UAMS to Test Telehealth to Improve Death Rate Among Rural Pregnant Women

LITTLE ROCK – Researchers at the University of Arkansas for Medical Sciences (UAMS) will use a $228,000 federal grant to test telehealth as a way to improve Arkansas’ death rate among pregnant women, which ranks fifth nationally.

Led by UAMS’ Hari Eswaran, Ph.D., the research team will focus on remote health monitoring of pregnant women in rural areas with few health providers or resources. The goal is to determine if remote health monitoring can improve care for rural pregnant women with high blood pressure.

The one-year grant is funded by the National Institutes of Health (NIH) National Center for Advancing Translational Sciences (NCATS). The funding was awarded as a supplement to UAMS’ NCATS-funded Clinical and Translational Science Award (CTSA).

Laura James, M.D., is principal investigator of the CTSA and director of the UAMS Translational Research Institute, whose work is supported by the five-year, $24.2 million award UL1 TR003107.

Statistics show that Arkansas has 44.5 maternal deaths per 100,000 live births annually. The national average is 29.6 deaths.

The team will recruit 50 pregnant women to test whether patient care can be improved using the combined systems of:

- Telemedicine via interactive video with UAMS maternal-fetal specialists
- Remote health monitoring (for example, blood pressure rates shared electronically from participants’ homes)
- The UAMS Institute for Digital Health & Innovation Call Center. The study’s remote patient monitoring system will become part of the institute’s existing rural telemedicine clinic and call center model for monitoring blood pressure in pregnancy.
“This is a critical health issue for us,” said Eswaran, a professor in the College of Medicine Department of Obstetrics and Gynecology. “No other developed countries have maternal mortality rates as high as Arkansas, and we know that lack of access to care is a significant factor.”

In the United States, severe maternal illness is on the rise, affecting about 52,000 pregnant women at delivery every year. According to a CDC report, the severe maternal illness rate during delivery increased almost 200% from 1993 to 2014. This increase is caused by increased rates of blood transfusion, acute renal (kidney) failure, respiratory (breathing) distress syndrome and cardiac (heart) disease.

Severe maternal illnesses are expected to continue to grow because women are becoming pregnant later in life, increasing pre-pregnancy obesity, pre-existing chronic medical conditions and cesarean deliveries, Eswaran said. Rates are also much higher among minority women and women from rural areas. Likewise, maternal death rates are higher for racial minorities and poorer populations.

“By identifying these at-risk women early in their pregnancy, we can potentially help provide timely medical care using telehealth technology,” Eswaran said. “This would help prevent illness and death, shorten hospital stays and reduce health care costs.”

UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and seven institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging, Translational Research Institute and Institute for Digital Health & Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS’ clinical enterprise including its hospital, regional clinics and clinics it operates or staffs in cooperation with other providers. UAMS is the only adult Level 1 trauma center in the state. U.S. News & World Report named UAMS Medical Center the state’s Best Hospital; ranked its ear, nose and throat program among the top 50 nationwide; and named six areas as high performing — COPD, colon cancer surgery, heart failure, hip replacement, knee replacement and lung cancer surgery. UAMS has 2,876 students, 898 medical residents and four dental residents. It is the state’s largest public employer with more than 10,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children’s Hospital, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on Facebook, Twitter, YouTube or Instagram.

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