

CO-DETECTION OF VIRAL RESPIRATORY PATHOGENS IN ASYMPTOMATIC HEALTH CARE PROVIDERS

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Objective

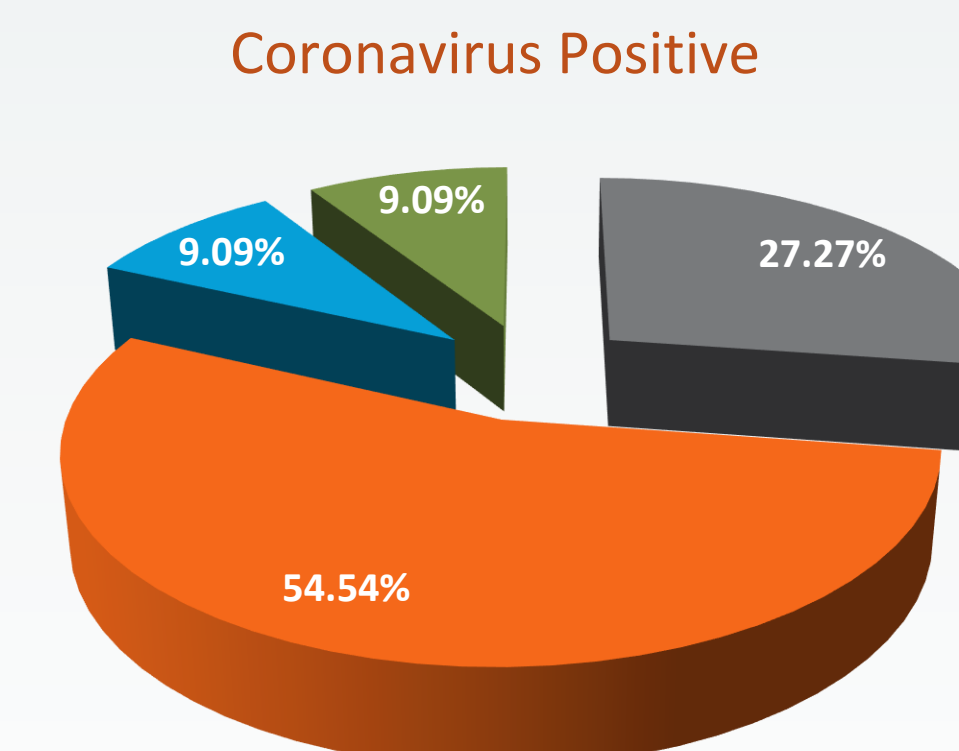
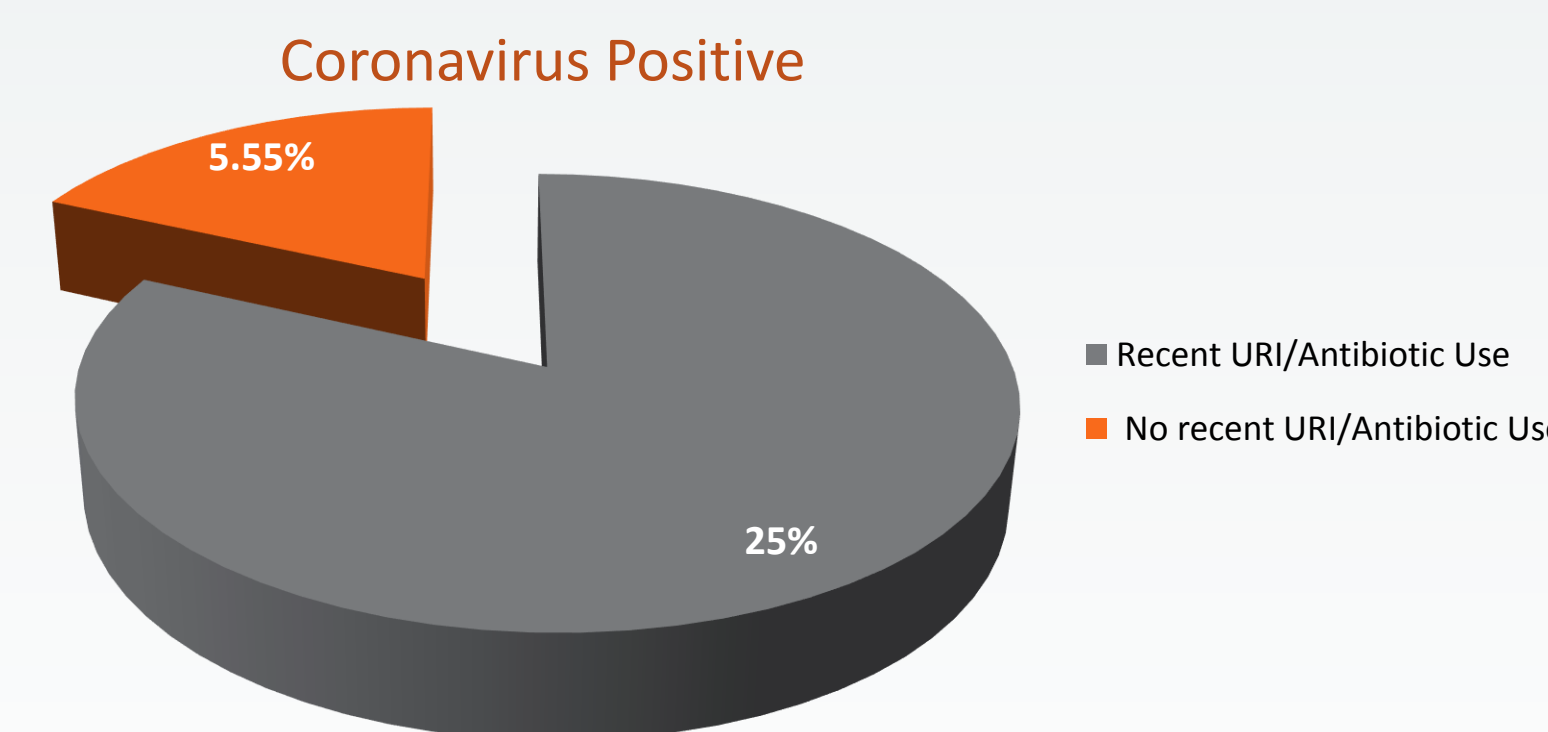
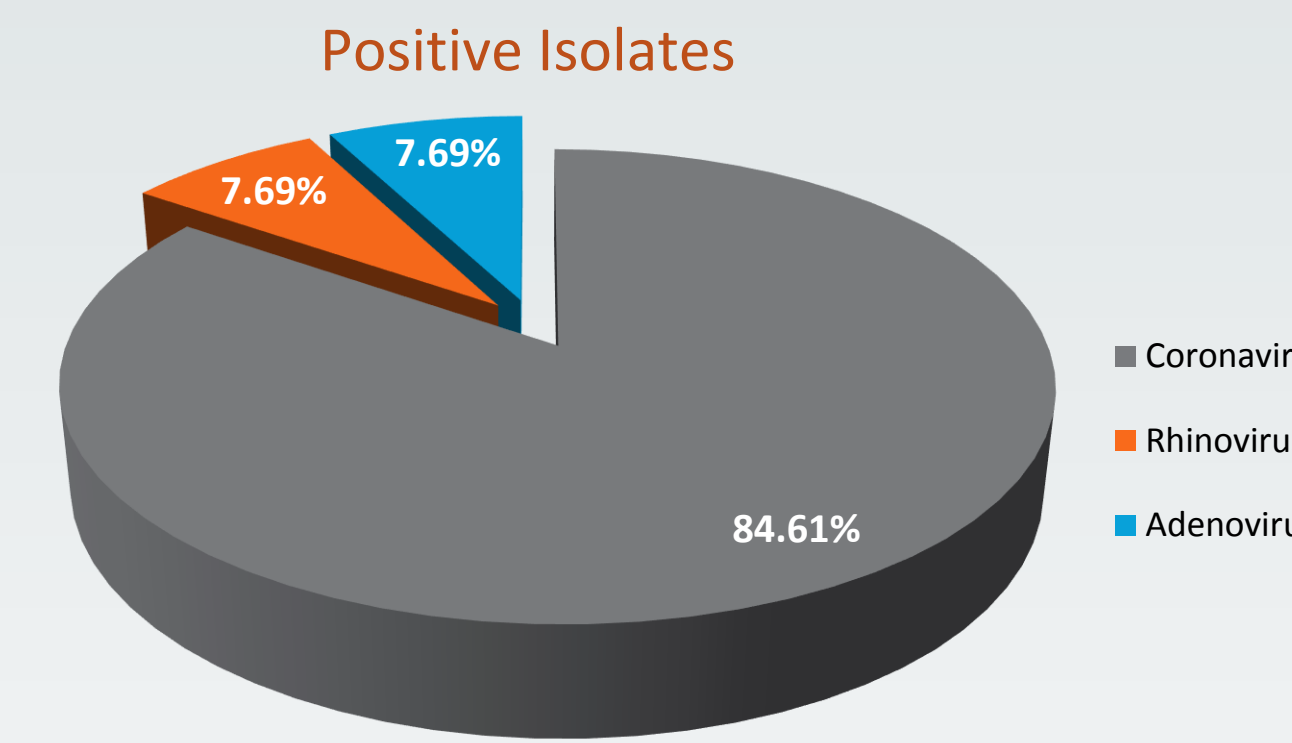
