Vaccinations alarmingly low for preventable childhood diseases

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University of Sydney researchers have found alarmingly low rates of vaccination against chicken pox and influenza in children hospitalised for these diseases.

The Paediatric Active Enhanced Disease Surveillance (PAEDS) study, published in the *Journal of Paediatrics and Child Health*, found that out of 133 children hospitalised for complications of chicken pox infection from 2007 to 2010, only 16 had been vaccinated.

Surveillance during the 2009 influenza pandemic found swine flu (Influenza-A H1N1-09) was the cause in 84 percent of infant hospitalisations, with seasonal influenza (H3N2) responsible for just 7 percent of cases.

The study found only 11 percent of all the children and 17 percent of children with underlying chronic disorders had been vaccinated for seasonal influenza. Of the 324 children hospitalised in the three NSW children's hospitals, complications occurred in 34 percent of children, 56 percent of whom had been previously healthy.

Contrary to the widespread view that flu vaccinations can induce seizures in children under five years of age, the study found that of 122 infants hospitalised with seizures, only 15 (10 percent) had received any vaccine in the previous seven days.

Of these 15 infants, nine had underlying chronic conditions that may

cause seizures, such as previously diagnosed epilepsy and viral infections.

The researchers noted that bowel obstruction was more frequent among infants receiving the first, rather than second, dose of either of the two available rotavirus vaccines.

Paper senior author, Professor Elizabeth Elliott from Sydney Medical School, said the PAEDS research aimed to address gaps in surveillance data for severe vaccine-preventable diseases and adverse events following immunisation.

"Although there are excellent national laboratory and public health surveillance systems currently operating in Australia, very few provide timely, detailed clinical data or the opportunity for simultaneous collection of biological samples," she said.

"This presents an issue in the event of infectious disease outbreaks, including chicken pox, rotavirus and influenza. None of these conditions are readily or completely described by existing surveillance systems.

"We recognised the potential of PAEDS to rapidly identify cases of severe emerging disease or outbreaks, as demonstrated by surveillance for influenza during the recent H1N1-09 (swine flu) pandemic.

"The PAEDS study provides important, previously unavailable data on the number of children hospitalised from vaccine-preventable diseases and adverse events resulting from vaccinaton," she said.

"To our knowledge, it is also the first system to reliably capture data on adverse events resulting from vaccination and requiring admission.

"We believe our research will inform public health policy, clinical

practice and community confidence and has the potential to allow the health workforce to respond more quickly during outbreaks and epidemics."

More information: onlinelibrary.wiley.com/doi/10 … 1/jpc.12282/abstract

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