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First-Ever Study Finds Extensive Patient Sharing Among Hospitals; Could Impact Spread of Infectious Diseases

San Diego, CA (March 19, 2009) - Findings from the first in-depth study of patient sharing show that hospitals share large numbers of patients with other acute care facilities without knowing it. In the new study released today at the annual meeting of the Society for Healthcare Epidemiology of America (SHEA), researchers found that only one in nine shared patients is directly transferred from one hospital to another, whereas most patients were discharged before being readmitted to another hospital. This high underestimation of patient sharing has important implications for handling the potential spread of infectious disease among acute care facilities, since patient sharing could be an avenue of transmission if a major disease outbreak were to occur.

“We were surprised to find extensive interlinking of all the hospitals included in the study,” said Susan S. Huang, MD, MPH, assistant professor and hospital epidemiologist, University of California Irvine School of Medicine and SHEA member. “The level of patient sharing among hospitals is grossly underestimated because patients often don’t transfer directly between hospitals.”

The study included nearly 240,000 patient admissions. Researchers assessed direct and indirect transfers among all 31 acute care hospitals in Orange County, CA, a large metropolitan county of three million people, using a retrospective evaluation of 2005 California Hospital Discharge Data. Huang and colleagues examined the likelihood that adult patients admitted to each hospital in 2005 would subsequently be transferred or admitted to another hospital in the county in the 365 days following their discharge. This research did not include skilled nursing homes, psychiatric hospitals or rehabilitation facilities, which according to Huang could mean that the amount of patient sharing among all healthcare facilities is even higher than their study found.

A large number of people (22 percent) who are discharged from acute care facilities are readmitted elsewhere within one year. Huang attributed the intricate and broad connections among hospitals to three primary factors: patient choice, insurer agreements among hospitals and immediacy of needing care.

Huang emphasized that the objective of this research is not to change patient behavior but to comprehend the extent of patient sharing and its impact on potential public health responses. “If we better understand the ‘traffic patterns’ of patients and the interlinking of hospitals, we’ve added an important component to preventing the spread of disease,” said Huang. “In the event of a public health

problem, being aware of the extent of patient sharing could give us a better idea of where to intervene first,” she added.

This research is particularly important for infectious agents with a substantial incubation period or prolonged carrier state such as methicillin-resistant *Staphylococcus aureus* (MRSA) or vancomycin-resistant *Enterococcus* (VRE), since patients may not exhibit symptoms of these diseases until after they have been discharged from a hospital stay. “We may not know the true value of this work until a specific pathogen is tested within this context,” Huang noted.

This research was jointly funded by the University of California, Irvine and the National Institutes of Health’s Models of Infectious Disease Agent Study (MIDAS), which is comprised of a consortium of researchers who develop mathematical and computational tools to assist policymakers and public health professionals in preparing the nation for outbreaks of infectious diseases.

SHEA, comprised of more than 1,400 physicians, infection control practitioners, and other healthcare professionals, is dedicated to maintaining the utmost quality of patient care and healthcare worker safety in all healthcare settings. It upholds its high success rate in infection control and prevention, while applying epidemiologic principles and prevention strategies to a wide range of quality-of-care issues. For more information, visit SHEA’s website, www.shea-online.org.

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