The following information resources have been selected by the National Health Library and Knowledge Service Evidence Virtual Team in response to your question. The resources are listed in our estimated order of relevance to practicing healthcare professionals confronted with this scenario in an Irish context. In respect of the evolving global situation and rapidly changing evidence base, it is advised to use hyperlinked sources in this document to ensure that the information you are disseminating to the public or applying in clinical practice is the most current, valid and accurate. For further information on the methodology used in the compilation of this document—including a complete list of sources consulted—please see our National Health Library and Knowledge Service Summary of Evidence Protocol.

## YOUR QUESTION

What psychological supports are required to assist health workers during the COVID-19 pandemic?

## IN A NUTSHELL

The psychological needs of health workers may be very different to those of the general public: through their work roles, HCWs are exposed to specific risks and stress-generating scenarios not experienced by other sectors or the general public. The risk to the mental health of health workers in the current pandemic has been clearly identified in the literature[13,17]; several studies have identified those groups that might be at particular risk such as female[29,34], younger staff members[32] and those working directly with suspected or confirmed COVID-19 patients[34,35]. Some studies have also suggested that HCWs with less clinical experience, including final year students fast-tracked into service during the pandemic, may also be at greater risk of developing mental health problems[36,50]; while another study suggests the contrary—that greater experience brings with it a greater acknowledgement of the severity of the disease and, therefore, an increased risk of anxiety and stress[36]. While most of the literature concurs that those on the frontline in direct contact with COVID-19 patients experience the greatest levels of stress and anxiety, several studies have demonstrated that non-frontline HCWs including non-clinical staff are also in need of psychological support[20,37,54,61].

Among the main risk factors for stress and anxiety are shortage of PPE and other vital equipment[12,21,22,39]; concerns about family members[12,22,32]; physical deprivation such as lack of food and rest[9]; poor sleep quality[57,59,60,65]; too much or too little information[22]; bereavement[12]; stigma[25] ; and moral or psychological injury[20,58].

Although there is a paucity of evidence concerning psychological interventions in the current crisis[62], more studies are beginning to emerge which identify possible strategies for alleviating the psychological distress in the short and longer term. Many harness technology[10, 15, 27, 28, 45, 56, 66]; others emphasise the need to encourage self-care[9, 32, 62]. Mindfulness and resilience training feature in some studies [30, 40, 47]; and the provision of emotional support,[19] brief interventions [43] and Psychological First Aid [24] are other strategies discussed. A note of caution is sounded by some authors who argue that resilience is not the responsibility of the individual but of the organisation[39, 48]. The importance of social support from the rest of the team [39] and support from management[26] is also emphasised, as well as the need for preventive measures such as regular screening[42, 51] and the development of an organisational strategy[56, 64]. It is also noted by some authors that the issue of stigma surrounding mental health is an issue that may prevent HCWs from seeking help[18, 23, 30].

Perhaps the current crisis and its impact on the mental health of HCWs can be most succinctly summarised in the words of Shanafelt et al[49] who state that the concerns of HCWs "can be organized into 5 requests to their organization: hear me, protect me, prepare me, support me, and care for me."

## IRISH AND INTERNATIONAL GUIDANCE

### What does the HSE say?

**Staff: mind your mental health[1]**

The HSE provides links to information and online education programmes on managing stress and maintaining the well-being of staff members and managers.

### What does the Health Protection Surveillance Centre (Ireland) say?

**Occupational Health Interim Guidance for Coronavirus[2]**

Contacts should be informed of the psychosocial supports that are available via the OHS and the local Employee Assistance Programme and Employee

Wellness Programme. Local Employee Assistance services must be included on information leaflets.

### Good Practice and Support for healthcare staff in managing fatigue during COVID-19[3]

Fatigue is a subjective feeling of needing to sleep. Due to the current immediate response to support healthcare staff during COVID-19 the College of Anaesthesiologists of Ireland with their colleagues in the Association of Anaesthetists have given permission to use their Fatigue Pack. This is a support resource for all healthcare staff in relation to managing fatigue and exhaustion.

## What does the World Health Organization say?

### Mental health and psychosocial considerations during the COVID-19 outbreak[4]

Managing your mental health and psychosocial well-being during this time is as important as managing your physical health. Take care of yourself at this time. Try and use helpful coping strategies such as ensuring sufficient rest and respite during work or between shifts; eat sufficient and healthy food; engage in physical activity; and stay in contact with family and friends. Avoid using unhelpful coping strategies such as use of tobacco, alcohol or other drugs. In the long term, these can worsen your mental and physical well-being. The COVID-19 outbreak is a unique and unprecedented scenario for many workers, particularly if they have not been involved in similar responses. Even so, using strategies that have worked for you in the past to manage times of stress can benefit you now.

Some healthcare workers may unfortunately experience avoidance by their family or community owing to stigma or fear. This can make an already challenging situation far more difficult. If possible, staying connected with your loved ones, including through digital methods, is one way to maintain contact.

Turn to your colleagues, your manager or other trusted persons for social support: your colleagues may be having similar experiences to you. Know how to provide support to people who are affected by COVID-19 and know how to link them with available resources. This is especially important for those who require mental health and psychosocial support.

Keeping all staff protected from chronic stress and poor mental health during this response means that they will have a better capacity to fulfil their roles. Be sure to keep in mind that the current situation will not go away

overnight and that you should focus on longer-term occupational capacity rather than repeated short-term crisis responses. Ensure that good quality communication and accurate information updates are provided to all staff. Rotate workers from higher-stress to lower-stress functions. Partner inexperienced workers with their more experienced colleagues. The buddy system helps to provide support, monitor stress and reinforce safety procedures. Ensure that outreach personnel enter the community in pairs. Initiate, encourage and monitor work breaks. Implement flexible schedules for workers who are directly impacted or have a family member affected by a stressful event. Ensure that you build in time for colleagues to provide social support to each other. Ensure that staff are aware of where and how they can access mental health and psychosocial support services and facilitate access to such services. Managers and team leaders are facing similar stresses to their staff and may experience additional pressure relating to the responsibilities of their role. It is important that the above provisions and strategies are in place for both workers and managers, and those managers can be role models for self-care strategies to mitigate stress.

**What do the Centers for Disease Control and Prevention (United States) say?**

**Stress and Coping: for Responders[5]**

Responding to COVID-19 can take an emotional toll on you, and you may experience secondary traumatic stress. Secondary traumatic stress comprises stress reactions and symptoms resulting from exposure to another individual's traumatic experiences, rather than direct exposure to a traumatic event.

