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**Hospitalizations due to Vaccine-Preventable Influenza in 2015/2016**

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**Background:** Influenza vaccination is one of the most significant public health concerns, yet in Poland percentage of flu vaccination is very low.

**Aim:** We aimed to analyze vaccine coverage in 2015/16 season in children hospitalized due to influenza in single pediatric ward. Moreover, correlation with clinical course and treatment costs were analyzed in terms of vaccine versus non-vaccine virus type for 2015/16 season.

**Material and methods:** In 2015/2016 159 children were hospitalized due to influenza. 118 children had the influenza virus typing performed, 1 patient was excluded due to discharge on parents' request. Finally, 117 patients (74%) aged 16 days-206 months were included in further studies. Additional cross-protection induced by the vaccination was not taken into account.

**Results:** Among 117 patients with virus typing, 77 (66%) patients had virus subtype determined. 60 patients (51%) had confirmation of vaccine-preventable influenza. There were also 5 cases of A/H1N1 influenza, 8 type B (Victoria lineage), and 4 cases of influenza A (not subtyped) and B (Victoria lineage) coinfection. In 37 (32%) cases virus was not subtyped, and in 3 (2%) cases lineage was not determined. Vaccine-preventable influenza was seen mostly in patients without comorbidities (67%). 33% (20 out of 60, including 4 under 6 months of age) patients hospitalized had other comorbidity, but did not obtain vaccination (none of the patients hospitalized were vaccinated). 25% (15 out of 60) of patients hospitalized due to vaccine-preventable influenza were under 6 months of age. Patients with vaccine-preventable influenza were at 1.5-fold higher risk of having complications. Vaccine-preventable influenza generated additional cost of 46240 euro (198000PLN, mean 771 euro/patient).

**Conclusion:** Influenza vaccination may decrease the risk of complications in children, and substantially decrease the costs of hospital treatment. It should be underlined, that many of vaccine-like viruses are present in children under 6 months of age and cocoon strategy should be implemented.

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