

Supercomputer models bird flu pandemic

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Los Alamos, N.M., scientists say supercomputer models of a national bird flu emergency have generated "stark" results.

Researchers from the Los Alamos National Laboratory in New Mexico, the University of Washington and the Fred Hutchinson Cancer Research Center in Seattle used the supercomputer to predict the possible course of an avian influenza pandemic, given today's environment of worldwide connectivity.

The large-scale, stochastic simulation examined the nationwide spread of a pandemic influenza virus strain, such as an evolved avian H5N1 virus, should it become transmissible human-to-human.

The simulation produced a city- and census-tract-level picture of the spread of infection through a synthetic population of 281 million people during 180 days. It also examined the impact of interventions, from antiviral therapy to school closures and travel restrictions.

The study's authors -- Timothy Germann, Kai Kadau and Catherine Macken of Los Alamos and Ira Longini of the Fred Hutchinson Cancer Research Center and the University of Washington -- presented the study online in the Proceedings of the National Academy of Science. The study will appear in print in the April 11 issue of the journal.

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