There are things you can do to reduce secondary traumatic stress reactions:

- Acknowledge that secondary traumatic stress can impact anyone helping families after a traumatic event.
- Learn the symptoms including physical [fatigue, illness] and mental [fear, withdrawal, guilt].
- Allow time for you and your family to recover from responding to the pandemic.
- Create a menu of personal self-care activities that you enjoy such as spending time with friends and family, exercising or reading a book.
- Take a break from media coverage of COVID-19.

— Ask for help if you feel overwhelmed or concerned that COVID-19 is affecting your ability to care for your family and patients as you did before the outbreak.

**Emergency Responders: Tips for Taking Care of Yourself**[6]
Responding to disasters is both rewarding and challenging work. Sources of stress for emergency responders may include witnessing human suffering, risk of personal harm, intense workloads, life-and-death decisions, and separation from family. Stress prevention and management is critical for responders to stay well and to continue to help in the situation. There are important steps responders should take before, during, and after an event. To take care of others, responders must be feeling well and thinking clearly.

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## POINT-OF-CARE TOOLS

### What does UpToDate say?

**Coronavirus Disease 2019 ( COVID-19): Psychiatric symptoms and disorders**[7]
Risk factors for psychiatric problems in clinicians who care for patients with COVID-19 include increased proximity to affected patients and infection hotspots. One study found that symptoms of any severity were most likely to occur in health care workers having the greatest direct contact with patients: eg nurses, the majority of whom were women.
Psychiatric issues related to the COVID-19 pandemic can occur in multiple populations including clinicians treating patients with COVID-19 or suspected illness, patients with COVID-19, and patients with established psychiatric disorders prior to COVID-19. In addition, family members of clinicians and patients may develop psychiatric symptoms or disorders.
Health care workers in particular are likely to benefit from private, on-demand access to mental health professionals who can address sources of anxiety, distress, and other emotions related to caring for patients.
Individuals with moderate to severe symptoms can be treated by their primary care provider or referred to a mental health specialist.

Addressing Stressors
Potential sources of anxiety and distress that should be addressed include:
— Access to personal protective equipment.

- Risk of self-exposure and infection.
- Risk of exposing others to infection.
- Access to testing.
- Access to up-to-date, accurate information about COVID-19.
- Access to childcare during school closures.
- Increased and taxing workloads.
- Moral dilemmas and moral injury arising from situations such as deciding how to allocate insufficient resources, inadvertently placing others in danger, and implementing clinical decisions by others that one thinks are contrary to best practices.
- Loss of control or vulnerability.
- Availability and use of support from colleagues and managers.
- Patient deaths and family grief.

Based upon a study of clinicians in public hospital emergency departments (n = 466) in Hong Kong during the 2003 severe acute respiratory system (SARS) epidemic, the most frequent coping strategies included accepting the reality of the stressor, taking action to circumvent the stressor, and viewing the situation in a more positive light and attempting to grow from the situation.

A follow-up study of hospital employees who were exposed to the 2003 SARS epidemic in Beijing (n = 549) found that higher levels of altruistic acceptance of risk during the outbreak were associated with lower levels of self-reported depressive symptoms three years later.

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## INTERNATIONAL LITERATURE

### What does the international literature say?

**ALBOTT, CS et al (2020) Battle Buddies: Rapid Deployment of a Psychological Resilience Intervention for Healthcare Workers during the COVID-19 Pandemic[8]**

The outbreak of the coronavirus disease 2019 ( COVID-19) and its rapid global spread have created unprecedented challenges to healthcare systems. Significant and sustained efforts have focused on mobilization of personal protective equipment, intensive care beds, and medical equipment, while substantially less attention has focused on preserving the psychological health of the medical workforce tasked with addressing the challenges of the

pandemic. And yet, similar to battlefield conditions, healthcare workers are being confronted with ongoing uncertainty about resources, capacities, and risks; as well as exposure to suffering, death, and threats to their own safety. These conditions are engendering high levels of fear and anxiety in the short-term, and place individuals at risk for persistent stress-exposure syndromes, sub-clinical mental health symptoms, and professional burnout in the long-term. Given the potentially wide-ranging mental health impact of COVID-19, protecting healthcare workers from adverse psychological effects of the pandemic is critical. Therefore, we present an overview of the potential psychological stress responses to the COVID-19 crisis in medical providers and describe pre-emptive resilience-promoting strategies at the organizational and personal level. We then describe a rapidly deployable psychological resilience intervention founded on a peer-support model developed by the United States Army. This intervention  the product of a multidisciplinary collaboration between the Departments of Anesthesiology and Psychiatry and Behavioral Sciences at the University of Minnesota Medical Center  also incorporates evidence-informed 'stress inoculation' methods developed for managing psychological stress exposure in providers deployed to disasters. Our multi-level, resource-efficient, and scalable approach places two key tools directly in the hands of providers: 1 peer-support; and 2 a designated mental health consultant who can facilitate training in stress inoculation methods, provide additional support, or coordinate referral for external professional consultation. In parallel, we have instituted a voluntary research data-collection component that will enable us to evaluate the intervention's effectiveness while also identifying the most salient resilience factors for future iterations. It is our hope that these elements will provide guidance to other organizations seeking to protect the well-being of their medical workforce during the pandemic. Given the remarkable adaptability of human beings, we believe that, by promoting resilience, our diverse healthcare workforce can emerge from this monumental challenge with new skills, closer relationships, and greater confidence in the power of community.

**ALIKHANI, R et al (2020) Mental health advice for frontline healthcare providers caring for patients with COVID-19[9]**

Interventions that minimize fatigue, burnout and medical error will improve the care of COVID-19 patients and their healthcare providers. All healthcare workers must work together to enact effective strategies to promote

psychological well-being. We base the following suggestions on our experience with COVID-19 in Iran:

- Sleep sufficiently and efficiently. You need rest to recover from today and prepare for tomorrow.
- Eat well: at least three times a day. You need fuel for the long and difficult work ahead. Now more than ever, do not let the day's work make you skip a meal.
- Maintain contact with your colleagues. Working with patients in isolation also isolates their healthcare workers. Share information and personal stories. Care for each other.
- Share decisions with your colleagues. Use their skill, experience, and support to guide you in the challenging diagnostic and therapeutic decisions you will make.
- Constantly update your knowledge. Information regarding COVID-19 grows and evolves rapidly. Develop an information-sharing network with your colleagues. Knowing you are providing the best possible care will ease your stress when patients suffer poor outcomes.
- Maintain contact with your family and friends. They worry about your health as you worry about theirs. Call or video chat regularly to support each other.
- Make time for your hobbies and daily routine. Listen to music, read a book, exercise. It will lend a sense of normalcy to your day and refresh you for your next shift.
- Share your emotions. While patient confidentiality limits sharing the details of your work, you can share how this work made you feel. Sharing the emotional burden of COVID-19 care reduces mental and emotional fragility.
- Self-care did not begin with COVID-19. You may have struggled with your physical and emotional health before the pandemic. Ensure that you continue to care for these pre-existing conditions in addition to the new challenges posed by COVID-19. Seek help from your primary care physician and your departmental leadership.
- Get help. Reach out to a mental health professional if you are suffering anxiety, depression, symptoms of post-traumatic stress, or suicidal thoughts. Support a colleague in doing the same.

