

# College of Public Health News

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Georgia Southern University

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## Georgia Southern Examines a Test of Symmetry

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Many statistical applications and inferences rely on the validity of the underlying distributional assumption. Symmetry of the underlying distribution is essential in many statistical inference and modeling procedures.

The assumption of the symmetry of the underlying distribution is important to many statistical inference and modeling procedures. This paper provides a test of symmetry using kernel density estimation and the Kullback-Leibler information. Based on simulation studies, the new test procedure outperforms other tests of symmetry found in the literature, including the Runs Test of Symmetry. We illustrate our new

procedure using base deficit data.

[“A Test of Symmetry Based on the Kernel KullbackLeibler Information with Application to Base Deficit Data,”](#) was published in *Biometrics & Biostatistics International Journal*.

Dr. Hani Samawi, Director of the K.E. Peace Center for Biostatistics at the Jiann-Ping Hsu College of Public Health Georgia Southern University was the lead author and Dr. Robert Vogel, Dual Department Chair for Biostatistics and Epidemiology was the co-author.

# Georgia Southern Examines Cross-Jurisdictional Resource Sharing

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Local health departments (LHDs) are striving to meet public health needs within their jurisdictions, amidst fiscal restraints and complex dynamic environment. Resource sharing across jurisdictions is a critical opportunity for LHDs to continue to enhance effectiveness and increase efficiency. A recent study led by researchers from the Jiann-Ping Hsu College of Public Health at Georgia Southern University (JPHCOPH) examined the extent of cross-jurisdictional resource sharing among LHDs, the programmatic areas and organizational functions for which LHDs share resources, and LHD characteristics associated with resource sharing.

Dr. Gulzar Shah and co-authors used data from the National Association of County & City Health Officials' 2013 National Profile of LHDs and found that more than 54% of LHDs shared resources such as funding, staff, or equipment with 1 or more other LHDs on a continuous, recurring basis. Results from the multinomial regression analysis indicate that economies of scale (population size and metropolitan status) had significant positive influences (at  $P \leq .05$ ) on resource sharing. Engagement in accreditation, community health assessment, community health improvement planning, quality improvement, and use of the Community Guide were associated with lower levels of engagement in resource sharing. Doctoral degree of the top executive and having 1 or more local boards of health carried a positive influence on resource sharing.

Authors concluded that cross-jurisdictional resource sharing is a viable and commonly used process to overcome the challenges of new and emerging public health problems within the constraints of restricted budgets. LHDs, particularly smaller LHDs with limited resources, should consider increased resource sharing to address emerging challenges.

[“Cross-Jurisdictional Resource Sharing in Changing Public Health Landscape: Contributory Factors and Theoretical Explanations,”](#) is published in the Journal of Public Health Management and Practice.

Dr. Gulzar Shah, JPHCOPH Associate Dean for Research was the lead author. JPHCOPH alumni Mr. Adrian, Dr. Claire Robb, JPHCOPH Assistant Professor of Epidemiology, and Dr. William C. Livingood, University of Florida Health Science Center Senior Research Scientist were co-authors.