

# COVID-19 among the Asymptomatic Healthcare Workers in the Tertiary Care Centers of the Southwestern Region of Saudi Arabia: Preventive and Protective Insights

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## ABSTRACT

**Background:** COVID-19 pandemic has sent serious waves of medical emergency all over the world. Healthcare workers (HCWs) are vulnerable to the infection through various patient care processes. As the pandemic advances, it becomes necessary to screen the asymptomatic HCWs for COVID-19 as they constitute potential sources for the disease transmission.

**Objectives:** To screen for the incidence of COVID-19 among asymptomatic HCWs in the tertiary care centers in the Southern regions of Saudi Arabia using both RT-PCR and serology.

**Methods:** A cross-sectional, hospital-based study was conducted to determine the incidence of COVID-19 among the asymptomatic HCWs using RT-PCR and serological assays among 186 consented participants.

**Results:** The total number of COVID-19 cases among the participants using all tests was 34 (18.3%). Out of the total participants, 4.8%, 3.2%, 7%, 10.2%, and 11.8% positive COVID-19 cases were detected using RT-PCR, rapid ICT for IgG, rapid ICT for IgM, ELISA for IgG and ELISA for IgM respectively. Significantly higher cases were observed among HCWs in the ICU of Aseer Central Hospital. 100% of the medical students and administrative staff, 40% of respiratory therapists, 31.8% of laboratory specialists, 22.7% of cleaners, 13.5% of physicians, 12.2% of nurses participated were positive to COVID-19. Participants of 18-24 years old showed the highest level of cases. However, considering the total number of positive COVID-19, nurses showed the highest number of cases.

**Conclusions:** Considerable number of COVID-19 cases were detected among HCWs in the Southern region of KSA. Screening of HCWs should have the priority in the preventive interventions.

**Keywords:** COVID-19; HCWs; RT-PCR; serology; Saudi Arabi

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