Community Factors Drive Hospital Readmissions in the Delta

LITTLE ROCK — Researchers at the University of Arkansas for Medical Sciences (UAMS) call for revision to the Hospital Readmissions Reduction Program to reduce unintended consequences that could threaten the health care delivery system in the Mississippi Delta region in a new study published in The American Journal of Managed Care.

The program provides financial incentives for hospitals to deliver higher-quality, higher-value care by reducing Medicare reimbursements to hospitals with higher-than-average readmission rates for selected conditions.

“In the Mississippi Delta, one of the country’s poorest areas, community factors matter,” said Hsueh-Fen Chen, Ph.D., associate professor in the UAMS Fay W. Boozman College of Public Health and lead author on the study. “They matter so much that once accounted for, readmissions were not much different from those in the rest of the country for heart failure and were about the same for pneumonia and heart attacks,”

The study examined data from 2013-2016 for counties that fall under the Mississippi Delta Regional Authority, in parts of eight states: Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee.

Chen and her colleagues compared 30-day readmission ratios for hospitals in the Delta region, the remaining counties of the eight Delta states, and the rest of the nation.

When not controlling for hospital and community factors, they found the Delta region and state hospitals had higher readmission ratios for pneumonia, heart failure and heart attacks. But when they controlled for hospital and community factors, the significant difference in readmission ratios for pneumonia and heart attack disappeared, and the difference for heart failure was much less pronounced between hospitals in the Delta region and those in the rest of the nation.

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Factors linked to higher readmission ratios for pneumonia and heart failure were whether a patient was treated in a major teaching hospital, which tend to take the sickest patients, and the percentage of the community that is African American.

Oddly, high poverty was associated with lower readmissions for heart attacks, but the researchers noted that mortality rates for this condition are very high if patients cannot access treatment in a timely manner.

Chen and coauthors conclude that these findings show that changes to the program are necessary and urgent to ensure that the resources are not removed from the communities that need them most.

Her co-authors are Adrienne Nevola, M.P.H.; Mack Bird, Ph.D.; Saleema Karim, Ph.D.; Michael Morris, Ph.D.; and J. Mick Tilford, Ph.D., from the Department of Health Policy and Management and Fei Wan, Ph.D., from the Department of Biostatistics, both in the UAMS College of Public Health.


UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; northwest Arkansas regional campus; statewide network of regional centers; and seven institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Myeloma Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging and Translational Research Institute. It is the only adult Level I trauma center in the state. UAMS has 2,834 students, 822 medical residents and six 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 throughout the state, 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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