**BADAHDAH, AM et al (2020) The Psychological Well-Being of Physicians During COVID-19 Outbreak in Oman[10]**

This study, which we believe is the first from the Arab world, showed that COVID-19 impacted physicians' mental health, especially female and young physicians. Females reported more stress than did males. Two in three

female physicians reported a low level of psychological well-being, compared to one in three male physicians. Older physicians experienced greater well-being and a lower level of stress compared to younger ones. Married physicians reported less stress than non-married ones. It seemed, however, that physicians experienced similar amounts of anxiety regardless of their gender and contact with COVID-19 patients. Both stress and anxiety had a strong effect on the overall well-being of physicians. To minimize the impact of COVID-19-related mental and physical health issues, we recommend that health facilities, especially ones that receive COVID-19 patients, set up counselling services for HCWs. Equally health care providers should be cognizant of their own signs of mental health issues and seek help.

### BLAKE, H et al (2020) Mitigating the Psychological Impact of COVID-19 on Healthcare Workers: A Digital Learning Package[11]

Actions are needed to mitigate the impacts of COVID-19 on mental health by protecting and promoting the psychological wellbeing of healthcare workers during and after the outbreak. We developed and evaluated a digital learning package using Agile methodology within the first three weeks of UK outbreak. This e-package includes evidence-based guidance, support and signposting relating to psychological wellbeing for all UK healthcare employees. A three-step rapid development process included public involvement activities (STEP 1); content and technical development with iterative peer review (STEP 2); and delivery and evaluation (STEP 3). The package outlines the actions that team leaders can take to provide psychologically safe spaces for staff together with guidance on communication and reducing social stigma; peer and family support; signposting others through psychological first aid; self-care strategies such as rest, work breaks, sleep, shift work, fatigue and healthy lifestyle behaviours; managing emotions such as moral injury, coping, guilt, grief, fear, anxiety and depression; and preventing burnout and psychological trauma. The e-package includes advice from experts in mental wellbeing as well as those with direct pandemic experiences from the frontline, as well as signposting to public mental health guidance. Rapid delivery in STEP 3 was achieved via direct emails through professional networks and social media.

**CAI, H et al (2020) Psychological Impact and Coping Strategies of Frontline Medical Staff in Hunan Between January and March 2020 During the Outbreak of Coronavirus Disease 2019 ( COVID-19) in Hubei, China[12]**

Study questionnaires were completed by 534 frontline medical staff. The responses showed that they believed they had a social and professional obligation to continue working long hours. Medical staff were anxious regarding their safety and the safety of their families and reported psychological effects from reports of mortality from COVID-19 infection. The availability of strict infection control guidelines, specialized equipment and recognition of their efforts by hospital management and the government provided psychological benefit. The COVID-19 outbreak in Hubei resulted in increased stress for medical staff in adjacent Hunan province. Continued acknowledgment of the medical staff by hospital management and the government, provision of infection control guidelines, specialized equipment and facilities for the management of COVID-19 infection should be recognized as factors that may encourage medical staff to work during future epidemics.

**CAO, J et al (2020) A Study of Basic Needs and Psychological Wellbeing of Medical Workers in the Fever Clinic of a Tertiary General Hospital in Beijing during the COVID-19 Outbreak[13]**

Consistent with other similar situations, medical workers in our study were under high stress; however, overall the emotional distress and burnout levels were not highly elevated. Our psychological support and adjustments may help buffer the negative impact of stress. In addition, we have to acknowledge that in such an emergency situation with a shortage of medical staff and resources, many doctors and nurses are overworking extensively. It is a new situation for medical workers. We suggest monitoring the physical and psychological needs and wellbeing of medical workers in similar situations, and then adjusting their working schedules and formulating psychosocial interventions accordingly.

**CHEN, Q et al (2020) Mental health care for medical staff in China during the COVID-19 outbreak (corrected version)[14]**

Maintaining staff mental health is essential to better control infectious diseases, although the best approach to this during the epidemic season remains unclear. The learning from these psychological interventions is expected to help the Chinese government and other parts of the world to better respond to future unexpected infectious disease outbreaks.

### CHENG, P et al (2020) COVID-19 Epidemic Peer Support and Crisis Intervention Via Social Media[15]

This study utilized an existing social media platform. We found that despite many challenges the social media platform was an effective way to implement mental health support. This form of disaster outreach via social media requires further study for development and improvement in different settings. Nevertheless, in the time of COVID-19 pandemic, psychological support to the frontline responders and community is of paramount importance.

### CHEW, NWS et al (2020) A Multinational, Multicentre Study on the Psychological Outcomes and Associated Physical Symptoms Amongst Healthcare Workers During COVID-19 Outbreak[16]

The prevalence of physical symptoms displayed by healthcare workers and the associations between physical symptoms and psychological outcomes of depression, anxiety, stress and post-traumatic stress disorder (PTSD) were evaluated. Our study demonstrates a significant association between the prevalence of physical symptoms and psychological outcomes among healthcare workers during the COVID-19 outbreak. We postulate that this association may be bi-directional, and that timely psychological interventions for healthcare workers with physical symptoms should be considered once an infection has been excluded.

### CHOUDHURY, T et al (2020) COVID-19 Pandemic: Looking after the Mental Health of our Healthcare Workers[17]

Our NHS healthcare workers are leading the fight against the COVID-19 pandemic which has claimed more than 20,000 lives in the UK and the numbers are continuing to increase. We need to ensure our work-force are looked after well. The current survey highlights the presence of psychological distress amongst healthcare workers and the risk of burnout. Early recognition of signs of psychological distress, setting up adequate support services and long-term aftercare for our healthcare workers are of paramount importance.

