

SYNOPSIS

03/19/2020

Review of “Risk factors of healthcare workers with corona virus disease 2019: a retrospective cohort study in a designated hospital of Wuhan in China”

Article citation: Ran L, Chen X, Wang Y, Wu W, Zhang L, Tan X. Risk factors of healthcare workers with corona virus disease 2019: a retrospective cohort study in a designated hospital of Wuhan in China. Clin Infect Dis. 2020 Mar 17 [Epub ahead of print]. Available from: <https://doi.org/10.1093/cid/ciaa287>

One-Minute Summary

- The authors examined risk factors and behaviours associated with coronavirus disease 2019 (COVID-19) infection in 72 health care workers (HCWs) with acute respiratory symptoms in a hospital in Wuhan, China.
- Eligible participants were clinicians or nurses with ≥ 1 acute respiratory illness symptoms.
- **Baseline Characteristics:**
 - Of 72 HCWs, 39 (54%) worked in low risk exposure departments (e.g., general clinic), 33 (46%) in high risk exposure departments (i.e., procedures with respiratory aerosols)
 - Median age: 31 (IQR = 28 to 40 years), 50 (69%) females, 38 (53%) clinicians
 - Median work hours per day: 8 (IQR = 8 to 10 hours)
- Of the 72 HCWs, 28 (39%) diagnosed with COVID-19 (using PCR testing).
- There was an association between COVID-19 infection and the following exposures:
 - **Contact History with a COVID-19 case:** Diagnosed family member (RR: 2.8, 95% confidence interval (CI) 2.0, 3.8); diagnosed patient (RR 0.4, 95%CI 0.2, 0.6) suspected patient (RR 0.5, 95% CI 0.3, 0.9)
 - **Risk Behaviours:** Unqualified hand washing (RR 2.6, 95%CI 1.0, 6.7), suboptimal hand hygiene before contact with patients (RR 3.1, 95%CI 1.4, 6.7), suboptimal hand hygiene after contact with patients (RR 2.4, 95%CI 1.3, 4.4), improper PPE (RR 2.8, 95%CI: 1.1, 7.2)
 - **Exposure Group:** HCWs in high risk relative to low risk exposure group (RR 2.1, 95%CI 1.5, 4.0)

Additional Information

- Common symptoms were fever (86%), cough (61%), brachypnea (7%), chest distress (7%), headache (7%), diarrhea (7%), and hemoptysis (7%) among the 28 HCWs diagnosed with COVID-19.

- Data were collected using surveys and verified through medical records in the hospital information system
- Generalizability limited to: Small sample size, single-centre aspect and less representative research subjects

PHO Reviewer’s Comments

- Study results should be interpreted with caution, as univariate analyses do not control for potential confounders.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Review of “Risk factors of healthcare workers with corona virus disease 2019: a retrospective cohort study in a designated hospital of Wuhan in China”. Toronto, ON: Queen’s Printer for Ontario; 2020.

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