

## INTISARI

**Latar belakang:** Tenaga kesehatan yang merawat pasien COVID-19 atau terduga COVID-19 beresiko terpapar virus, baik dari pasien yang terinfeksi maupun dari peralatan, bahan atau lingkungan yang terkontaminasi. Beberapa penelitian menunjukkan bahwa profesi dokter dan tenaga kesehatan yang bertugas di zona resiko tinggi mempunyai peluang terinfeksi lebih besar. Penerapan kewaspadaan standar dan kewaspadaan tambahan akan mengurangi resiko terhadap infeksi COVID-19.

**Tujuan:** untuk mengeksplorasi hubungan antara karakteristik petugas kesehatan dengan kejadian infeksi COVID-19 pada petugas kesehatan di RSUP Dr Sardjito Yogyakarta.

**Metode:** Desain penelitian ini adalah *cross sectional study* yang dilakukan di RSUP Dr Sardjito Yogyakarta pada bulan Oktober. Data karakteristik petugas kesehatan diperoleh dari survei *online* diisi petugas kesehatan yang masuk kriteria inklusi.

**Hasil:** Survei *online* diikuti oleh 657 petugas kesehatan, 6 orang menyatakan tidak bersedia melanjutkan survei. Setelah melakukan eksklusi, sebanyak 651 hasil survei dilakukan analisis. 23 petugas Kesehatan diketahui memiliki hasil swab positif. tingkat infeksi COVID-19 di antara dokter, perawat, staf klinis lain, dan staf non klinis masing-masing yaitu 1.7%, 1.4%, 0% dan 0.4% ( $P = 0.041$ ). Adanya petugas kesehatan yang positif COVID-19 yang bertugas di zona hijau (OR 0.330, CI 95% = 0.141 - 0.775,  $P = 0.015$ ), dan yang bertugas di zona kuning (OR 4.571, CI 95% = 1.970 - 10.607,  $P = 0.001$ ), serta petugas kesehatan dengan jenis kelamin pria ( $P = 0.001$ ) merupakan karakteristik dasar petugas kesehatan yang bermakna secara statistik terhadap infeksi. Sementara riwayat tinggal serumah dengan orang terkonfirmasi (OR 13.643, CI 95% 2.303 - 80.835,  $P = 0.02$ ), riwayat kontak langsung <1 meter dengan orang terkonfirmasi (OR 6.719, CI 95% 2.412 - 18.715,  $P = <0.0001$ ), frekuensi kontak <10 kali (OR 5.171, CI 95% 1.159 - 23.66,  $P = 0.017$ ), tindakan endoskopi (OR 27.375, CI 95% 3.409 - 219.796,  $P = 0.01$ ), kebiasaan cuci tangan ( $P = 0.004$ ) serta pemakaian APD level 3 (OR 0.121, CI 95% 0.16 - 0.908,  $P = 0.028$ ) merupakan faktor resiko yang secara statistik bermakna terhadap infeksi COVID-19 di antara petugas kesehatan.

**Simpulan:** Petugas kesehatan yang memberikan pelayanan secara langsung kepada pasien dan bertugas di zona kuning memiliki risiko terinfeksi COVID-19 lebih besar dari petugas kesehatan yang bertugas di zona merah. Pemakaian APD level 3 secara benar di zona merah akan melindungi petugas yang bertugas di area tersebut. Resiko infeksi COVID-19 juga lebih besar pada petugas kesehatan pada saat tidak sedang melayani atau saat tidak sedang bertugas, karena petugas kesehatan abai terhadap protokol kesehatan. Faktor risiko lain yang mempengaruhi kejadian infeksi COVID-19 yaitu riwayat kontak yang berasal dari rumah tangga dan komunitas, dengan jenis kontak yaitu riwayat tinggal serumah dan riwayat kontak langsung dengan jarak <1 meter dengan orang terkonfirmasi positif.

**Kata kunci:** infeksi COVID-19, faktor resiko, petugas kesehatan

## ABSTRACT

**Background:** Health care personnel taking care of COVID-19 patients or suspected case are at risk of exposure to the virus, both from infected patients and contaminated equipment, materials or environments. Several studies reported that doctors and health care personnel who work in high-risk area have greater probability to be infected. Implementation of standard precautions and additional measures reduce the risk of COVID-19 infection

**Objective:** This study aimed to explore the relationship between characteristics of health care personnel and the incidence of COVID-19 infection among health professionals at Dr. Sardjito General Hospital, Yogyakarta.

**Methods:** A cross-sectional study design conducted at Dr. Sardjito General Hospital Yogyakarta period October 2020. An online survey was distributed to the health professionals retrieving individual characteristics in adherence to the inclusion criteria.

**Results:** The online survey was attended by 657 health workers, 6 people declined to participate in the survey. Prior to statistical analysis, ineligible data were excluded. 651 survey results were analyzed. 23 health personnel confirmed with positive swab test. COVID-19 infection rate among doctors, nurses, other clinical personnel and non-clinical personnel was 1.7%, 1.4%, 0% and 0.4% respectively ( $p=0.041$ ). COVID-19 incidence among health personnel on duty from green zone (OR 0.330, 95% CI=0.141-0.775,  $p=0.015$ ), while the yellow zone (OR 4.571, 95% CI=1970-10 607,  $p=0.001$ ). Male health personnel were the basic characteristics which statistically significant for the infection ( $p=0.001$ ). Meanwhile, history of living with a confirmed cases (OR 13,643, 95% CI 2,303-80,835,  $p=0.02$ ), history of direct contact <1 meter with a confirmed person (OR 6,719, 95% CI 2,412-18,715,  $p<0.0001$ ), frequency of contact <10 times (OR 5,171, 95% CI 1,159-23.66,  $p=0.017$ ), endoscopic procedures (OR 27,375, 95% CI 3,409-219,796,  $p=0.01$ ), hand hygiene habits ( $p=0.004$ ) and level 3 PPE (OR 0.121, 95% CI 0.16-0.908,  $p=0.028$ ) were statistically significant risk factor for COVID-19 infection among health personnel.

**Conclusion:** Health personnel who provide direct care for patients and work in the yellow zone are at a greater risk of being infected with COVID-19, compared to health workers who work in the red zone. Appropriate use of PPE level 3 in the red zone protect personnel during their duty in the area. The risk of COVID-19 infection is also higher for health workers during the off-duty period due to health protocols ignorance. Other risk factors that contribute the incidence of COVID-19 infection are household and community contact history, including history of living with confirmed cases and direct contact <1 apart with infected individual.

**Keywords:** COVID-19 infection, health workers, risk factors