

## 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  $\geq 1$  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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