

# More jobs might mean more flu

July 10 2019, by Marc Ransford

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Businesses should take precautions in advance of the annual flu season to keep sick workers home and reduce infection rates that send people to physicians in droves, says new research from Ball State University.

"The Effects of Employment on Influenza Rates" found that a 1

percentage point increase in the [employment](#) rate correlates with increases in the number of influenza-related doctor visits by about 16 percent. These effects are highly pronounced in the [retail sector](#) and health care sectors—industries with the highest levels of interpersonal contact.

Erik Nesson, an associate professor of economics in the Miller College of Business, said [labor market](#)-based activities, such as using public transportation and carpools, working in offices, putting children in daycare, and having frequent contact with the public, might help spread the flu.

"Employers should consider differences in the lost productivity from many employees becoming infected with influenza versus the lost productivity from a few infected individuals taking sick leave," he said. "Workers concerned about missing pay or losing their jobs as the result of staying home from work due to illness will be less likely to heed early signs of influenza infection and stay home.

"Since a person may be infectious while experiencing mild symptoms, this greatly increases the probability that the virus will spread to other workers in the firm. This implies that firms should consider more generous sick day policies, particularly during the flu season."

The study was recently published by *Economics & Human Biology*. Nesson was joined on the research project by Sara Markowitz, an economics professor at Emory University, and Joshua Robinson, an economics professor at the University of Alabama at Birmingham. The team used state-level data on the prevalence of the flu from the Centers for Disease Control and Prevention.

Nesson points out that employment conditions can be forecast, to a fairly accurate degree, several months in advance.

"This information could be used by the public health community to plan for the severity of an upcoming flu season," he said. "For example, if the economy is on an upswing, the public health community should plan for an above normal increase in flu incidence.

"Our results imply that employment in service industries—particularly retail and health care—is a particularly strong mechanism for flu spread. If our economy continues to shift to more service-oriented employment, the results presented here suggest there is greater potential for flu spread in the future."

**More information:** Sara Markowitz et al. The effects of employment on influenza rates, *Economics & Human Biology* (2019). [DOI: 10.1016/j.ehb.2019.04.004](https://doi.org/10.1016/j.ehb.2019.04.004)

Provided by Ball State University

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