

Study shows inequitable access to flu vaccinations could worsen flu epidemic

June 10 2011

Giving wealthier counties greater access to influenza vaccine than poorer counties could worsen a flu epidemic because poor areas have fairly high population densities with higher levels of interaction among households and communities, enabling the infection to spread faster, according to a University of Pittsburgh study.

Published in the June issue of [Health Affairs](#), the study used a detailed computer simulation of the Washington, D.C., metropolitan area and found limiting or delaying the vaccination of residents in poorer counties could raise the total number of influenza infections. Moreover, inequitable access to vaccinations increased the number of new infections during the peak of an epidemic in both poor and wealthier counties – even though the wealthier counties had received more timely and abundant vaccine access.

“When vaccines are in short supply, distributing them quickly and equitably among populations and localities can be a difficult challenge,” said the study’s lead author, Bruce Y. Lee, M.D., M.B.A., assistant professor of medicine, epidemiology and biomedical informatics at the University of Pittsburgh. “However, policymakers across the country, in poor and wealthy areas alike, have an incentive to ensure that poorer residents have equal access to vaccines.”

Dr. Lee is the Applied Modeling Project principal investigator for the Models of Infectious Disease Agent Study (MIDAS) National Center of Excellence, also at the University of Pittsburgh. He and his co-authors

developed the flu vaccination model while working with the Department of Health and Human Services during the 2009 H1N1 pandemic. The team studied how the course of the pandemic might have been affected by vaccinating residents of various counties at different rates and times.

Computer simulation modeling suggested that equitable vaccination could reduce an epidemic's severity because poorer counties tend to have high-density populations and more higher-risk people — such as children – per household, resulting in more interactions. This leads to increased transmission of influenza and greater risk for poorer [influenza](#) outcomes, the study said.

Even with the best intentions, inadequate infrastructure, geographical or socioeconomic barriers or cultural differences can lead to inequitable access to vaccines, Dr. Lee said. Research has shown that poorer people may have less access to medical care, including vaccination, than wealthier people.

Provided by University of Pittsburgh

Citation: Study shows inequitable access to flu vaccinations could worsen flu epidemic (2011, June 10) retrieved 19 April 2024 from <https://medicalxpress.com/news/2011-06-inequitable-access-flu-vaccinations-worsen.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--