

Healthcare workers in COVID-19

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[Epidemiology of and Risk Factors for Coronavirus Infection in Health Care Workers: A Living Rapid Review](#) Chou et al

This ongoing systematic review of coronavirus infection in healthcare workers was first published in May 2020, with subsequent monthly updates. The first paper included research that relates to the SARS-CoV-2 (Covid19), SARS-CoV-1 and MERS coronavirus outbreaks, with subsequent updates focusing on Covid19. Across all of these coronavirus diseases, healthcare workers account for a significant proportion of infections. However, they appear to experience less severe illness than the general population, possibly due to younger age and fewer comorbidities. PPE use and infection control training are associated with decreased risk of infection in healthcare workers.

[Risks to healthcare workers following tracheal intubation of patients with COVID-19: a prospective international multicentre cohort study](#) El-Boghdady et al

A prospective international multicentre cohort study of healthcare workers undertaking tracheal intubation of suspected or confirmed COVID patients was conducted, looking at the incidence of lab-confirmed COVID-19. n=1718 healthcare workers across 503 hospital in 17 countries contributed (mostly from HICs) to 5148 tracheal intubation episodes. The overall incidence of the primary endpoint was 10.7% over a median (IQR [range]) follow-up of 32 (18-48 [0-116]) days. The cumulative incidence within 7, 14 and 21 days of the first tracheal intubation episode was 3.6%, 6.1% and 8.5%, respectively.

[Infection prevention and control compliance in Tanzanian outpatient facilities: a cross-sectional study with implications for the control of COVID-19](#)

Powell-Jackson et al

Correct infection prevention and control practices are key to stopping the spread of Covid-19. This may be more difficult to achieve in less well-resourced healthcare systems, for instance due to inadequate provision of supplies or healthcare worker training. This observational study carried out at over 200 Tanzanian healthcare facilities in early 2018 showed poor infection prevention and control compliance among healthcare workers, in particular in relation to hand hygiene (6.9% compliance) and disinfection of reusable equipment (4.8%). Compliance with glove use (74.8%) and correct waste management processes (43.3%) was somewhat better. The authors suggest that improving infection prevention and control practice in low resource settings is a priority in controlling the spread of the Covid-19 virus.

[Barriers and facilitators to healthcare workers' adherence with infection prevention and control \(IPC\) guidelines for respiratory infectious diseases: a rapid qualitative evidence synthesis](#) Houghton et al

This Cochrane rapid review aims to explore factors which affect HCW compliance with IPC guidelines for respiratory infectious diseases. The authors searched for qualitative data focusing on "experience and perception of HCW towards factors impacting their ability to comply with IPC guidelines", collected anytime, in any language, in any patient-facing healthcare setting. 20 of the 36 studies found were sampled: Asia=10, Africa=4, North and Central America=4, Australia=2; most were conducted in hospital settings. The authors conclude that the main factors affecting HCW compliance with IPC are 1) inconsistency of message between local/national/international IPC guidelines 2) training for PPE 3) crowded physical environment and lack of access to sanitising facilities 4) access to and quality of PPE 5) desire to deliver good patient care, PPE discomfort, workplace culture. 6) importance of including all staff (eg. cleaning, porters, kitchen and other support staff) when implementing IPC guidelines.

During the COVID19 pandemic, IPC guidelines are continuously updated as our knowledge and experience of the novel coronavirus grows. Although none of the factors uncovered by this review are surprising-- it is good to see evidence on this topic, so key factors can be brought to the attention of policy makers and addressed going forward in this pandemic.

[Teaching Adequate Prehospital Use of Personal Protective Equipment During the COVID-19 Pandemic: Development of a Gamified e-Learning Module](#) Suppan et al

During the pandemic, PPE has emerged as a new area for just in time training. The simultaneous need for physical distancing has led to innovation in methods of teaching and training. This paper is looking at the development of a elearning module on the choice and use of PPE targeting prehospital healthcare providers, using gaming theory. The interactivity gaming mechanics afford was thought to be particularly useful in learning the donning/doffing sequence. The jury is still out on whether this learning translates into clinical practice, and so further studies are needed.

[A Randomized Trial of Hydroxychloroquine as Postexposure Prophylaxis for Covid-19](#) Boulware et al

There has been a tremendous amount of research interest in chemoprophylaxis of Covid-19, especially for healthcare workers. The drug that is most talked about and studied throughout the world in this context is hydroxychloroquine, however there is a lack of evidence to support its use. In this randomised, double-blind, placebo-controlled trial, 821 asymptomatic participants were recruited across the US and Canada to assess the effectiveness of hydroxychloroquine as post-exposure prophylaxis for Covid-19. There was no statistically significant difference in the incidence of new illness compatible with Covid-19 between the hydroxychloroquine group and the placebo group, nor was there any significant difference in cases of confirmed Covid-19. Side effects with hydroxychloroquine were common.

[Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis](#)

Kisely et al

The world has seen a number of viral pandemics such as SARS, H1N1, MERS, ebola, SARS-CoV-2 over the past 20 years or so. This rapid review and meta-analysis aims to 1) identify psychological effects in HCW of working during emerging viral outbreaks, and 2) identify successful measures to manage stress and psychological distress. Inclusion criteria were broad, and there were no restrictions on study design, type of emerging virus or clinical setting. Acute and post-traumatic stress and psychological distress were increased in HCW with higher exposure to patients. Specific risk factors included younger age, being more junior, being the parents of dependent children, or having an infected family member. Longer quarantine, lack of practical support, and stigma also

contributed. Mitigating factors included clear communication, access to PPE, rest, and both practical and psychological support.

The association found between psychological trauma/stress and volume of patient-contact doesn't imply causation, but does it suggest it is an unavoidable risk of the frontline healthcare trade? This study concludes that effective interventions to mitigate stress/psychological distress of HCW in an emerging disease outbreak do exist, and interestingly that these may be transferable across different types of settings/outbreaks.

[Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis](#) Pappa et al

This metaanalysis aims to describe the prevalence of depression, anxiety and insomnia in HCW during the COVID-19 pandemic up to 17/04/2020. 33,062 participants from 13 studies (12 from China, 1 from Singapore) were included in the analysis. Anxiety (12 studies) had a prevalence of 23.2%, depression (10 studies) had a prevalence of 22.8% and insomnia had a prevalence of 38.9% (5 studies). There was heterogeneity in psychological measurement scales, and overall the severity of symptoms measured was mild.

Should psychological interventions targeting mental health risks in HCW therefore be adapted under pandemic conditions? Mood and sleep symptoms were mild overall, and it is unclear from the study how this would compare to non-pandemic times; however there is no denying the prevalence overall is high. This suggests that it would be important to monitor mood and sleep symptoms in HCW, during pandemic as well as 'normal' times.

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