

Personal clothing may spread respiratory infections within the NICU

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Respiratory syncytial virus (RSV), which is the leading cause of childhood respiratory hospitalizations among premature babies, can be detected from the clothes worn by caregivers/visitors who are visiting infants in the neonatal intensive care unit (NICU), according to research being presented at the International Conference on Emerging and Infectious Diseases in Atlanta, Georgia.

"The aim of this study was to identify potential sources of transmission of RSV in the NICU to better inform infection control strategies," said Dr. Nusrat Homaira, Ph.D. researcher, from UNSW, Australia. During periods of seasonal heightened activity there is an increase in <u>hospital</u> <u>admission</u> due to RSV, which may put the <u>premature infants</u> at risk of <u>respiratory infection</u>.

A total of 4% of the swabs collected from the personal clothing of caregivers/visitors in the NICU had detectable RSV. In addition, RSV was detected from 9% of the high-touch areas in the NICU including computers on the nurse's table, chairs adjacent to the admitted infants and their bed rails. "Though the detection rate is low, personal clothing of caregivers/visitors do get contaminated with RSV," said Homaira. The caregivers/visitors are not required to change clothing when they walk into the NICU. "There is a need for further research to evaluate how long the virus remains infectious on personal clothing, which will have policy implications in terms of need for use of separate gowns by the visitors while they are in the NICU," she added.



RSV was not detectable in the hands of the doctors, nurses or the visitors. There was alcohol based hand rub available at point of care and hand hygiene practices were prevalent within the NICU. As hands are the main mode of transmission for respiratory viruses, having optimal hand hygiene practices may mitigate the risk of respiratory infection within the NICU. Suboptimal hand hygiene practices may lead to transmission of the virus from the dresses to the infants. It is therefore crucial to maintain hand hygiene before and after touching the infants in the NICU.

The study was conducted in the NICU of the Royal Hospital for Women in Sydney, Australia during peak community circulation of RSV. Once every week for two months, the two investigators, Nusrat Homaira and Joanne Sheils, collected specimens from the hands, nose, and the clothes of the doctors, nurses and visitors in the NICU. A nasal swab specimen was also collected from the infants admitted. The swab specimens were tested for RSV using molecular technology at the Virology Research Laboratory in the Prince of Wales Hospital, Sydney. Though it could not be determined whether the virus was infectious or not, the study shows that RSV can be detected from the NICU even in the absence of an outbreak.

The study authors concluded that frequent cleaning of high touch areas and periodic screening of visitors for RSV as they enter into the NICU during period of annual seasonal epidemics might help in limiting the transmission of the disease within the NICU.

More information: This research was presented as part of the 2015 International Conference on Emerging and Infectious Diseases held August 24 - 26 in Atlanta, Georgia.



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