

Expanding flu vaccination policies to include children could reduce infections and mortality

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The current influenza (flu) vaccination policy in England and Wales should be expanded to target 5 to 16-year-olds in order to further reduce the number of deaths from flu, according to a study by UK researchers published in this week's *PLOS Medicine*.

The results of the study by Marc Baguelin and colleagues from the London School of Hygiene & Tropical Medicine in the UK, Public Health England, and Athens University of Economics and Business, show that the current flu vaccination policy that targets people aged 65 years and over and also those in high risk groups has reduced the number of [flu infections](#) and associated deaths in these groups over the past 14 years. The authors show that offering the [flu vaccine](#) to children will have beneficial effects especially as children are key "spreaders" of the flu virus.

In their modelling study, the authors combine clinical information collected in a primary care (general practice) surveillance scheme over 14 years in England and Wales with information on social contacts, and with information on immunity to flu viruses in the population. They use this information to estimate the [number](#) of influenza infections and deaths that might have occurred without vaccination, with the current vaccination program, and if the program were expanded. Compared to no vaccination, the authors estimate that the current program probably averted 0.39 infections per dose of vaccine and 1.74 deaths per 1,000

doses. Furthermore, expanding the program to target 5-16-year-old children would avert 0.70 infections per dose and 1.95 deaths per 1,000 doses compared to no vaccination.

These findings are encouraging given that a new flu vaccination program for children is being rolled out in England and Wales from this month (September 2013). However, the accuracy of the authors' predictions may be limited because the vaccination model was based on several assumptions.

The authors say: "The most efficient way of reducing overall influenza-attributable morbidity and mortality appears to be to target the key spreaders—children."

They continue: "Even with modest coverage, substantial further reductions in morbidity and mortality could be achieved."

More information: Baguelin M, Flasche S, Camacho A, Demiris N, Miller E, et al. (2013) Assessing Optimal Target Populations for Influenza Vaccination Programmes: An Evidence Synthesis and Modelling Study. PLoS Med 11(10): e1001527. [DOI: 10.1371/journal.pmed.1001527](https://doi.org/10.1371/journal.pmed.1001527)

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