

Preparing for a public health emergency

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Researchers have published a set of key insights that could help countries prepare for an influenza pandemic.

In a supplement to the journal *Clinical Infectious Diseases*, researchers – including Monash University Associate Professor Manoj Gambhir – produced a series of modelling papers describing how [public health workers](#) can prepare for a potential pandemic.

Associate Professor Gambhir, Department of Epidemiology and Preventive Medicine, said the work was very timely given the current

large outbreak of [avian influenza](#) among birds in the US.

The modelling research, conducted by the U.S. Centers for Disease Control and Prevention (CDC) and published this month, was initiated during the March 2013 detection of H7N9 avian influenza virus – bird flu – in China, and also draws insight from the 2009 H1N1 [influenza pandemic](#).

Associate Professor Gambhir, who worked with CDC colleagues on CDC's H7N9 response, said the modelling served as a roadmap for practically preparing for an influenza pandemic when data were scarce but clear thinking and risk management were needed.

"With limited data available to the CDC to plan and prepare for a potential pandemic, the agency turned to mathematical modellers to help them answer questions," said Associate Professor Gambhir.

"These questions included what the potential impact would be if the virus became transmissible between humans, should a vaccine be developed, and what was the likely impact of interventions," he said.

The supplement includes eight papers that were written to inform planning and help provide answers to these various questions and disseminate what the CDC found.

Associate Professor Gambhir worked on three of the papers which involved looking at standardising scenarios to respond to a pandemic, modelling methods, and effects of a vaccine program.

"We found that the computer modelling was very informative about the trade-offs that should be considered when determining what quantity of a resource, like vaccine or [personal protective equipment](#), would be required as well as when and for how long it would be needed," said

Associate Professor Gambhir.

"Making clear assumptions about the possible ways in which a pandemic might unfold, and playing them forward in a computer simulation, was shown to be immensely powerful for the preparedness of a nation to such an emergency."

"The supplement offers a wealth of analytical insight and guidance for public health workers preparing for an [influenza](#) pandemic."

Associate Professor Gambhir said the collection of articles can serve as an important guide to help countries prepare for a [pandemic](#) when limited data are available.

Provided by Monash University

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