

Expert says vaccination is still recommended for flu despite decreased effectiveness

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Credit: Dr Jeremy Rossman

As the UK currently experiences the worst influenza season since the winter of 2010/2011, influenza expert Dr. Jeremy Rossman of the School of Biosciences at the University, worries that 'the number of

cases will continue to rise over the coming weeks, with similar increases in GP visits and hospitalizations, enhanced by the current low temperatures throughout the country.

"At present, this year's [influenza outbreak](#) has not reached [epidemic levels](#) in the UK, but researchers predict that this threshold may soon be met, as it has in the USA.

"Influenza is a seasonal illness that circulates around the globe, typically causing disease in the winter months. Whilst the term epidemic sounds very concerning, many past influenza seasons have been termed epidemics, based on the percentage of deaths attributable to pneumonia and influenza.

"Now, we are experiencing higher than normal levels of influenza illness and an increase in associated hospitalizations, this is not currently at epidemic levels. This trend is similar to what we saw during the recent Australian influenza season. During the 2017 Australian winter, the country saw the largest number of influenza cases since the 2009 pandemic, with a 50 percent increase in influenza-associated hospitalizations.

"Despite the large number of cases, we do not think that any of the influenza [virus](#) strains circulating are more dangerous than in any other year. Researchers speculate that the increase in cases is partly attributable to a reduced effectiveness of the current influenza [vaccine](#) against one subtype of the virus, H3N2.

"Influenza viruses come in several types and subtypes, though most human disease is caused by Influenza A (H1N1 and H3N2 subtypes) and Influenza B viruses (Victoria and Yamagata lineages). Typically, flu B infections are milder than flu A infections, though, flu B infections can be very serious in young children.

"We know that influenza disease can be prevented by vaccination; however, as the virus is continually mutating, a new vaccine is required each year and in some years the virus changes such that the vaccine is no longer as effective. Typically, the vaccine contains 3-4 virus strains and is around 40 percent effective at preventing influenza.

"This year we have seen the vaccine is highly effective against H1N1 viruses but only 10 percent effective against H3N2 viruses and offers almost no protection against H3N2 for those over 65. During the Australian flu season, we saw that this decreased effectiveness led to an increase in the number of H3N2 cases (hence Aussie flu), similar to what we are currently seeing in the UK.

"However, we are also seeing an increase in the number of Yamagata-lineage flu B infections (hence the Japanese flu). Unfortunately, the main trivalent (3-strain) vaccine only protects against Victoria-lineage flu B strains, though quadrivalent (4-strain) vaccines are available that protect against the Yamagata flu B strains and are recommended for children.

"In the UK, we typically see the number of [influenza](#) cases peak near the start of the year and slowly decline into the spring; thus the increased number of cases and hospitalizations is likely to continue, possibly reaching epidemic levels within the coming weeks.

"Despite the reduced vaccine effectiveness, individuals are still recommended to get the vaccine, as the quadrivalent vaccine is highly effective against the Japanese flu (Yamagata flu B) and against the other circulating H1N1 strains. In addition, good hygiene practices (such as hand washing and using tissues) will help combat the spread of the flu.

"If you do get the flu, the disease typically consists of fever, headache, tiredness and respiratory symptoms that resolve within 7 days. However,

the NHS recommends that you speak with your GP if you experience symptoms that do not resolve in 7 days or if you have symptoms and are at an increased risk of disease (young children, individuals over 65, those that are pregnant or those with long term medical conditions)."

Provided by University of Kent

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