### CHUNG, JPY et al (2020) Staff Mental Health Self-Assessment During the COVID-19 Outbreak[18]

With the high anticipated stress among hospital staff in Hong Kong East Cluster, a comprehensive support programme named Support of You is initiated. Since 14 February 2020, the Department of Psychiatry of Pamela

Youde, Nethersole Eastern Hospital has provided an online mental health self-assessment questionnaire to all hospital staff in the cluster. It consists of the Patient Health Questionnaire-9 (PHQ-9), a free-text response, and an anonymous way to request for psychological support. An experienced advanced practice psychiatric nurse with training in psychotherapy was appointed to contact staff who needed help. The online questionnaire was distributed through the COVID-19 newsletter via email and hospital smartphone app together with other mental health information and hospital resources for psychological support.
Although only a small proportion of hospital staff have responded, they are more likely to be psychologically affected by the outbreak. Nonetheless, there is no new case of psychological distress caused by the COVID-19 outbreak in the Critical Incident Psychological Services of the Centre for Personal Growth and Crisis Intervention in Hong Kong East Cluster. Staff may have concern about seeking help from hospital psychological service, and an anonymous online assessment provides a good platform for staff to assess their own mental well-being and to seek help.

### CONVERSANO, C et al (2020) Psychological distress among healthcare professionals involved in the COVID-19 emergency: vulnerability and resilience factors[19]

The aim of this paper is to outline some considerations about the psychological distress in healthcare professional during the COVID-19 pandemic. We summarize available literature both on 'protective' and 'predisposing' factors potentially involved in the occurrence of psychological distress, including PTSD, in frontline healthcare operators. Valid social support, self-efficacy, internal locus of control (LOC) and sense of coherence (SOC) have been considered as resilience factors, in previous studies. Similarly, several observations pointed on the relevance of individual and environmental vulnerabilities. No real evidence is available about strategies to face the emotional burden for healthcare operators due to present COVID-19 scenario. However, we strongly believe that the containment of isolation anxiety with an appropriate emotional support should be the first instrument to minimise the psychological effect of pandemic on the more exposed healthcare professionals.

## DE PIERRO, J et al (2020) Lessons Learned From 9/11: Mental Health Perspectives on the COVID-19 Pandemic[20]

Several lessons learned from the mental health response to 9/11 should inform how providers and institutions meet the treatment needs of those affected by COVID-19.

Two vulnerable populations should be highlighted. First, high rates of post-traumatic stress disorder (PTSD), clinical depression, and recurrent alcohol use problems are anticipated among healthcare workers, now on the front lines of the COVID-19 pandemic, and serving as the most visible responder group during this crisis. Concerns have been raised around moral injury among healthcare workers given that hard choices may need to be made regarding rationing care, including ventilators. Moral injury has been associated with increased risk for psychiatric disorders and suicidal ideation. Second, special attention should be paid to the mental health outcomes of non-medical essential personnel, including governmental employees, healthcare administrators and support staff, and food delivery workers. This concern arises from striking parallels to the 9/11 experience. Non-traditional 9/11 responders [construction, cleanup, asbestos workers; city employees; and volunteers] have consistently higher rates of chronic PTSD than uniformed responders, potentially related to having greater pre and post-9/11 life stressors, higher rates of pre-9/11 psychiatric diagnoses, and lower social support around the time of 9/11.

## DU, J et al (2020) Psychological symptoms among frontline healthcare workers during COVID-19 outbreak in Wuhan[21]

Our results suggest frontline HCWs should be closely monitored as a high-risk group for depression and anxiety, and given proper training before deployment; some require psychological interventions. Greater protection gear supplies, on-going monitoring and provision of psychological support, strong family support may also increase frontline HCWs' resilience to stress and psychological symptoms during a public health emergency.

## EL-HAGE, W et al (2020) Health professionals facing the coronavirus disease 2019 (COVID-19) pandemic: What are the mental health risks?[22]

[French with English abstract]

The disease characteristics of the current COVID-19 pandemic provoked a generalized climate of wariness and uncertainty, particularly among health

professionals, due to a range of causes such as the rapid spread of COVID-19, the severity of symptoms it can cause in a segment of infected individuals, the lack of knowledge of the disease, and deaths among health professionals. Stress may also be caused by organizational factors such as depletion of personal protection equipment, concerns about not being able to provide competent care if deployed to a new area, concerns about rapidly changing information, lack of access to up-to-date information and communication, shortage of specific drugs, shortage of ventilators and intensive care unit beds necessary to care for the surge of critically ill patients, and significant change in their daily social and family life. Further risk factors have been identified including feelings of being inadequately supported; concerns about health of self; fear of taking home infection to family members or others or adequate access to testing through occupational health; feelings of uncertainty and social stigmatization; overwhelming workload; or insecure attachment. Additionally, we discussed positive social and organizational factors that contribute to enhance resilience in the face of the pandemic. There is a consensus in all the relevant literature that health care professionals are at an increased risk of high levels of stress, anxiety, depression, burnout, addiction and post-traumatic stress disorder, which could have long-term psychological implications.

**GALBRAITH, N et al (2020) The mental health of doctors during the COVID-19 pandemic[23]**

This article highlights the increased mental health risks faced by doctors and other healthcare professionals during the COVID-19 pandemic. Doctors experience high levels of work stress even under normal circumstances but many would be reluctant to disclose mental health difficulties or seek help for them with stigma an often-cited reason. The COVID-19 crisis places additional pressure on doctors and on the healthcare system in general and research shows that such pressure brings a greater risk of psychological distress for doctors. For this reason, we argue that the authorities and healthcare executives must show strong leadership and support for doctors and their families during the COVID-19 outbreak and for efforts to reduce mental health stigma in clinical workplaces. This can be facilitated by deliberately adding 'healthcare staff mental health support process' as an ongoing agenda item to high level management planning meetings.

### GAVIN, B et al (2020) Caring for the Psychological Well-Being of Healthcare Professionals in the COVID-19 Pandemic Crisis[24]

Post-pandemic research suggests any psychological supports should be based on models of adaptation and resilience and may assist with post-pandemic absenteeism. Counter perhaps to expectation, such support is considered more pertinent by staff who considered themselves to report to duty during an event. Debriefing and psychological first aid (RAPID-PFA), helplines and support groups for professionals have also been found helpful. One study found computer-assisted pre-pandemic training, increased staff 'pandemic related self-efficacy' and confidence. This feasibility trial incorporated tools to enhance coping styles and reduce maladaptive escape-avoidance patterns. The results are encouraging, although the intervention is intended to occur prior to the pandemic as a means of enhancing resilience and pandemic preparedness. Aspects of this training may be useful in the future stress-proofing of healthcare staff and the computer assisted delivery model would facilitate widespread provision in a climate that is likely to be marked by even fewer resources than before. We have an ethical duty post COVID-19 to reflect on the seismic and rapid work-related enforced changes and stressors, and the impact of these on staff well-being so that we can better equip ourselves for future disasters.

