In brief

COVID-19 pandemic and wellbeing of critical care and other healthcare workers

17 February 2022

Summary

Critical care workforce

- During the COVID-19 pandemic, intensive care unit (ICU) and urgent care staff may be at increased risk of physical and mental stress, including burnout, exhaustion, depression, anxiety and post-traumatic stress.

- Managing the wellbeing of ICU staff may include providing psychological support, assisting with basic needs, promoting self-care, and maintaining communication. Studies were predominantly descriptive, and effectiveness of different management strategies was not evaluated.

Healthcare workers

- Studies have shown that during the COVID-19 pandemic healthcare workers are at higher risk of mental health issues, including depression, anxiety, sleep problems and stress, compared to non-healthcare workers.

- Managing the wellbeing of healthcare workers may include systematic screening, early psychological intervention, and organisational actions to support staff. A Cochrane review did not find any evidence on how well different management strategies work.

Critical care workforce

Risk

Many studies report on the impact of the COVID-19 pandemic on the wellbeing of ICU staff. They include the following:

- A cross-sectional study on the effect of COVID-19 pandemic on physical wellbeing and mental health of ICU healthcare workers in Turkey reported mental health issues including poor sleep quality, anxiety, depression and emotional exhaustion. Decreased sleep duration, white blood cell count, vitamin B12 and vitamin D levels, and increased daily cigarette consumption were also reported, particularly in ICU workers working ≥200 hours per month.[1]

- A survey on the mental health status of 3,851 ICU practitioners in China reported that the mental health of ICU practitioners in the COVID-19 group was worse than the Chinese norm including somatisation, depression and anxiety.[2]

- A study of perceived stress and post-traumatic stress disorder (PTSD) symptoms reported by ICU staff working with COVID-19 patients found the majority of participants perceived working in the ICU as moderately to severely stressful. PTSD symptoms were reported in 17.7% of respondents. Staff with previous ICU experience were less likely to be diagnosed with probable PTSD than staff without prior experience.[3]

- A cross-sectional survey of Swiss health care workers reported low wellbeing, anxiety, depression and peritraumatic stress in ICU staff. Working in the ICU was associated with a significant change in eating habits, sleeping patterns, and alcohol consumption compared to other departments.[4]

- A survey of Italian ICU workers assisting COVID-19 patients reported over half (60%) met the criteria for burnout. Nurses reported significantly higher scores of anxiety and insomnia compared to physicians. Symptoms of depression were reported in 45% of participants.[5]

- A separate Italian survey reported being exposed to COVID-19 infection was associated with symptoms of depression in healthcare workers.[6]

- A study from China reported that healthcare workers engaged in direct diagnosis, treatment and care of COVID-19 patients were associated with a higher risk of depression, anxiety, insomnia and distress.[7]

- A report of American physicians found a 42% prevalence of self-reported burnout with the highest proportion (48%) being intensivists.[8]

- Concerns linked to symptoms of mental health disorders included fear of being infected, lack of sleep or rest, inability to care for family, managing difficult emotions, visitor restrictions, and end-of-life decisions.[9, 10]

Management

- Organisational support for staff may include ongoing provision of psychological support and support during isolation or quarantine (e.g. testing, assisting with alternative accommodation, arranging food deliveries).[11]

- A New York City taskforce identified three priority areas for promoting and maintaining healthcare workforce wellbeing during the pandemic: meeting basic daily needs; enhancing communication; and developing robust psychosocial and mental health support options.[12]

Table 1 Priority areas and deliverables for workforce wellbeing during COVID-19[12]

Priority area	Work group representation	Categories	Deliverables
Basic needs	Office of Well-being and Resilience (OBWR), human resources, recreation office, housing office, security office, infection prevention, nursing	Food	• System-wide provision of food for staff and physicians • Free or reduced-cost options for staff to order
		Housing	• Onsite call room options • On-campus option • Local hotel options (reduced rates)
		Transportation	• Free parking • Reduced-cost/free car rentals • Free bike rental options
		Personal safety	• Clear guidelines for use of and updates on status of PPE • Provision of scrubs • Clear guidelines for reducing exposure for self and loved ones
		Childcare	• Online tool to link employees, faculty, trainees in need of childcare with available services
Communications	OWBR, institutional leadership, communications team, department and divisional leadership, infection prevention	System wide	• System-wide email (with inspiring and honest messaging) • Website with pandemic resources and well-being resources • Town halls with leadership and infection prevention personnel (weekly to a few times per week)
		Local	• Department/division emails (daily updates, with information distilled to fit group) • Department/division conference meetings (daily to weekly) to allow for information sharing, and questions and concerns to be raised
Psychosocial and mental health support	OWBR, psychiatry, psychology, social work, employee assistance, nursing	Resilience and self-care	• Virtual mindfulness, yoga, music therapy • Social networking groups • Free apps for the above
		Group debrief support	• Virtual social worker-/psychologist-facilitated support groups • Spiritual care support groups
		Individual brief support	• System-wide peer support hotline • Employee Assistance Program counseling • Spiritual care one-on-one counseling • Government/nonprofit help lines
		Individual long-term mental health support	• Institutional psychiatry and mental health services • Voluntary and offsite mental health services
		Crisis management	• System-wide peer support hotline • 24/7 Mental health crisis support • Deployment of mental health providers to units in need (virtually or in person) • Government/nonprofit crisis lines

