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Covid-19: risks to healthcare workers and their families

Mistakes made in the first wave must not be repeated in the second

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Since the beginning of the coronavirus 2019 (covid-19) pandemic, healthcare workers have shown a remarkable resilience and professional dedication despite a fear of becoming infected and infecting others.¹ In a linked paper (doi:10.1136/bmj.m3582), Shah and colleagues now report robust and concerning findings regarding the risks of covid-19 among health workers and their households.²

In a large register based cohort study, comprising the entire Scottish healthcare workforce, the authors compared the risk of covid-19 related hospital admission between patient facing and non-patient facing workers, their household members, and the general population. Absolute risks were low, but during the first three months of the pandemic patient facing healthcare workers were three times more likely to be admitted with covid-19 than non-patient facing healthcare workers. Risk was doubled among household members of front facing workers, in analyses adjusted for sex, age, ethnicity, socioeconomic status, and comorbidity.

Previous work reported similar risks for covid-19 among healthcare workers,^{3 4} but the new study provides the most comprehensive estimate to date of the risk of more serious disease, and it is the first to report risk to household members. The reasons for the observed increase in risk—likely multifactorial—need to be explored to help to guide safety improvements in healthcare settings.

During lockdowns, most essential workers are unable to protect themselves by working from home. Furthermore, insufficient physical distancing is a leading contributor to any work related covid-19 outbreak.⁵ Consequently, workers in sectors such as transport and social care are also at increased risk of covid-19, although healthcare workers have been shown repeatedly to be at highest risk.^{5 6}

During the first wave of the pandemic, overstretched healthcare systems left health workers in hard hit countries struggling with long working hours, fatigue, and extreme psychological stress. Rapidly vanishing supplies, national lockdowns, and a feeding frenzy on the open market for personal protective equipment (PPE) led to shortages.⁷ Healthcare workers often had to care for patients with suspected or confirmed covid-19 infection without proper training or adequate PPE. This contributed to an increased risk to healthcare workers during the initial phase of the pandemic.^{3 8 9}

Superspreading events, a hallmark of previous coronavirus outbreaks, contribute substantially to community transmission of covid-19 and to work related clusters.⁵ Most countries struggled with insufficient testing capacity in the first months of the

pandemic, which hampered early detection of emerging outbreaks and implementation of infection control measures. Increasing experience now suggests that every suspected healthcare associated infection should trigger a bundle of immediate infection control measures, including extensive screening for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), quarantining of all patients on the affected ward, physical distancing between personnel, and use of reinforced PPE during all contact with patients on the affected ward, in order to prevent larger outbreaks.^{10–12}

Most, but not all, studies report increased risks for health workers caring for patients with covid-19.^{3 13 14} Working in intensive care units is not associated with an increased risk of infection, possibly owing to the protection afforded by high level PPE or to the decrease in infectivity that occurs in the later stages of the illness, even among critically ill patients.^{13 15} The greatest risk to healthcare workers may be their own colleagues or patients in the early stages of unsuspected infections when viral loads are high.¹²

Most studies to date, including Shah and colleagues' study, have evaluated risks to healthcare workers during the early phases of the pandemic. Advances since then may have reduced the risks, although further confirmatory studies are needed. Such advances include greater knowledge of transmission dynamics and the impact of asymptomatic and pre-symptomatic infections,¹⁶ better access to effective PPE, improved testing capabilities, optimised triage systems, implementation of new infection control measures such as continuous mask use in hospitals,^{17 18} and faster outbreak alerts and responses.

High quality prospective studies evaluating new prevention and control practices will be important to guide improvements in our approach to protecting healthcare workers and their families,¹⁹ including those from ethnic minority communities who have the highest risks of infection and poor outcomes, widening workplace inequality.³ The international community must support efforts by the World Health Organization to secure adequate supplies of PPE and covid-19 tests for low and middle income countries. An effective vaccine, if and when available, must be distributed fairly and healthcare workers must be prioritised globally. In accordance with United Nations Sustainable Development Goals, we must ensure the protection and security of all health workers in all settings.²⁰

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