

# A new approach to deadly influenza outbreaks in nursing homes

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(Medical Xpress)—In developed countries people over 65 years old are the most likely to die from an influenza outbreak and people in nursing homes, where the virus is difficult to control, are especially vulnerable.

A new preventive approach to this health problem, trialled by University of Sydney researchers and published in [PLOS ONE](#) today, achieved lowered rates of infection in residents and staff, fewer hospitalisations and a significant reduction in the duration of the outbreak.

"This is a really important public health result. [Influenza](#) causes untold misery and is frequently fatal for older people. These results provide good evidence to support an active policy of treating and preventing influenza promptly, once an outbreak is declared," said Professor Robert Booy, Head of Clinical Research at the National Centre for Immunisation Research and Surveillance at Sydney Medical School and lead author of the study.

The trial took place in 16 nursing homes in the Sydney area over three winter flu seasons. Using the [antiviral drug oseltamivir](#), commonly known as Tamiflu, the researchers tried two different strategies when an outbreak occurred.

They either treated only those residents in the home who had influenza symptoms with Tamiflu or they treated all residents with Tamiflu. In the second case, of treating everyone, [Tamiflu](#) was being used both as a treatment and a preventive health measure.

The results of treating all patients included:

- a reduction in the length of the [influenza outbreak](#) by 13 days
- a reduction in the numbers of residents infected by a statistically significant amount (36.5 percent among those treated only for symptoms compared to 22.9 percent for those given the [preventive treatment](#))
- fewer staff infections
- a lower rate of [hospitalisation](#) for residents.

Their results support the policy of widespread preventive use of the drug during outbreaks.

"This is a landmark trial as it has found an effective treatment for some of the most disadvantaged people in our community, who are usually excluded from major studies of this kind," said Professor Richard Lindley, the team geriatrician from Sydney Medical School and The George Institute.

"The speed and virulence with which influenza spreads in aged care homes is a recognised health issue so reducing both the numbers of people infected and the duration of the outbreak is a major breakthrough."

During the study period the researchers monitored for any evidence of an outbreak and 23 respiratory illness outbreaks were detected of which nine were shown to be influenza. This points to the importance of researching and treating other sources of respiratory illness outbreak.

"Getting any flu outbreak under control quickly is really important as it quickly spreads into the local community from bad outbreaks in [nursing homes](#) and schools," Professor Dwyer said.

"This study also shows the importance of modern laboratory testing as we were able to show that the majority of respiratory outbreaks in this study were in fact not due to influenza," said Professor Dominic Dwyer, the team virologist from Sydney Medical School and Westmead Hospital.

**More information:** [dx.plos.org/10.1371/journal.pone.0046509](https://doi.org/10.1371/journal.pone.0046509)

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