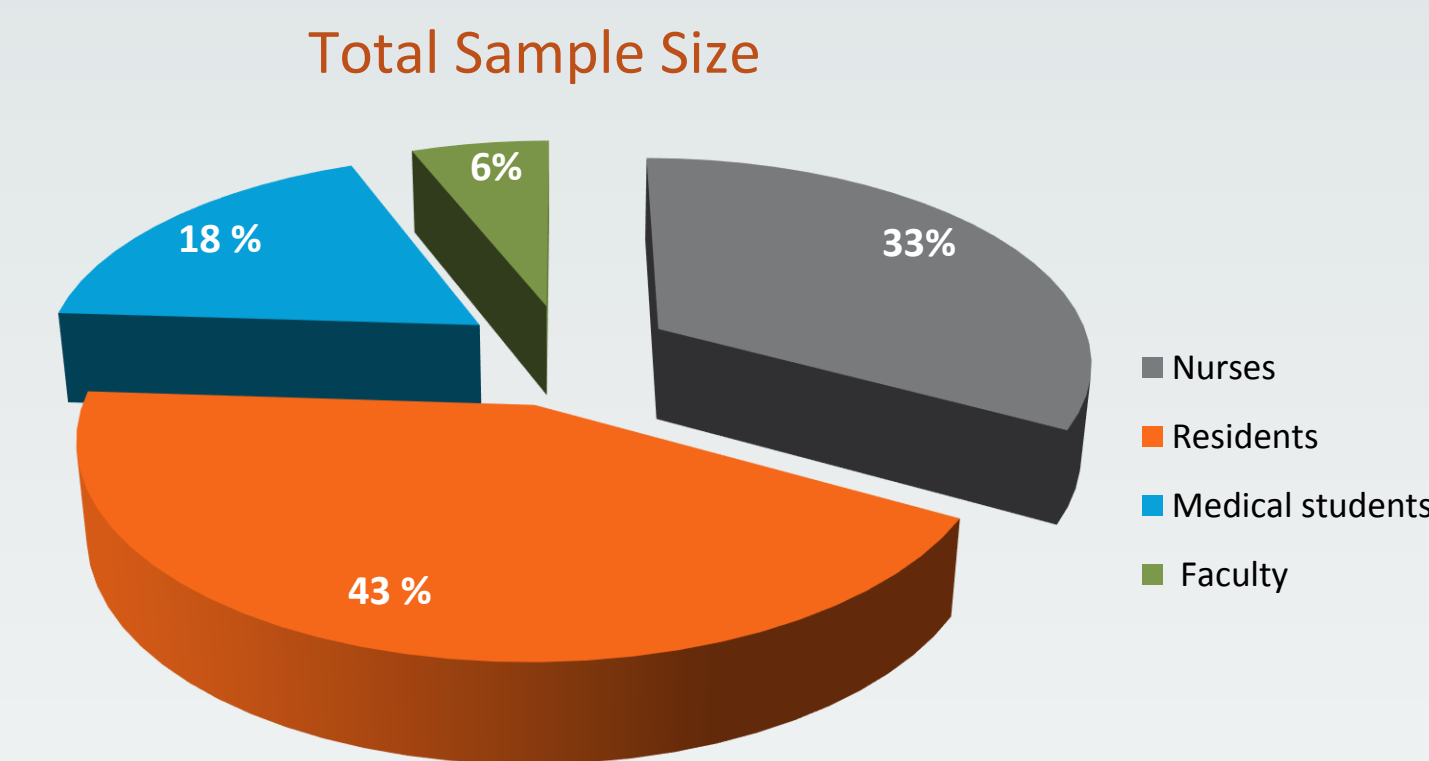
- To determine the prevalence of respiratory viruses carriage among asymptomatic health care professionals (HCPs) during the 2013-2014 influenza season where widespread H1N1 Influenza infections were observed.

