

1141. 2013-2014 Resurgence of 2009 Influenza A (H1N1) Infection among Adults: Has the Epidemiology and Clinical Severity of Disease Changed?

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Background. For the first time since the 2009 pandemic, 2009 Influenza A (H1N1; pH1N1) emerged in 2013-2014 as the predominant influenza A subtype in the US. We analyzed adult cases of pH1N1 from 2009-2014 to describe how the epidemiology and clinical severity of disease has changed over time.

Methods. Established in 2009, the Acute Respiratory Infection Consortium (ARIC) Natural History Study is an observational, longitudinal study of influenza-

like illness (ILI) among military beneficiaries at five US military treatment facilities. Individuals age 18-65y with ILI onset <72h were eligible. Clinical symptoms and physical findings were ascertained at enrollment. Nasal/throat swabs were collected at baseline and tested by influenza PCR.

Results. From 2009-2014, 161 enrollees were positive for influenza. Of these, 143 (88%) were influenza A, including 71 pH1N1 cases (50%). Twenty-six pH1N1 cases were enrolled in the 2013-2014 influenza season. The age of pH1N1 cases was higher in the current season compared to the previous four seasons (median 35y vs 27.6y, respectively; $P < 0.01$). Cases in 2013-2014 had lower severity of cough (median score 2 vs 3; $P = 0.04$) and composite systemic symptom score (mean score of chills, muscle, headache, fatigue, and dizziness; median 1 vs 1.6; $P = 0.01$) than cases from the previous four years. The proportion of pH1N1 cases receiving pH1N1-containing vaccine in the season of enrollment varied from 22.2% in 2009-2010 to 73.1% in 2013-2014. In 2013-2014, 19 (66%) of 29 pH1N1 cases had received seasonal influenza vaccine >14 days prior to illness: 8 (42%) received quadrivalent and 11 (58%) received trivalent vaccine. Quadrivalent vaccine recipients were younger than trivalent vaccine recipients (mean 29.1y vs 44.3y; $P = 0.004$), with similar doses of influenza vaccine received in the past 5 years. No significant differences in clinical severity were observed in the two vaccination groups.

Conclusion. Middle-aged adults were more affected during the resurgence of pH1N1 in 2013-14, while the highest incidence of pH1N1 2009-10 was among those <25y. Symptom severity of pH1N1 infection appears to have lessened over time.

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