

Scientists study past flu pandemics for clues to future course of 2009 H1N1 virus

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A commonly held belief that severe influenza pandemics are preceded by a milder wave of illness arose because some accounts of the devastating flu pandemic of 1918-19 suggested that it may have followed such a pattern. But two scientists from the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, say the existing data are insufficient to conclude decisively that the 1918-19 pandemic was presaged by a mild, so-called spring wave, or that the responsible virus had increased in lethality between the beginning and end of 1918.

Moreover, their analysis of 14 global or regional [influenza](#) epidemics during the past 500 years reveals no consistent pattern of wave-like surges of disease prior to the major outbreaks, but does point to a great diversity of severity among those pandemics.

In their commentary in the Aug. 12 issue of the [Journal of the American Medical Association](#), David M. Morens, M.D., and Jeffery K. Taubenberger, M.D., Ph.D., note that the two other flu pandemics of the 20th century, those of 1957 and 1968, generally showed no more than a single seasonal recurrence; and in each case, the causative virus did not become significantly more pathogenic over the early years of its circulation.

The variable track record of past flu pandemics makes predicting the future course of 2009 H1N1 virus, which first emerged in the Northern Hemisphere in the spring of 2009, difficult. The authors contend that

characteristics of the novel H1N1 virus, such as its modest transmission efficiency, and the possibility that some people have a degree of pre-existing immunity give cause to hope for a more indolent pandemic course and fewer deaths than in many past pandemics.

Still, the authors urge that the 2009 H1N1 virus continue to be closely tracked and studied as the usual influenza season in the Northern Hemisphere draws near. Like life, the authors conclude, paraphrasing Danish philosopher Soren Kierkegaard, "influenza epidemics are lived forward and understood backward." Thus, the robust, ongoing efforts to meet the return of 2009 [H1N1](#) virus with vaccines and other measures are essential responses to a notoriously unpredictable [virus](#).

More information: DM Morens and JK Taubenberger. Understanding influenza backward. *Journal of the American Medical Association* 302: 679-80. [DOI: 10.1001/jama.302.6.679](https://doi.org/10.1001/jama.302.6.679) (2009).

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