- [Individual strategies combined with a supportive system](#) are recommended to reduce burnout and promote resilience. Individual strategies may focus on self-care, including adequate nutrition, rest, exercise and connecting with others.[8]

- There are [emerging 'blended care' services](#) for healthcare workers combining digital (websites and apps) and person-to-person (including telehealth) mental health support. These services can deliver personalised, evidence-based support at scale during and beyond the pandemic.[13]

- The [NSW Health adult intensive care workforce report in COVID-19 pandemic](#) provides recommendations for supporting staff wellbeing and a sustainable workforce. Recommendations include providing debriefing and psychological support, assisting with accommodation and other basic needs, and access to testing and vaccination.[14]

- The [South Australia Health Critical Care Surge Nursing Workforce Strategy](#) for COVID-19 outlined wellbeing support measures for staff including psychological support, employee support programs, mindfulness and resilience training, debriefing and communication.[15]

- The [UK Intensive Care Society](#) published advice for sustaining staff wellbeing in critical care during and post COVID-19 including communication updates, escalation planning, peer support, supporting basic needs, psychological first aid and debriefing.[16]

Healthcare workers

Due to a large volume of literature, evidence on health care workers was limited to systematic reviews. Fourteen systematic reviews on the mental health impact of the COVID-19 pandemic on healthcare workers reported:

Risk

- The [estimated prevalence](#) of [depression](#) ranged from 12.1-55.9%, [anxiety](#) 23.2-67.6%, [insomnia](#) or sleep disturbance 34.5-41.0%, and [stress](#) 28.8-63.0%.[17-23]

- Rates of depression, anxiety, sleep problems and stress were [higher compared to non-healthcare workers](#).[17-19, 24]

- Fear, [burnout](#), [post-traumatic stress disorder](#), obsessive compulsive disorder and somatisation were also experienced.[17, 20, 21, 25]

- Healthcare workers feel concerned about their own and others' [physical safety](#), including risk of infection, inadequate personal protective equipment and resourcing.[18, 25, 26]

- Healthcare workers struggled with high workloads and long shifts.[24, 26]

- Many healthcare workers experienced stigma, particularly in the early stages of the pandemic.[26]

Management

- [Early psychological intervention](#) is recommended for frontline responders to prevent or minimise mental health impacts.[23, 27] Potential interventions include: psychological first aid; eye movement desensitisation and reprocessing; the anticipate, plan, and deter responder risk and resilience model; resilience at work mindfulness program; resilience and coping for the healthcare community; and trauma risk management.[27]

- Recommendations for managing mental health issues include [assessment and promotion of coping strategies and resilience](#), provision of adequate protective supplies, and organisation of online support services.[25, 28]

- One review proposed mental health interventions in five categories: supportive interventions; encouragement and motivation interventions; protective interventions; educational and training interventions; and technology and online services.[22]

- Support from their organisations was valued by healthcare workers.[26] Organisational actions included flexible work schedules, support systems for healthcare workers' families, and involving healthcare workers in decision processes.[21]

- Workplace interventions are associated with a reduction in burnout. Organisational strategies to reduce burnout may include improving workflow management, reducing workload, improving communication, debriefing, supporting adequate rest and exercise, developing coping skills, and increasing teamwork.[25]

- Consistent, centralised and accurate communication with healthcare workers is important.[21, 26]

- Psychological support, including online services, hotlines and peer support programs, may help reduce mental health problems.[19, 21, 22]

- Systematic screening of healthcare workers for mental health illness may be used to implement mental health support programs and provide early intervention.[24]

- Some staff were reluctant to engage in psychological support services when they were provided.[26]

- A Cochrane review evaluated workplace interventions designed to support resilience and mental wellbeing in healthcare workers during an infectious disease outbreak. Interventions included either psychological support (e.g. counselling or seeing a psychologist) or work-based interventions (e.g. training or changing routines). Barriers to implementation of an intervention included frontline workers lacking awareness of requirements to support their mental health and a lack of resources. Three facilitators to implementation of an intervention were adaptability for a local area, effective communication, and positive and supportive environments.[29]

- Effective interventions during previous viral outbreaks are applicable to the COVID-19 pandemic: communication; access to adequate personal protective equipment; adequate rest; and practical and psychological support.[30]

To inform this brief, PubMed and Google searches were conducted using terms related to critical care, workforce, wellbeing and COVID-19 on 17 and 18 January 2022. A separate search of systematic reviews was conducted using terms related to healthcare workers, wellbeing and COVID-19 on 25 January 2022.

