Estimates of influenza vaccine effectiveness using a sentinel practitioner network in Poland during the 2010/2011 season

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Background and aims

Background:
• Because of influenza virus mutability (antigenetic shift and drift), during each season a new vaccine is needed
• Increasing number of people suffer from complications of influenza, and there is necessity to encourage people to vaccination (especially patients belonging to risk groups)
• In Poland vaccination campaign in the 2010-2011 influenza season began on week 36 and achieved the vaccination coverage of 5.2%

Aims:
• to measure age and influenza type specific vaccine effectiveness estimates in the Polish population
• provide distribution of influenza types by age groups

Methods

Study design: test-negative case control study
Study period: from 2 December 2010 to 29 April 2011
Study population: 64,745 persons registered with 33 GPs participating in sentinel network, from 6 Polish regions. The study population constituted 0.17% of general population in Poland

Inclusion criteria:
» case: patient meeting criteria for EU-ILI case definition and positive for influenza
» control: patient meeting criteria for EU-ILI case definition and negative for influenza

Initial visit:
» interview according to standardized questionnaire
» collecting nasopharyngeal swab

Testing and laboratory results
» Confirmatory testing using RT-PCR
» Subtyping using isolation and antigenetic analysis

Results

of 180 medically attended ILI patients 99 (55%) were confirmed as influenza
54.5% cases were positive for influenza B (54/99), 26.3% positive cases for AH1N1v (26/99), 15.2% for not subtype A (15/99) and 4.0% for AH1N1 (4/99)
Influenza strains detection in different age group is presented on Fig. 1
Among patient included to the study 17 were vaccinated against influenza (6 cases, 11 controls, 7.0% and 13.6% respectively
cases occurred between week 48, 2010 and week 15, 2011
most cases were recruited between weeks 4 and 6 2011
the predominant strain early in the epidemic was A(H1N1)2009 and then it was progressively replaced by influenza B at the end of the epidemic (Fig. 2)

Conclusions

Influenza Vaccine Effectiveness was measured for the first time in Poland
The results suggest a moderate IVE in the Polish population during the season 2010/2011
The main limitation in this first season was the small sample size