

P0271

Paper Poster Session I

Progress in vaccination

**Seasonal influenza vaccine effectiveness against influenza and influenza-like illness in 2013-2014, a nationwide cohort study conducted in Finland**

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In the Finnish National Immunisation Programme, seasonal influenza vaccination is recommended since 2007 to children aged 6 to 35 months (hereafter referred to as children), since 2002 to adults 65 years of age and older (hereafter referred to as elderly) and before that only to other risk groups. The vaccination coverage of the last 3 seasons has been constant. Between September 2013 and April 2014, 15.0% of the children and 37.4% of the elderly were vaccinated. Evaluating the seasonal influenza vaccine's effectiveness is essential for the assessment of the National Immunisation Programme's performance and the development of future preventive policies.

The Finnish Population Register and the National Vaccination Register provided population and vaccination data. Cases of laboratory confirmed influenza and influenza like illness (ILI) occurring between January and April 2014 were retrieved from the Infectious Disease Register and the Primary Healthcare Register. The registers were linked via a personal identification code assigned to all Finnish residents (5.45mi). Software related reporting problems necessitated the exclusion of half of the population. Effectiveness estimates were calculated using the counts of vaccinated and unvaccinated cases, as well as the person-time the population was vaccinated and unvaccinated.

Influenza diagnoses of 150 (10 vaccinated) children and 391 (96) elderly were laboratory confirmed. The effectiveness against laboratory confirmed influenza was estimated with 54.32% (95%CI: 13.24%-75.95%) in children and 41.20% (25.97%-53.29%) in the elderly. Corresponding figures for seasonal influenza vaccine effectiveness against ILI were 56.28% (10.51%-78.64%) and 37.76% (6.39%-58.62%). 125 (8) children and 121 (31) elderly were diagnosed with ILI. Subtyping of laboratory confirmed influenza was done, but insufficient for meaningful calculations.

Seasonal influenza vaccination was more effective in children than in the elderly. Although the effectiveness against the unspecific outcome ILI was expected to be lower than the effectiveness against laboratory confirmed influenza, the effectiveness figures are roughly similar. Reporting encouraging effectiveness estimates will support a higher seasonal influenza vaccine uptake in the population, next season's target for better a protection against influenza.