### GHEBREYESUS, TA (2020) Addressing mental health needs: an integral part of COVID- 19 response[25]

Frontline workers, particularly health staff, are playing a crucial role in fighting the pandemic and saving lives. They are under exceptional stress, facing increased workloads, and are being confronted with great suffering and high mortality rates. Some are being forced into triage situations that can cause ethical quandaries with traumatic impact. Their stress is compounded by their risk of being infected as many facilities lack sufficient personal protective equipment. Sadly, social stigma towards those working with people with COVID- 19 has also been reported.

### GREENBERG, N et al (2020) Managing Mental Health Challenges Faced by Healthcare Workers During COVID-19 Pandemic[26]

Key messages:

- Healthcare staff are at increased risk of moral injury and mental health problems when dealing with challenges of the COVID-19 pandemic.
- Healthcare managers need to proactively take steps to protect the mental wellbeing of staff.

- Managers must be frank about the situations staff are likely to face
- Staff can be supported by reinforcing teams and providing regular contact to discuss decisions and check on wellbeing.
- Once the crisis begins to recede, staff must be actively monitored, supported, and, where necessary, provided with evidence-based treatments.

**HU, X et al (2020) Protecting the psychological well-being of healthcare providers affected by the COVID-19 outbreak: Implications for the psychological rescue work of international community[27]**

Psychological support and crisis intervention tailored to healthcare workers are needed to alleviate psychological distress. Healthcare workers caring for patients diagnosed with COVID 19 are at a higher risk of developing psychological distress. Taking preventive measures and providing psychological interventions tailored to these healthcare workers can positively effect this distress To date, the Chinese authorities have taken numerous decisive measures to help relieve mental stress related to the on-going coronavirus outbreak. These measures have included releasing the notification of basic principles for emergency psychological crisis interventions for COVID-19 pneumonia; providing telephone-based and internet-based counselling services and platforms; and psychological guidance and services specifically tailored to healthcare workers.

**HUANG, J et al (2020) Care for the psychological status of frontline medical staff fighting against COVID-19[28]**

The authors describe various interventions to care for the mental health of frontline medical staff in China implemented by the country's four national mental psychological illness clinical medicine research centres. Interventions include telephone and online counselling, self-rated mental health scales, psychological training, videos and online games and mental health books. In addition psychologists have been sent to the most affected areas.

**HUANG, JZ et al (2020) Mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19[29]**

[Chinese with English abstract]
In COVID-19 epidemic, the incidence of anxiety and stress disorder is high among medical staff. Medical institutions should strengthen the training of psychological skills of medical staff. Special attention should be paid to the mental health of female nurses.

**JUN, J et al (2020) Clinician Mental Health and Well-Being During Global Healthcare Crises: Evidence Learned From Prior Epidemics for COVID-19 Pandemic[30]**

Acceptance, active coping, cognitive-behavioral skills building, stress-reduction strategies, mindfulness, deep breathing, gratitude, positive framing and health coaching, along with programs such as MINDBODYSTRONG have been shown through research to be successful strategies to improve mental health and well-being. We also must reduce stigma and increase awareness of and screening for depression and post-traumatic stress disorder among healthcare professionals and put systems in place to deal effectively with them. As the crisis continues, encrypted screening for depression and suicidal ideation, along with evidence-based interventions, must be included.

**KANG, L et al (2020) Impact on mental health and perceptions of psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study[31]**

Although staff accessed limited mental healthcare services, distressed staff nonetheless saw these services as important resources to alleviate acute mental health disturbances and improve their physical health perceptions. These findings emphasize the importance of being prepared to support frontline workers through mental health interventions at times of widespread crisis.

**KISELY, S et al (2020) Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis[32]**

Risk factors for psychological distress included being younger, 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. Clear communication, access to adequate personal protection, adequate rest and both practical and psychological support were associated with reduced morbidity.

Effective interventions are available to help mitigate the psychological distress experienced by staff caring for patients in an emerging disease outbreak. These interventions were similar despite the wide range of settings and types of outbreaks covered in this review, and thus could be applicable to the current COVID-19 outbreak.

**GOLD, J A (2020) [Comment on Kisely et al] COVID-19: adverse mental health outcomes for healthcare workers**[33]

**LAI, J et al (2020) Factors associated with mental health outcomes among health care workers exposed to coronavirus disease** [34]

In this survey of heath care workers in hospitals equipped with fever clinics or wards for patients with COVID-19 in Wuhan and other regions in China, participants reported experiencing psychological burden, especially nurses, women, those in Wuhan and frontline HCWs directly engaged in the diagnosis, treatment and care for patients with COVID-19.

**LI, G et al (2020) Psychological impact on women health workers involved in COVID-19 outbreak in Wuhan: a cross-sectional study**[35]

A cross-sectional survey showing that women HCWs had a high proportion of stress, depression and anxiety symptoms during the early stage of COVID-19. Among the sociodemographic characteristics, those who have more than 10 years of working and two or more children are susceptible to stress, depression and anxiety. Those women HCWs might face more occupational exhaustion, family responsibilities and inequality in domestic labour. Moreover, those women HCWs in the crisis of COVID-19 were placed at a considerable dilemma, which existed between working and family care and between the family care and avoidance of contact with family members. Women with more children were more likely to experience avoidance.

**LI, Y et al (2020) Psychological Distress Among Health Professional Students During the COVID-19 Outbreak**[36]

Due to the drastic surge of COVID-19 patients, many countries are considering or already graduating health professional students early to aid professional resources. We aimed to assess outbreak-related psychological distress and symptoms of acute stress reaction (ASR) in health professional students and to characterize individuals with potential need for interventions. We conducted a prospective cohort study of 1442 health professional students at Sichuan University, China. At baseline (October 2019), participants were assessed for childhood adversity, stressful life events, internet addiction, and family functioning. Using multivariable logistic regression, we examined associations of the above exposures with subsequent psychological distress and ASR in response to the outbreak. Our findings suggest that COVID-19 related psychological distress and high symptoms burden of ASR are common among health professional students. Extended family and

professional support should be considered for vulnerable individuals during these unprecedented times.

