Acquisition of COVID-19 by health care workers: the importance of non-patient workplace sources

To the Editor: In a recent letter published in the *MJA*, Muhi and colleagues[1] reviewed the source of acquisition by 11 health care workers with coronavirus disease 2019 (COVID-19) who presented for symptomatic screening at a single clinic. Travel and transmission outside the workplace were considered the likely source of infection for most of them.

Data on COVID-19 cases collected for public health purposes in Western Australia up to 1 June 2020 were reviewed to inform local public health strategies to protect health care workers. Fifty-seven cases of COVID-19 among health care workers or workers in health care settings with direct patient contact were identified. Fifty-six cases were confirmed by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) polymerase chain reaction (PCR) test, and one case had positive SARS-CoV-2 IgG serology indicating past infection. Thirty-one health care workers acquired their infection from a cruise ship or overseas, and 26 health care workers acquired COVID-19 within Australia.

The likely source of the 26 locally acquired cases is shown in the Box. Ten health care workers acquired the infection in the workplace. A further eight had no known contact with a COVID-19 case but worked during their incubation period. These health care workers may have acquired the infection from an unidentified patient with COVID-19, from another health care worker, or via fomite transmission at work. Extensive contact tracing did not reveal an alternate source in a setting of limited community transmission.

Likely source of coronavirus disease 2019 (COVID-19) infection for locally acquired cases by Western Australian health care workers (HCWs)

Source of infection	Cases
Direct HCW to HCW transmission	7
Likely fomite transmission	3
Unknown, but worked during incubation period*	8
From a close contact outside of work	5
Contact not identified, but interstate travel	3
Total	26

* No alternate source of infection identified in the context of limited community transmission. ◆

Where possible, whole genome sequencing was used to substantiate epidemiological findings. Transmission of COVID-19 occurred between health care workers, emphasising the need for staff to recognise not only the risk from patients but also from colleagues, where use of personal protective equipment and physical distancing may be relaxed. There were no cases among staff in COVID-19 clinics, suggesting that the use of personal protective equipment does mitigate risk. Workplace fomite transmission was the putative source on three occasions, which reinforces the importance of regular environmental cleaning, rigorous cleaning of shared equipment, and good cough etiquette and hand hygiene practices within health care facilities.

Our review describes a larger cohort of COVID-19 cases among health care workers, encompassing metropolitan and regional settings. With international travel restrictions, an increasing proportion of locally acquired infections among health care workers may be expected. From this analysis and others,[2] colleagues and fomites should be recognised as potential workplace sources of infection, in addition to direct patient contact.

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1 Muhi S, Irving LB, Buising KL. COVID-19 in Australian health care workers: early experience of the Royal Melbourne Hospital emphasises the importance of community acquisition [letter]. *Med J Aust* 2020; 213: 44. https://www.mja.com.au/journal/2020/213/1/covid-19-australian-health-care-workers-early-experience-royal-melbourne

2 Zabarsky TF, Bhullar D, Silva SY, et al. What are the sources of exposure in healthcare personnel with coronavirus disease 2019 infection? *Am J Infect Control* 2021; 49: 392–395. ■