References

1. Duru H. The Continuing Effect of COVID-19 Pandemic on Physical Well-Being and Mental Health of ICU Healthcare Workers in Turkey: A Single-Centre Cross-Sectional Later-Phase Study. J Intensive Care Med. 2021 Dec 30:8850666211070740. DOI: 10.1177/08850666211070740

2. He W, Chen W, Li X, et al. Investigation on the Mental Health Status of ICU Practitioners and Analysis of Influencing Factors During the Stable Stage of COVID-19 Epidemic in China. Front Public Health. 2021;9:572415. DOI: 10.3389/fpubh.2021.572415

3. Kader N, Elhusein B, Chandrappa NSK, et al. Perceived stress and post-traumatic stress disorder symptoms among intensive care unit staff caring for severely ill coronavirus disease 2019 patients during the pandemic: a national study. Ann Gen Psychiatry. 2021 Aug 21;20(1):38. DOI: 10.1186/s12991-021-00363-1

4. Wozniak H, Benzakour L, Moullec G, et al. Mental health outcomes of ICU and non-ICU healthcare workers during the COVID-19 outbreak: a cross-sectional study. Ann Intensive Care. 2021 Jul 10;11(1):106. DOI: 10.1186/s13613-021-00900-x

5. Stocchetti N, Segre G, Zanier ER, et al. Burnout in Intensive Care Unit Workers during the Second Wave of the COVID-19 Pandemic: A Single Center Cross-Sectional Italian Study. Int J Environ Res Public Health. 2021 Jun 5;18(11). DOI: 10.3390/ijerph18116102

6. Rossi R, Socci V, Pacitti F, et al. Mental Health Outcomes Among Frontline and Second-Line Health Care Workers During the Coronavirus Disease 2019 (COVID-19) Pandemic in Italy. JAMA Network Open. 2020;3(5):e2010185-e. DOI: 10.1001/jamanetworkopen.2020.10185

7. Lai J, Ma S, Wang Y, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. JAMA Network Open. 2020;3(3):e203976-e. DOI: 10.1001/jamanetworkopen.2020.3976

8. Wong A, Olusanya O, Parulekar P, et al. Staff wellbeing in times of COVID-19. Journal of the Intensive Care Society. 2020 2021/11/01;22(4):328-34. DOI: 10.1177/1751143720968066

9. Azoulay E, Cariou A, Bruneel F, et al. Symptoms of Anxiety, Depression, and Peritraumatic Dissociation in Critical Care Clinicians Managing Patients with COVID-19. A Cross-Sectional Study. Am J Respir Crit Care Med. 2020 Nov 15;202(10):1388-98. DOI: 10.1164/rccm.202006-2568OC

10. De Kock JH, Latham HA, Leslie SJ, et al. A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being. BMC Public Health. 2021 2021/01/09;21(1):104. DOI: 10.1186/s12889-020-10070-3

11. Walton M, Murray E, Christian MD. Mental health care for medical staff and affiliated healthcare workers during the COVID-19 pandemic. Eur Heart J Acute Cardiovasc Care. 2020 Apr;9(3):241-7. DOI: 10.1177/2048872620922795

12. Ripp J, Peccoralo L, Charney D. Attending to the Emotional Well-Being of the Health Care Workforce in a New York City Health System During the COVID-19 Pandemic. Acad Med. 2020 Aug;95(8):1136-9. DOI: 10.1097/acm.0000000000003414

13. Baldwin PA, Black MJ, Newby JM, et al. The Essential Network (TEN): rapid development and implementation of a digital-first mental health solution for Australian healthcare workers during COVID-19. BMJ Innovations. 2022:bmjinnov-2021-000807. DOI: 10.1136/bmjinnov-2021-000807

14. NSW Health. Adult intensive care workforce report in COVID-19 pandemic [Internet]. NSW Health: Australia; 2021 Oct 7 [cited 2022 Jan 18]. Available from: https://www.health.nsw.gov.au/Infectious/covid-19/communities-of-practice/Pages/guide-aic-workforce-report.aspx#supporting

