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Paper Poster Session IV

Healthcare-associated infection epidemiology and control

Control strategy for nosocomial respiratory virus (including H1N1) infection based on the colonization status of healthcare workers

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Objectives: Many respiratory viruses are easily spread by human-to-human transmission, and healthcare workers (HCWs) are likely to be the source of infection. The aim of this study was to verify the colonization rates of respiratory viruses (including H1N1) in HCWs and to evaluate the necessity of nasal swab screening for detection of subclinical infections in HCWs.

Methods: First-line and non-first-line HCWs were monitored twice for respiratory virus colonization in May and August 2010. We obtained 147 total nasal secretion samples from HCWs and performed reverse transcription (RT)-multiplex polymerase chain reaction (PCR) to identify seven respiratory viruses and RT-PCR for H1N1. All participants were required to complete questionnaires.

Results: Positive results for respiratory viruses were more frequent in first-line HCWs than in non-first-line HCWs in May (13.3% vs. 3.5%, respectively). In addition, first-line HCWs presented more frequently with respiratory virus infection-related symptoms than non-first-line HCWs.

Conclusion: Nasal swab screening by RT-PCR in conjunction with observations of associated symptoms in first-line HCWs may provide effective early detection and prevention of the nosocomial spread of respiratory viruses.