

**THE NEED TO INCREASE LOW INFLUENZA IMMUNIZATION
RATES IN CHILDREN AND TEENAGERS IN POLISH INNER CITIES.
CONCLUSIONS FROM THE 2009/2010 SEASON IN WARSAW
AND WROCLAW**

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Introduction. Influenza is a serious preventable respiratory infection that continues to contribute to significant morbidity and mortality worldwide. Annual influenza vaccination benefits have been clearly demonstrated and universal vaccination of children is recommended in US. In contrast, Polish national immunization program recommends vaccination of children from certain risk groups (immunodeficiency, asthma, diabetes, chronic cardiac, pulmonary and renal insufficiency) and for "epidemiologic indications". The vaccine cost is not covered and parents must pay for the vaccine for their children.

Objective: to determine influenza vaccine coverage among children aged 0-18 years in inner-city practices in 2009/2010 season and factors that might have influenced low vaccination coverage.

Material and methods.

A retrospective review of 11735 vaccination charts of children aged 0-18 years from 7 randomly selected general practices in Warsaw and one large practice in Wrocław. The figures of children who were vaccinated in season 2009/2010 (by 31st March 2010) were calculated. The age distribution of vaccinations was analysed. We also reviewed the vaccination history in patients who were vaccinated against influenza including: previous influenza vaccinations, modification (widening) of standard immunization scheme, co-administration of influenza vaccine with other vaccines and proportion of children who completed the recommended two dose schedule of vaccination. In calculations 95% confidence intervals were used.

Results.

In our group 362/11735 (3,1%, 95%CI: 2,8-3,4%) children were vaccinated against influenza (received one or two doses of the vaccine) in 2009/2010 season. The influenza vaccine coverage in our group (3,1%) was slightly higher than among all Polish children (2,61%). For 115/362 (31,8%, CI: 27,0-36,6%) patients it was their first vaccination against influenza. The mean age of a vaccinated child was 6,0 ± 4,3 years. Children aged 2-5 years were most commonly vaccinated (153/362, 42,3%, CI: 37,2-47,4%), while infants (aged 6-12 months) were vaccinated very rarely (15/362 4,4%, CI: 2,2-6,2%).

In the group of children younger than 8 years (86/362 children) who were vaccinated for the first time in their life only 29/86 (33,7%, CI: 23,7-43,7%) completed recommended two dose schedule. The mean age of children who received partial and full vaccination did not differ significantly; (3,6 ± 2,3 years vs 3,4 ± 1,6 years). In the majority of the vaccinated children

(198/362, 54,7%, CI: 49,6-59,8%) the universal schedule of immunization was modified (widened) by use of combined or monovalent vaccines, extra paid by parents, what suggested primary physician's active recommendation.

Co-administration of influenza vaccine with other vaccines was marginal - there were 6/362 such children only (1,7%, CI: 1,3-3,3%).

Conclusions. The importance of vaccinating children against influenza is hugely understated in Poland. General physicians probably trivialize influenza morbidity and do not recommend influenza vaccinations actively; in consequence vaccine coverage among children in Poland is very low. General physicians should actively recommend annual influenza immunization of children. Recommendations of National Immunization Program with regards to influenza vaccine should be clearer, simpler and easier to implement.