

## Daily work commute linked to flu spread

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Henry Ray Abrams/AP/Empics

For more information on Viboud and colleagues' study see *Science* early online March 30, 2006; DOI:10.1126/science.1125237

For more information on Wilson and colleagues' findings see *Am J Epidemiol* 2006; 163: 316-26; DOI:10.1093/aje/kwj040

Everyday work-related commutes, rather than airplane travel, are closely linked to the regional spread of flu in the USA, and highly connected, populated cities drive the epidemic according to Cécile Viboud (National Institutes of Health, Bethesda, MD, USA) and colleagues, who examined the role of human movement in the synchrony of 30 past flu epidemics.

The researchers focused on the transcontinental and regional (ie, between cities and states) transmission of flu. "An important implication of our study is that adults are responsible for the regional spread of flu epidemics throughout the USA, via workflows", Viboud told *TLID*. She describes workflows as the rates of movement of people to and from the workplace.

In their model, Viboud and colleagues used weekly state-specific excess mortality rates from pneumonia and flu (ie, the sum of deaths exceeding a

baseline of expected deaths when flu is not actively circulating) for each state in the USA from 1972 to 2002 and statistics on human movements in the USA (including air travels, workflows, and long-distance trips).

"The innovative work of Viboud and colleagues shows that regional epidemic spread and population movement are correlated", Mark L Wilson (University of Michigan School of Public Health, Ann Arbor, MI, USA) told *TLID*. "This research builds upon our finding that virus subtype affects epidemic synchrony", he added.

Viboud and colleagues also concluded that large population centres drive the annual flu epidemic. "Population size mirrors connectivity", Viboud told *TLID*. "Within the USA, there are persistent regional differences in epidemic magnitude", Wilson said.

California often leads the flu season in the USA by one week. When

epidemics begin in a populated state like California, the model predicts that influenza will spread across the USA in about 5 weeks, whereas the model predicts almost 7 weeks for continental spread when an epidemic starts in a less populated and isolated state such as Wyoming.

Viboud also used the model to predict the spread of a future pandemic. At a projected spread of 2-2 weeks, the model predicts a pandemic would spread faster than a typical flu epidemic; however, when they looked at public-health reporting data from the 1968 pandemic the flu spread in 6-7 weeks, significantly slower than the model predicted and slower than most of the subsequent influenza epidemics.

"Further work is warranted to better understand the spread of pandemic influenza", she said.

Mary Quirk

## Ukraine fights to re-instate loan for HIV/AIDS project

Ukraine plans to restructure a key HIV/AIDS and tuberculosis control project to help ensure disbursement of a US\$60 million loan recently suspended by the World Bank.

Alla Shcherbinska (Ukrainian Centre to Combat HIV/AIDS) told journalists that it will take the government only a few weeks to "reconstruct" the project.

However, Shiyao Chao, a senior health economist at the World Bank cautioned that: "resumption of the funds will hinge on the government's concrete actions to improve earlier shortcomings related to policy issues on tuberculosis control, procurement, fiduciary controls, and other important aspects of project management".

The World Bank suspended the loan, complaining of poor implementation by the Ukrainian ministry of health. "At the time of suspension, which came after the first 3 years of implementation, only 2% of funds available for this project

had been disbursed by the Ukrainian ministry of health", Merrell Tuck, a spokesperson of the Bank said. The Bank says "there is also concern about the government's full commitment to both condom use and harm reduction for injecting drug users [IDUs]".

Recently a top Ukrainian health official indicated that they may not want to use the loan to buy condoms. However, "we do not know what will be the government's position on this at this moment", Chao told *TLID*.

According to Anna Shakarishvili, UNAIDS country coordinator in Ukraine, the Ukrainian government officially supports both condom distribution and harm reduction programmes among IDUs and other groups as part of the national concept on HIV/AIDS prevention. However, "the government does not currently support substitution therapy as a part of harm reduction that is strongly

supported by UNAIDS", she noted.

During the past few years, the ministry of health has encountered serious problems in implementation of externally funded large HIV/AIDS projects. In early 2004, the Global Fund to Fight AIDS, Tuberculosis, and Malaria also suspended approximately \$6.7 million in payments on grants to the ministry of health and other organisations because of concerns that they are poorly managed. The programme was subsequently re-designated through the International HIV/AIDS Alliance, an international non-governmental organisation. Since then, "it has been highly successful with its implementation, demonstrating that large and ambitious projects for HIV and AIDS could be successfully implemented in Ukraine", Shakarishvili concluded.

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