

**P1387**  
**Paper Poster Session**  
**Influenza - clinical epidemiology**

**Severity of influenza in northern Greece, 2014-2015**

Maria Exindari<sup>1</sup>, Georgia Gioula<sup>\*2</sup>, Angeliki Melidou<sup>1</sup>, Nikolaos Malisiovas<sup>3</sup>

<sup>1</sup>*Aristotle University of Thessaloniki, Thessaloniki, Greece*

<sup>2</sup>*Aristotle University of Thessaloniki, Medical School, Laboratory , Thessaloniki, Greece*

<sup>3</sup>*Medical School, Aristotle University of Thessaloniki, First Department of Microbiology, Thessaloniki, Greece*

**Background:** Influenza viruses cause typical ILI or other more mild or severe clinical syndromes. As the common-cold-like syndromes seldom reach medical treatment, the laboratory confirmed influenza cases mostly concern ILI or more severe clinical conditions. In 2014-15 new influenza strains have circulated. Therefore it would be interesting to correlate influenza clinical pictures with the responsible influenza viruses.

**Material/methods:** 523 respiratory samples were obtained from 403 hospitalized ILI cases and 120 outpatients including one pneumonia case. Of the hospitalized patients 244 were treated in normal wards and 159 in Intensive Care Units. The samples were tested for influenza viruses using real-time RT-PCR according to the WHO protocols.

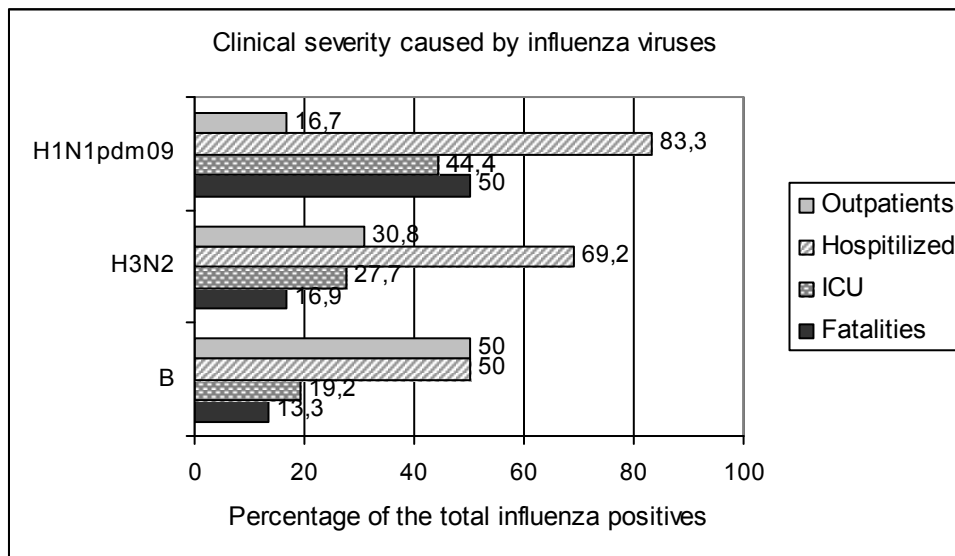
**Results:** Influenza viruses were detected in 203 (38.8%) of the 523 tested samples: 18 (8.9%) H1N1pdm09, 65 (32.0%) H3N2 and 120 (59.1%) B.

According to the patients' conditions the virus distribution was as follows:

Sample origin	Number of samples	Influenza (+)	H1N1pdm09	H3N2	B
Outpatients	120	83/120 (69.2%)	3/83 (3.6%)	20/83 (24.1%)	60/83 (72.3%)
Hospitalized	403	120/403 (29.8%)	15/120 (12.5%)	45/120 (37.5%)	60/120 (50.0%)
Wards	244	71/244 (29.1%)	7/71 (9.9%)	27/71 (38.0%)	37/71 (52.1%)
ICU	159	49/159 (30.8%)	8/49 (16.3%)	18/49 (36.7%)	23/49 (46.9%)
Fatalities influenza(+)		36	9/36 (25.0%)	11/36 (30.6%)	16/36 (44.4%)

Hospitalized patients are predominating in H1N1pdm09 and H3N2 cases (15 out of 18, p=0.0001, and 45 out of 60, p=0.0001, respectively) while hospitalized and outpatients are completely equal in

influenza B cases (60 and 60 out of 120). H1N1pdm09 viruses were detected in only three outpatients, one of which however was clinically diagnosed as a pneumonia case. The contribution of H1N1pdm09 ICU patients to the total H1N1pdm09 cases is statistically significant compared to that of B ICU patients to the total B cases ( $p=0.0166$ ). The contribution of H1N1pdm09 fatalities to the total H1N1pdm09 cases is statistically significant compared to H3N2 and B ( $p=0.0037$  and  $p=0.0002$  respectively).



The mean age of the fatalities was generally 64.6 years: H3N2 65.8, B 72.8 while H1N1pdm09 48.7 years.

**Conclusions:** H1N1pdm09 strains seem to be the most pathogenic since a considerable proportion of them belonged to hospitalized and ICU patients, while the related fatalities were increased and their mean age was remarkably lower in comparison to H3N2 and B co-circulating viruses, despite the fact that vaccine effectiveness was estimated to be lower for H3N2 and B viruses this year. B strains were not found strongly pathogenic, as they affected an impressively high proportion of outpatients and were poorly related to fatal cases. The total fatality rate (17.7%) is inaccurate due to the fact that the tested sample was not representative (lack of mild cases).