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**UAMS Researches Find Insurance Status
Affects Treatment, Outcomes in Child Brain Injuries**

LITTLE ROCK — Insurance status affected the amount of treatment received and the patient’s chance of survival in cases of brain injury in children, a team of researchers from the University of Arkansas for Medical Sciences (UAMS) found in a study that used nationwide data.

The study [was recently published in Critical Care Medicine](#).

It was conducted by a multidisciplinary team led by Austin Porter, Dr.P.H., M.P.H., an assistant professor in the UAMS Fay W. Boozman College of Public Health and deputy chief science officer for the Arkansas Department of Health; and Analiz Rodriguez, M.D., Ph.D., a neurosurgeon and assistant professor in the Department of Neurosurgery in the UAMS College of Medicine.

The team looked at 12,449 patients under the age of 18 from a nationwide database. Insured patients were 25% less likely to die while in care, even after the team used statistics to correct for the possible influence of other demographic factors like race, gender, and how the patients presented at the hospital. Having insurance increased the patient’s odds of receiving brain surgery by 32% and having intracranial pressure monitoring by 54%. Both are highly recommended basic lifesaving procedures.

“Uninsured patients were in worse condition when they arrived at the hospital, received less treatment, and had greater chances of dying compared with insured patients who were otherwise similar,” Porter said. “We hear about the effects of disparities in health care and this is just the latest in many studies that are finding this link.”

Despite a growing body of research about how insurance status can affect patient outcomes, Rodriguez said the results were still troubling to the research team.

“It’s surprising, especially for children,” Rodriguez said. “One would think that everything would be done to save this population. Our next studies will look more closely at this topic to try to determine the ‘why.’ As surgeons, we usually don’t know anything about the insurance status of our patients, so it’s hard for us to think about. We

would like to think everyone in the health care system is making logical – and neutral – decisions about who receives what care. So we need to look at whether there is a systems issue involved or whether there are other outside forces we haven't considered.”

Traumatic brain injury (TBI) is a leading cause of injury and death in children, affecting about 475,000 annually.

Coauthors included Clare Brown, Ph.D.; Mick Tilford, Ph.D.; Saleema Karim, Ph.D., MBA; and Namvar Zohoori, M.D., M.P.H., Ph.D.; of the College of Public Health, Todd Maxson, M.D., of the Division of Pediatric General Surgery, Kevin Sexton, M.D., of the Division of Trauma and Acute Care Surgery, and Kevin Thomas, an M.D./M.P.H. student working with Rodriguez. A similar study on insurance and adult brain injury is under review for publication.

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 — cancer, colon cancer surgery, heart failure, hip replacement, knee replacement and lung cancer surgery. UAMS has 2,727 students, 870 medical residents and five 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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