

Abstract : 492

Keywords: Epidemiology, Hospitalization and Immune response

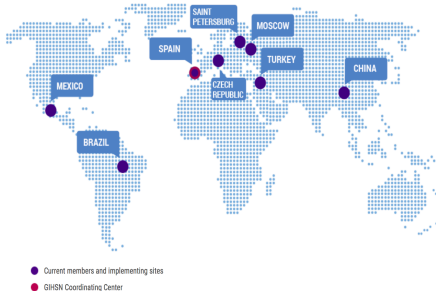
Epidemiology of admissions with influenza and the impact of underlying patient characteristics on the risk of admission with influenza during the 2013/14 season in the GIHSN participating sites

Joan Puig-Barberà¹, Angels Natividad-Sancho¹, Svetlana Trushakova², Anna Somnina³, Maria Pisareva³, Meral A. Ciblak⁴, Selim Badur⁴, Hongjie Yu⁶, Benjamin J. Cowling⁶, Clotilde El Guerche-Séblain⁷, Ainara Mira-Iglesias¹, Lidiya Kisteneva², Kirill Stolyarov³, Kubra Yurctur⁴, Luzhao Feng⁵, Elena Burtseva² for the Global Influenza Hospital Surveillance Study Group (GIHSN)

¹ Fundación para el Fomento de la Investigación Sanitaria y Biomédica de la Comunidad Valenciana (FISABIO), Valencia, Spain; ² D.I. Ivanovsky Institute of Virology FGBC "N.F. Gamaleya FRCM Ministry of Health of Russian Federation, Moscow, Russian Federation; ³ Research Institute of Influenza, Saint Petersburg, Russian Federation; ⁴ National Influenza Reference Laboratory, Istanbul Faculty of Medicine, Istanbul University, Istanbul, Turkey; ⁵ Division of Infectious Disease, Key Laboratory of Surveillance and Early Warning on Infectious Disease, Chinese Center for Disease Control and Prevention, Beijing, China; ⁶ School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong Special Administrative Region, China; ⁷ Sanofi Pasteur, Lyon, France

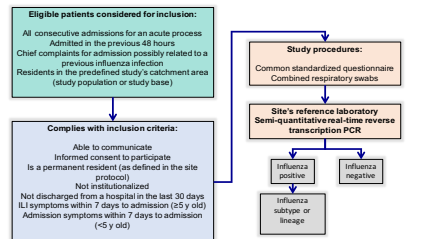
Background

This was a multicentric study performed by the Global Influenza Hospital Surveillance Network (GIHSN). A total of 9,507 consecutive eligible admissions were screened for inclusion in 19 hospitals in Russia, Turkey, China and Spain, following a prospective, active surveillance, approach aimed to describe the epidemiology of admissions with influenza.



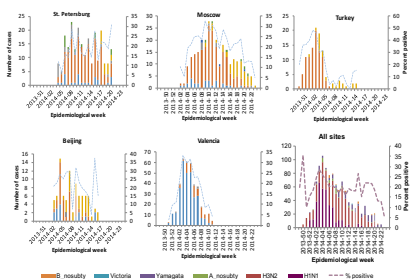
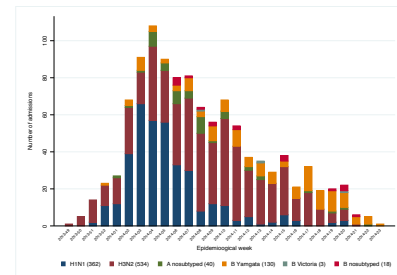
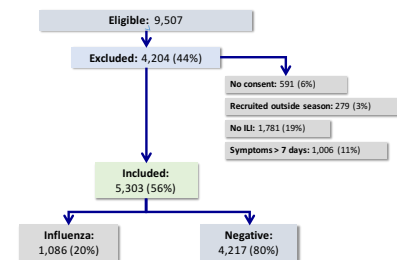
Methods

Epidemiological data was collected in consecutive admissions using a common case definition. Influenza was confirmed by RT-PCR. We used multivariate logistic regression models to estimate influenza admission adjusted odds ratios (aOR).



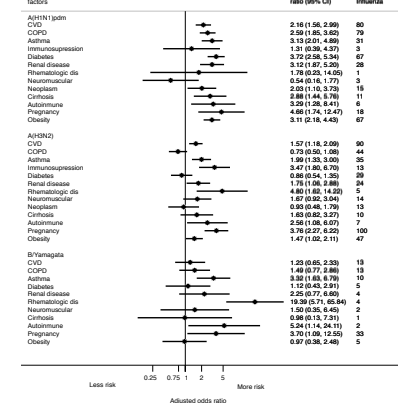
Results

We included 5,303 admissions, 1086 were influenza positive: 534, A(H3N2), 362, A(H1N1), 130, B Yamagata lineage, 3, B Victoria, 40 and 18, A and B, were not subtyped.



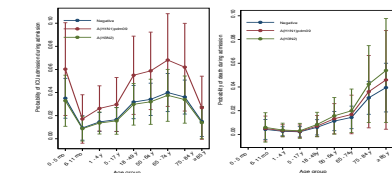
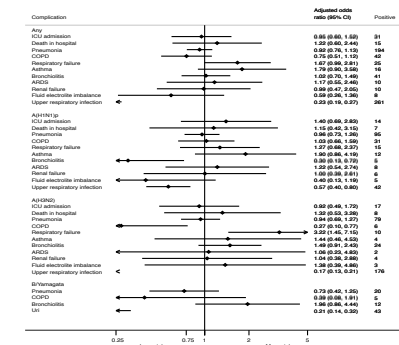
Sixty percent of influenza admissions were in patients with no comorbidity.

Patients with cardiovascular disease aOR, 1.6 (95%CI, 1.3 to 2), asthma, 2.3 (1.7 to 3.0), immunosuppression, 2.3 (1.2 to 4.1), renal disease, 2.1 (1.5 to 3.0), liver disease, 1.9 (1.2 to 3.2), autoimmune disease, 3.9 (1.6 to 5.6), and pregnancy, 3.8 (2.5 to 5.9) were at an increased risk regardless of influenza virus. For chronic obstructive pulmonary disease, 2.6(1.9 to 3.6), diabetes, 3.7(2.6 to 5.3), and obesity, 3.1 (2.2-4.4), the risk of severe diseases was preferentially related to A(H1N1)pdm



Respiratory failure was more common in admissions with A(H3N2).

Influenza vaccination, 0.6(0.4-0.8) lowered the risk of confirmed influenza.



We observed a non significant trend for influenza A(H1N1)pdm to increase the need of intensive care and for A(H3N2) the risk of in-hospital death.

Conclusions

Influenza was associated with disease needing admission in person with and without risk factors. Underlying comorbidity increased the risk of influenza and pregnancy was an outstanding risk factor. Our results support influenza vaccination as a risk reducing measure.