Methods

- Single-center, cross-sectional study involving 100 HCPs of a tertiary care hospital in the 2013-2014 influenza season was conducted.
- Nasopharyngeal samples were obtained and screened for 22 different respiratory viruses using a multiplex polymerase chain reaction (TEM-PCR, Diatherix laboratories Inc., Huntsville, AL).
- Pertinent histories including recent upper respiratory infections (URIs), antibiotic use, and immunization status for influenza were obtained.
- None of the subjects had current infections.

Results

- Nasopharyngeal specimens obtained from 100 health care professionals aged 20-59 years.
- Subjects included 64 % females and 36 % males.
- 28 % of subjects (n=28 of 100) reported recent URI symptoms and/or use of antibiotics (within 1 month).
- 80 % received immunization for influenza.
- Influenza viruses (A, B, and H1N1) were not detected in any specimen.
- Positive samples were found in 13 % (n=13 of 100) of subjects , 61% of these had recent URI symptoms



- Of all the Coronavirus positive subjects, 72.37 % were females (vs males 27.27 %) .
- 36.36 % of positive subjects were medicine residents and 25 % of these reported recent respiratory symptoms,
- 63.64 % of Coronavirus positive subjects were nurses and 85.71 % of these reported recent respiratory symptoms.
- In addition, we detected bacterial species in only one subject positive for Coronavirus (9.09%).

Conclusion

- Detection of different viruses especially Coronavirus in nasopharyngeal samples by PCR in this study suggested the possible asymptomatic carriage in HCPs.
- Intermittent or continual shedding of viral pathogens in an 'at risk' patient population is a point for concern.
- None of the samples were positive for Influenza viruses during widespread H1N1 infection.
- Further studies are needed to investigate the effects of possible asymptomatic carriage of viruses among HCPs and possible transmission to other patients.

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