to stabilize her heart. But she kept dropping into ventricular fibrillation, a serious condition that occurs when the ventricles of the heart, overwhelmed by erratic electrical signals, cease pumping blood.

Helmer suspected a blood clot may have developed following Atsede’s earlier c-section. If so, the clot could have traveled to the pulmonary arteries in her lungs, where it may have triggered the cardiac arrest. To reverse the condition, known as a pulmonary embolism, Helmer needed time to find and remove the clot.
To buy time, Helmer decided to put Atsede on an extracorporeal membrane oxygenation (ECMO) machine, a life support device that pumps blood and keeps it oxygenated—essentially bypassing a patient’s own heart and lungs. But Fairview Ridges isn’t equipped with an ECMO device.

So Fairview Ridges staff made a phone call to Critical Care Surgeon Melissa Brunsvold, MD, FACS. Brunsvold had access to a mobile ECMO machine stationed at University of Minnesota Medical Center. Atsede was too unstable to be brought by ambulance to the medical center in Minneapolis. Instead, a team loaded the ECMO machine into an ambulance and rushed it to Fairview Ridges in Burnsville.

“These devices are typically very large, and are usually only located at heart transplant centers,” Helmer said. “But I work with the doctors at University of Minnesota Medical Center on a regular basis, and I knew they had an advanced, portable ECMO unit.”

“Once they were here we were able to put her on the bypass ECMO device and provide the oxygenation support that she needed until we could get the clot out of her lung,” Helmer said.

When she was stable, Atsede was transported to University of Minnesota Medical Center. Three weeks later, she emerged from a coma and was greeted by her ecstatic husband, Miheret.

“She’s a very hard worker, she’s a very kind woman,” Miheret said. “In her family, she’s a special woman. And I’m lucky to marry her.”

Miheret had stepped out of the room for a few minutes just before Atsede fell into cardiac arrest. When he returned, his wife was unconscious and surrounded by medical personnel. “[I thought:] What am I going to do? Please God, please doctors! Please help!”

“They saved Atsede,” Miheret said.

Most hospitals aren’t equipped with the highly specialized, mobile ECMO device, Brunsvold said. But a pre-existing partnerships between the medical center, Fairview Ridges and Fairview Southdale allowed the medical center team to respond quickly.

“It was a great case of working together,” Brunsvold said. “We were at the right place at the right time, and we have the technology now, which we didn’t have previously, to transport these ECMO machines.”

It made all the difference for Atsede, who at first couldn’t believe the story her husband and her doctors told her.

“I was miracle! I’ve been told my heart was stopped for six minutes,” Atsede said. “I don’t even believe that. They told me ‘you are a miracle girl.’”

“Those doctors are a miracle. They gave me a chance to be alive, and I am back; I’m here for my three kids and for my husband.”