**LI, Z et al (2020) Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control[37]**

The results showed that the vicarious traumatization scores for front-line nurses including scores for physiological and psychological responses were significantly lower than those of non-front-line nurses ($P < 0.001$). Interestingly, the vicarious traumatization scores of the general public were significantly higher than those of the front-line nurses ($P < 0.001$); however, no statistical difference was observed compared to the scores of non-front-line nurses ($P > 0.05$). Therefore, increased attention should be paid to the psychological problems of the medical staff, especially non-front-line nurses, and general public under the situation of the spread and control of COVID-19. Early strategies that aim to prevent and treat vicarious traumatization in medical staff and general public are extremely necessary.

**LU, W et al (2020) Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study[38]**

The authors conducted a single-center, cross-sectional survey via online questionnaires. Occurrence of fear, anxiety and depression were measured by the numeric rating scale (NRS) on fear, Hamilton Anxiety Scale (HAMA), and Hamilton Depression Scale (HAMD), respectively. A total of 2299 eligible participants were enrolled from the authors' institution, including 2042 medical staff and 257 administrative staff. The severity of fear, anxiety and depression were significantly different between two groups. Furthermore, as compared to non-clinical staff, frontline medical staff with close contact with infected patients including working in the departments of respiratory, emergency, infectious disease and ICU showed higher scores on NRS, HAMA and HAMD, were 1.4 times more likely to feel fear and twice more likely to suffer anxiety and depression. Effective strategies toward to improving the mental health should be provided to these individuals.

**MABEN, J et al (2020) COVID-19: Supporting nurses' psychological and mental health[39]**

To get through this unprecedented situation, some resilience is needed, but nurses need their employers, teams, the profession and the public to support them with action and resources. #ClappingForTheCarers and publicly applauding frontline staff throughout Europe is helping to lift spirits, and

some nurses report feeling moved at the collective acknowledgement of gratitude and donation of gifts such as food and hand cream. There are also reports of teams pulling together in co-operative effort and great camaraderie in emergency departments and intensive care units to name but a few. Nurses also need to feel their needs are cared for and that they are safe with adequate PPE equipment in all settings where health and social care is being delivered. They need access to rest breaks, good peer and team support and leaders that will continue to care for them well after the pandemic is over. As researchers who have studied nurse wellbeing for decades, it is gratifying to see the increased focus on healthcare staff well-being, yet sad that it takes a pandemic to recognise its critical importance. Yes, staff will need 'resilience,' but resilience must never be seen as an individual responsibility; it is a collective and organisational responsibility.

**MELNYK, BM et al (2020) Interventions to Improve Mental Health, Well-Being, Physical Health, and Lifestyle Behaviors in Physicians and Nurses: A Systematic Review[40]**

The authors' findings indicated that mindfulness and cognitive behavioral therapy-based interventions are effective in reducing stress, anxiety and depression. Brief interventions that incorporate deep breathing and gratitude may be beneficial. Visual triggers, pedometers and health coaching with texting increased physical activity. What are the implications for health promotion practice or research? Healthcare systems need to provide wellness cultures and rapidly translate evidence-based interventions into clinical settings to improve the mental health, healthy lifestyle behaviours and physical health outcomes of their clinicians, which should lead to improvements in the quality and safety of care.

**OLESEN, B et al (2020) Infection prevention partners up with psychology in a Danish Hospital successfully addressing staffs fear during the COVID-19 pandemic[41]**

An inductive change strategy addressing staff fear and anxiety was used in an attempt to release defence mechanisms blocking rational thinking and change of behaviour. The intervention was based on Edgar H. Schein's Process Consultation and how to help people change. The psychologist acted as a process facilitator and the infection prevention and control nurse acted as a teacher during the process. Facilitation was combined with psychoeducation in coping strategies towards fear and high level of stress,

and the education focused primarily on recalling staff's existing knowledge of infection prevention and secondly on how to use PPE correctly.

**ORNELL, F et al (2020) The impact of the COVID-19 pandemic on the mental health of healthcare professionals[42]**

Health professionals who are in direct contact with infected patients need to have their mental health regularly screened and monitored, especially in relation to depression, anxiety and suicidal ideation. In the same way, it is essential to identify professionals with a history of exposure to psychosocial risk factors. Therefore, psychiatric treatments should be provided to those with more serious mental health problems. Specifically regarding the mental health of healthcare professionals in the context of COVID-19, it is important to identify secondary psychosocial factors that may potentially generate stress.

**PING, NPT et al (2020) Ultra brief psychological interventions for COVID-19 pandemic: Introduction of a locally-adapted brief intervention for mental health and psychosocial support service[43]**

The ultra-brief psychological interventions (UBPI) were created in 2018 to empower healthcare providers with psychological skills that can be delivered within a short period. Techniques used within UBPI were adopted from a variety of well-established psychotherapies and distilled into its core essentials which enabled practitioners of UBPI to deliver specific psychological skills in the appropriate context to the client within a period of 15–20 min. UBPI was also manualised to standardised training of practitioners. During the novel coronavirus disease of 2019 (COVID-19) pandemic, UBPI was modified to suit the unique psychological demands of the pandemic. This article presents how UBPI was adapted and used with healthcare providers dealing with COVID-19 and also with the public who required psychological first aid (PFA).

**RIPP, J et al (2020) Attending to the Emotional Well-Being of the Health Care Workforce in a New York City Health System During the COVID-19 Pandemic[44]**

The authors describe how a Mount Sinai Health System Employee, Faculty and Trainee Crisis Support Task Force ¾ created in early March 2020 and composed of behavioral health, human resources and well-being leaders from across the health system ¾ used a rapid needs assessment model to capture the concerns of the workforce related to the COVID-19 pandemic. The

task force identified 3 priority areas central to promoting and maintaining the well-being of the entire MSHS workforce during the pandemic: meeting basic daily needs; enhancing communications for delivery of current, reliable and reassuring messages; and developing robust psychosocial and mental health support options. Using a work group strategy, the task force operationalized the roll-out of support initiatives for each priority area. Attending to the emotional well-being of health care workers has emerged as a central element in the MSHS COVID-19 response, which continues to be committed to the physical and emotional needs of a workforce that courageously faces this crisis.

