

# Data gathering can't prevent a new influenza pandemic

March 22 2018, by Sandy Fleming

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Credit: U.S. Army Corps of Engineers

Commenting on a new BBC Four programme, Contagion, presenting the results of an on-going citizen-scientist experiment investigating how a new influenza pandemic might spread across the UK, influenza expert

Dr. Jeremy Rossman of the School of Biosciences comments that while this data 'cannot be used to prevent a pandemic, it may be useful in coordinating health care responses and limiting the spread of future pandemics.

"The experiment (a collaboration between the BBC, the University of Cambridge and the London School of Hygiene and Tropical Medicine) used an app (BBC Pandemic) to track peoples' movement and interactions since Sept 2017. This data has been used to better understand how a new influenza [pandemic](#) might spread and what might be done to mitigate this spread.

"Current data from the experiment predicts that a new pandemic could infect 43 million people in the UK and cause 886,000 deaths. This data is very useful in preparing for potential pandemics and better understanding how viruses spread. However, this is a worst-case scenario and not a prediction of the most likely scenario.

"There is always a risk of a new influenza [virus](#) pandemic, but there is no need to panic. Yes, the UK is has been experiencing one of the worst influenza season since the 2009 swine flu pandemic; however, this is due to a reduced effectiveness of this year's flu vaccine and not because the currently circulating strains are any more deadly.

"Influenza viruses are constantly mutating and changing, which is why we need a new vaccine every year and why there is a constant risk that a new flu virus will emerge and cause a new pandemic. 100 years ago a new strain of flu emerged and caused one of the most deadly pandemics that the world has seen. However, the most recent swine flu pandemic was much milder, causing many infections but less severe disease than most seasonal strains of the flu.

"In estimating the 886,000 potential deaths from an influenza pandemic,

the researchers set the fatality rate at 2%, which is the rate seen with the 1918 pandemic. However, the 1918 strain of influenza virus was the most lethal strain of human-transmissible influenza virus that we have ever seen. Most influenza virus strains are much less severe; the 2009 pandemic virus had a 0.026% fatality rate, comparable to most seasonal [strains](#) that we encounter every winter. At this rate, the hypothetical pandemic would result in just over 11,000 deaths, even if it still resulted in 43 million infections.

"However, the fact is that we do not know what or when the next pandemic will be and it is of crucial importance to be prepared for any eventuality, whether it is another virus like the 2009 swine flu or one as deadly as the 1918 [pandemic strain](#). We currently have two antiviral drugs that can be used to treat [influenza](#) virus infections and a very good vaccine that can prevent infections, though it can take several months to produce a new vaccine.

"There are also many experimental treatments and universal vaccines undergoing development, though when these will be ready for clinical use remains unclear. This current BBC Pandemic study plays a strong role in preparing for future potential pandemics, by providing movement and interaction data for over 30,000 people. Whilst this data cannot be used to prevent a pandemic, it may be useful in coordinating health care responses and limiting the spread of future pandemics in the UK. This study will be continuing throughout 2018 and anyone interested in participating can get more information and download the BBC Pandemic app at: [www.bbc.co.uk/pandemic](http://www.bbc.co.uk/pandemic)."

Provided by University of Kent

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