15. South Australia Health. 2020/2021 Critical care surge nursing workforce strategy COVID-19 [Internet]. South Australia Health: Government of South Australia, Australia; 2020 Nov [cited 2022 18 Jan]. Available from: https://www.sahealth.sa.gov.au/wps/wcm/connect/cd1c93b1-ba26-411e-8f4b-baf00ae6594b/20039.5+Critical+Care+Surge+Nursing+Workforce+Strategy-A4-WEB-FINAL+%281%29.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-cd1c93b1-ba26-411e-8f4b-baf00ae6594b-nxoaKWs

16. Intensive Care Society. Advice for sustaining staff wellbeing in critical care during and beyond COVID-19 [Internet]. Intensive Care Society: UK [cited 2022 Jan 18]. Available from: https://www.practitionerhealth.nhs.uk/media/content/files/Sustaining%20wellbeing%20COVID19.pdf

17. Dutta A, Sharma A, Torres-Castro R, et al. Mental health outcomes among health-care workers dealing with COVID-19/severe acute respiratory syndrome coronavirus 2 pandemic: A systematic review and meta-analysis. Indian journal of psychiatry. 2021 Jul-Aug;63(4):335-47. DOI: 10.4103/psychiatry.IndianJPsychiatry_1029_20

18. Raoofi S, Pashazadeh Kan F, Rafiei S, et al. Anxiety during the COVID-19 pandemic in hospital staff: systematic review plus meta-analysis. BMJ Supportive &amp; Palliative Care. 2021:bmjspcare-2021-003125. DOI: 10.1136/bmjspcare-2021-003125

19.   Zhang H, Li W, Li H, et al. Prevalence and dynamic features of psychological issues among Chinese healthcare workers during the COVID-19 pandemic: a systematic review and cumulative meta-analysis. General psychiatry. 2021;34(3):e100344-e. DOI: 10.1136/gpsych-2020-100344

20.   Yan H, Ding Y, Guo W. Mental Health of Medical Staff During the Coronavirus Disease 2019 Pandemic: A Systematic Review and Meta-Analysis. Psychosomatic Medicine. 2021;83(4).

21.   Busch IM, Moretti F, Mazzi M, et al. What We Have Learned from Two Decades of Epidemics and Pandemics: A Systematic Review and Meta-Analysis of the Psychological Burden of Frontline Healthcare Workers. Psychotherapy and psychosomatics. 2021;90(3):178-90. DOI: 10.1159/000513733

22.   Vizheh M, Qorbani M, Arzaghi SM, et al. The mental health of healthcare workers in the COVID-19 pandemic: A systematic review. Journal of diabetes and metabolic disorders. 2020;19(2):1-12. DOI: 10.1007/s40200-020-00643-9

23.   Pappa S, Ntella V, Giannakas T, et al. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. Brain, behavior, and immunity. 2020;88:901-7. DOI: 10.1016/j.bbi.2020.05.026

24.   Sanghera J, Pattani N, Hashmi Y, et al. The impact of SARS-CoV-2 on the mental health of healthcare workers in a hospital setting-A Systematic Review. Journal of occupational health. 2020;62(1):e12175-e. DOI: 10.1002/1348-9585.12175

25.   Sharifi M, Asadi-Pooya AA, Mousavi-Roknabadi RS. Burnout among Healthcare Providers of COVID-19; a Systematic Review of Epidemiology and Recommendations. Archives of academic emergency medicine. 2020;9(1):e7-e. DOI: 10.22037/aaem.v9i1.1004

26.   Billings J, Ching BCF, Gkofa V, et al. Experiences of frontline healthcare workers and their views about support during COVID-19 and previous pandemics: a systematic review and qualitative meta-synthesis. BMC health services research. 2021;21(1):923-. DOI: 10.1186/s12913-021-06917-z

27.   Hooper JJ, Saulsman L, Hall T, et al. Addressing the psychological impact of COVID-19 on healthcare workers: learning from a systematic review of early interventions for frontline responders. BMJ Open. 2021;11(5):e044134-e. DOI: 10.1136/bmjopen-2020-044134

28.   Monica A, Ferrara P, Dal Mas F, et al. The impact of Covid-19 healthcare emergency on the psychological well-being of health professionals: a review of literature. Annali di Igiene: Medicina Preventiva e di Comunità. 2021 03/30;34. DOI: 10.7416/ai.2021.2445

29.   Pollock A, Campbell P, Cheyne J, et al. Interventions to support the resilience and mental health of frontline health and social care professionals during and after a disease outbreak, epidemic or pandemic: a mixed methods systematic review. The Cochrane database of systematic reviews. 2020;11(11):CD013779-CD. DOI: 10.1002/14651858.CD013779

30.   Kisely S, Warren N, McMahon L, et al. Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis. BMJ (Clinical research ed). 2020;369:m1642-m. DOI: 10.1136/bmj.m1642