### ROMERO, C et al (2020) COVID-19 Psychological Impact in 3109 Healthcare workers in Spain: The PSIMCOV Group[45]

The psychological impact of the COVID-19 pandemic in healthcare workers in Spain has been evaluated. The stress level perceived is predominant in workers that are in contact directly with COVID-19 patients such as Respiratory Medicine, and in those with family exposure. In Emergency Medicine, workers have also suffered a high impact. The protective effect of seniority may be due to the fact that expertise and confidence helps in minimizing the stress caused by unforeseen situations. The number of cases in the geographical area was also a conditioning element for the stress. The greater the incidence of the disease, the more stressed healthcare workers feel.

This is the largest psychological impact study on healthcare workers during a major pandemic crisis. Psychological support has been demonstrated to minimize the negative impact on healthcare workers. Novel therapy approaches such as online support, mindfulness and relaxation therapies may have a promising role when the lack of time is a precipitating agent. A second survey is planned to assess stress levels among healthcare workers after the crisis finally ends.

### ROYCROFT, M et al (2020) [Comment on GREENBERG, N et al] Preventing psychological injury during the COVID-19 pandemic[46]

Greenberg and colleagues rightly state that the development of psychological injury is "influenced by the way [staff] are supported before, during, and after a challenging incident." But identifying, supporting and treating people after they have developed moral injuries can be very difficult, so we need a greater focus on preventive measures. Healthcare organisations, with their duty to protect the mental health of employees,

should adopt three key strategies urgently: enhanced decision making support; the provision of time and space for clinicians to decompress; and staff working consistently in the same team.
Complex decisions are more likely to lead to moral injury. Although evidence is limited, we think that sharing moral responsibility with other clinicians will help to reduce the intensity of dilemmas and reduce the emotional arousal. This would fit with the well-established social psychological principles of diffusion of responsibility and moral disengagement. Local clinical ethics committees or similar might also have a role if a further opinion is needed.
Time to process events and to decompress is key to limiting moral distress: a precursor to moral injury. Early evidence indicates that healthcare professionals need time and space to rest and to be able to talk about their experiences. Repeated long or intense shifts are not conducive to adequate rest, so we need workforce rostering that balances and rotates the intensity of working environments. Working in and having rest periods with consistent teams allows development of mutual support, reduces emotional and moral distress, and aids with recognition and prompt response to distress as doctors are much better at picking up distress in their colleagues than in themselves. Again, appropriate rostering considering teams is key.

### SANTARONE, K et al (2020) Preserving mental health and resilience in frontline healthcare workers during COVID-19[47]

Efforts must be made to allow physicians to seek help if needed with-out stigma or repercussion. Psychological support should be made available in a variety of methods so that the physician has the freedom to choose an approach that works best. Emphasis should be placed on individualized emotional support plans, as psychological care is not one-size-fits-all. This includes the use of telemedicine, video chats or online forums to make appointments with psychologists and psychiatrists. Support groups and reading materials pertaining to dealing with ongoing stressors should be available. Maintaining the mental resilience of frontline workers involves offering solutions that allow them to perform their duties.
While action to preserve the psychological and emotional health of physicians needs to begin now, these providers will need long-term resources to fully recover from this experience. Physician wellbeing should be one of our highest priorities.

## SELMAN, L E et al (2020) Bereavement support on the frontline of COVID-19: Recommendations for hospital clinicians[48]

In the COVID-19 pandemic, the ICU has been described as the 'frontline of a war' against the disease, with clinicians the 'soldiers in the trenches.' While war metaphors have limitations, we know from the experiences of clinicians in China, Italy and Switzerland that care of patients with COVID-19 results in major ethical dilemmas and a psychological toll on the health care teams caring for them, in part due to limited resources. Frontline staff are at risk of secondary or vicarious trauma as a result of repeated empathic engagement with sadness and loss as well as moral injury, resulting from actions, or the lack of them, which violate one's moral or ethical code. This can lead to depression, anxiety and post-traumatic distress. We recommend that healthcare leaders and organisations take responsibility and ensure staff are prepared for the emotional consequences of their work, and that resources, guidance and training are in place to safeguard healthcare providers' health. Self-care strategies and individual resilience tools such as mindfulness and reflective practice are insufficient; resilience should not become another responsibility of staff working in traumatic conditions, but requires an organisational and systemic response. Organisations should actively monitor frontline staff, facilitate effective team cohesion and implement strategies to support teams' day-to-day work, including informal debriefing and peer support. Single-session psychological debriefing approaches should be avoided as they may cause additional harm. Leaders and organisations should also make professional sources of support readily available, including formal bereavement counselling, which can enhance awareness about vicarious traumatisation and encourage adaptive coping strategies.

## SHANAFELT, T et al (2020) Understanding and Addressing Sources of Anxiety Among Health Care Professionals During the COVID-19 Pandemic[49]

The best way to understand what health care professionals are most concerned about is to ask. Eight listening sessions with groups of physicians, nurses, advanced practice clinicians, residents and fellows involving a total of 69 individuals held during the first week of the COVID-19 pandemic explored 3 key concerns: what health care professionals were most concerned about; what messaging and behaviours they needed from their leaders; and what other tangible sources of support they believed would be most helpful to them. These discussions consistently centred on 8 sources of anxiety: 1

access to appropriate personal protective equipment; 2 being exposed to COVID-19 at work and taking the infection home to their family; 3 not having rapid access to testing if they develop COVID-19 symptoms and concomitant fear of propagating infection at work; 4 uncertainty that their organization will support their personal and family needs if they develop infection; 5 access to childcare during increased work hours and school closures; 6 support for other personal and family needs as work hours and demands increase [food, hydration, lodging, transportation]; 7 being able to provide competent medical care if deployed to a new area  e.g. non-ICU nurses having to function as ICU nurses; and 8 lack of access to up-to-date information and communication.

Although these sources of anxiety may not affect everyone, they can weaken the confidence of health care professionals in themselves and the health care delivery system precisely when their ability to stay calm and reassure the public is most needed. Recognizing the sources of anxiety allows health care leaders and organizations to develop targeted approaches to address these concerns and provide specific support to their health care workforce.

### SHEN, X et al (2020) Psychological stress of ICU nurses in the time of COVID-19[50]

We surveyed 85 ICU nurses in our ward and found that the main manifestations of psychological stress were decreased appetite or indigestion (59%), fatigue (55%), difficulty sleeping (45%), nervousness (28%), frequent crying (26%), and even suicidal thoughts (2%). Young nurses with no experience of caring for critically ill patients face a greater psychological crisis. If these psychological problems are not solved effectively, they may not only lead to a decline in their immunity and increase the chances of COVID-19 infection but also have an adverse impact on the quality and safety of the medical care system.

