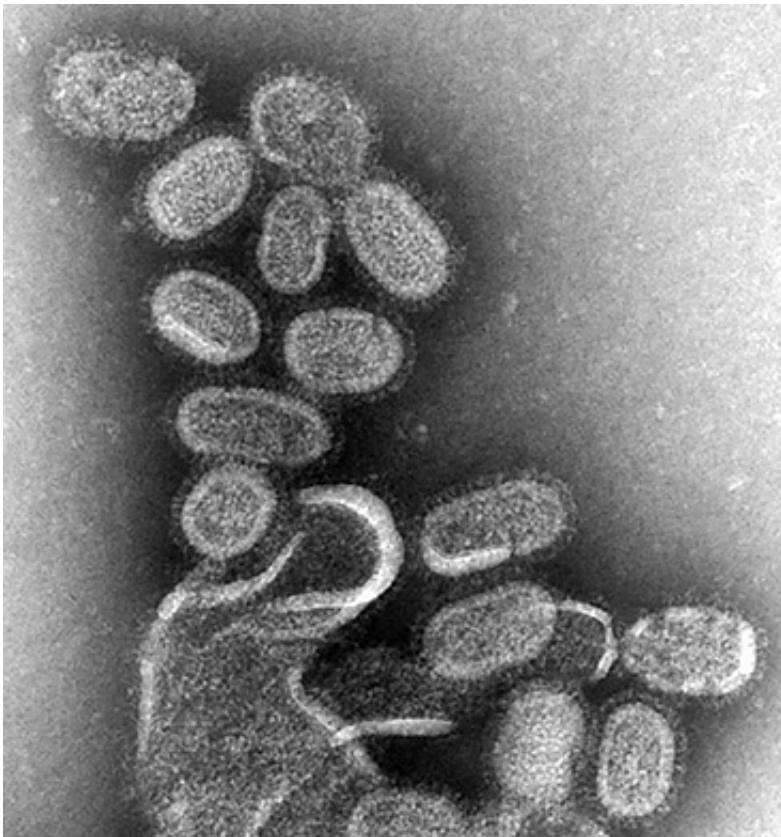


Flu vaccine prevents hospitalization in children

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Electron microscopy of influenza virus. Credit: CDC

Children vaccinated against influenza are significantly less likely to experience serious complications from the virus that could land them in hospital, new research from Public Health Ontario (PHO) and the Institute for Clinical Evaluative Sciences (ICES) has found.

Published in the Nov. 17 issue of *PLOS ONE*, the study found that young children who were fully vaccinated against influenza saw their risk of hospitalization due to influenza infection drop by 60 per cent overall. Even for children partially vaccinated against influenza (i.e., those who received one dose of influenza [vaccine](#) during their first [influenza season](#)), risk of hospitalization due to influenza dropped by 39 per cent.

"Influenza can cause serious illness, especially in [young children](#), but there hasn't been a lot of research that has examined the magnitude of the influenza vaccine's effectiveness at preventing kids from getting really sick and being hospitalized," says Dr. Jeff Kwong, a scientist in Applied Immunization Research and Evaluation at PHO and a senior scientist at ICES. Dr. Kwong is the senior author of the research paper.

"This research paper helps fill that gap by showing how effective the [influenza vaccine](#) can be at protecting young kids against serious complications from influenza infections," adds Dr. Kwong.

The researchers examined nearly 10,000 Ontario hospital records of children aged six months to under five years where a respiratory specimen was collected and tested for influenza; 12.8 per cent showed lab-confirmed influenza. The scientists included four influenza seasons - 2010-11 to 2013-14 - and broke the data down to compare children who were fully vaccinated, partially vaccinated and those who didn't get the vaccine. They also compared variations by age group and the circulating [influenza strains](#) each season.

Overall, fully vaccinated [children](#) aged two- to four-years-old saw their risk of hospitalization due to influenza drop by 67 per cent while those aged six to 23 months saw their risk drop by 48 per cent.

"These results show that flu vaccines are effective at preventing [influenza](#) hospitalizations in young kids, and this extended to those who

received their vaccination in two consecutive seasons. This contributes to the evidence that this group should be receiving their seasonal vaccine annually to prevent such serious outcomes," says Sarah Buchan, a PhD candidate at the University of Toronto and the study's lead author.

Provided by Public Health Ontario

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