Through the early assessment and active resolution of psychological stress, nurses experienced no adverse events during the fight against COVID-19. Of course, the long-term psychological changes in nurses needed a regular follow-up. Hence, it is recommended to address the psychological problems of ICU nurses who care for patients with COVID-19 and take action as soon as possible to relieve the psychological pressure on these nurses. Our experience may serve as a valuable reference while designing psychological health interventions for nurses in future large-scale public health emergencies.

**SPOORTHY, MS et al (2020) Mental health problems faced by healthcare workers due to the COVID-19 pandemic - a review[51]**

The authors reviewed the literature about mental health problems faced by health care workers during the COVID-19 pandemic. A total of 23 articles were selected by initial screening and 6 articles were included in the final review. Analysis of all the 6 articles showed that current research focused on assessing several aspects of mental health in HCWs due to COVID-19. Several sociodemographic variables such as gender, profession, age and place of work and psychological variables such as poor social support and self-efficacy were associated with increased stress, anxiety, depressive symptoms and insomnia. There is increasing evidence that suggests that COVID-19 can be an independent risk factor for stress in HCWs.

**SULEIMAN, A et al (2020) Preparedness of Frontline Doctors in Jordan Healthcare Facilities to COVID-19[52]**

Knowledge can significantly affect psychological impact. In our case, doctors with higher knowledge scores were more concerned about dealing with COVID-19 patients and more anxious regarding the increase of positive cases which may be attributed to proper understanding of the genuineness of the virus and to the lack of effective treatment policies until the present time. Our findings are also in line with other studies that associate poor knowledge with fewer concerns. The availability of clear protocols and full PPE significantly improved negative psychological impacts in terms of feeling safe at work and satisfaction about institutional plans.

**SUN, N et al (2020) A qualitative study on the psychological experience of caregivers of COVID-19 patients[53]**

The psychological experience of nurses caring for COVID-19 patients can be summarized into 4 themes. First, negative emotions present the in early stages consisting of fatigue, discomfort and helplessness were caused by high-intensity work, fear and anxiety, and concern for patients and family members. Second, self-coping styles included psychological and life adjustment, altruistic acts, team support and rational cognition. Third, we found growth under pressure, which included increased affection and gratefulness, development of professional responsibility and self-reflection. Finally, we showed that positive emotions occurred simultaneously with negative emotions.

### TAN, B et al (2020) Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore[54]

Non-medical health care workers had higher prevalence of anxiety even after adjustment for possible confounders. Our findings are consistent with those of a recent COVID-19 study[37] demonstrating that frontline nurses had significantly lower vicarious traumatization scores than non–frontline nurses and the general public ¾ possibly on account of reduced accessibility to formal psychological support, less first-hand medical information on the outbreak, less intensive training on personal protective equipment and infection control measures.

As the pandemic continues, important clinical and policy strategies are needed to support health care workers. Our study identified a vulnerable group susceptible to psychological distress. Educational interventions should target nonmedical health care workers to ensure understanding and use of infectious control measures. Psychological support could include counselling services and development of support systems among colleagues.

### TSAMAKIS, K et al (2020) COVID-19 pandemic and its impact on mental health of healthcare professionals[55]

In light of the unprecedented public health crisis of the COVID-19 pandemic, it is highly important to acknowledge the psychological impact of this mounting threat on healthcare professionals. Previous experience from smaller scale epidemics and emerging literature around COVID-19 show that the unparalleled amount of stress that healthcare workers are dealing with is associated with increased psychological morbidities. We have depicted the psychological burden that the COVID-19 pandemic has posed on healthcare professionals and have reviewed the literature around the effect of previous epidemics on frontline healthcare staff. Moreover, we discuss potential triggers and the need for measures to minimise the psychological pressure on those at the frontline against this bio-threat.

### WALTON, M et al (2020) Mental health care for medical staff and affiliated healthcare workers during the COVID-19 pandemic[56]

Organisations will be keen to support their employees' mental health and wellbeing needs during this pandemic. Resources have traditionally been put towards supporting staff once they have developed mental health pathology, for example rapid access to counselling and psychiatry, and contingency for time off work. However, a shift of focus is needed from the individual to the organisation. Prevention and mitigation is far more important than cure.

Drop-in sessions with psychologists/psychiatrists have been recommended based on evidence from previous outbreaks. The availability of support from psychologists and psychiatrists will vary from hospital to hospital and is likely to be scarce. An example of learning from a Toronto hospital in the SARS outbreak was that psychological drop-in sessions were more effective when they were offered in comfortable surroundings such as a room with sofas and music, and where senior staff also used the drop-ins. Remote psychological support such as phone and Skype is indicated especially when the goal is having as few people on site and exposed to infection as possible. While peer support has its place, sometimes being able to offload to a relative stranger can be useful to staff, especially in order to acknowledge feelings they are struggling with such as fear, anger and a reluctance to come to work at all.

### WANG, S et al (2020) Sleep Disturbances Among Medical Workers During the Outbreak of COVID-2019[57]

Aims: To assess the effect of the COVID-19 outbreak on the sleep quality of healthcare workers in a children's healthcare centre in Wuhan.
Methods: A cross-sectional, anonymized, self-reported questionnaire survey was conducted at the Children's Healthcare Centre of Renmin Hospital, Wuhan University. The questionnaire consisted of three parts, including socio-demographic characteristics and COVID-19 epidemic-related factors, the Pittsburgh sleep quality index (PSQI), and Zung's self-rating anxiety scale (SAS) and self-rating depression scale (SDS).
Results: In total, 47 out of 123 (38%) participants with PSQI scores > 7 were identified as having sleep disturbance. A logistic regression analysis showed that sleep disturbance was independently associated with being an only child (adjusted odds ratio (OR) and 95% confidence interval (CI) 3.40 (1.21-9.57), $P < 0.05$), exposure to COVID-19 patients (adjusted OR and 95% CI 2.97 (1.08-8.18), $P < 0.05$) and depression (adjusted OR and 95% CI 2.83 (1.10-7.27), $P < 0.05$).
Conclusions: We observed that, during the outbreak of COVID-19, sleep disturbance was highly prevalent among paediatric healthcare workers, and sleep disturbance was independently associated with being an only child, exposure to COVID-19 patients and depression. Therefore, more mental health services are required for front-line paediatric healthcare workers in Wuhan.

**WILLIAMS, RD et al (2020) Moral Injury in Times of COVID-19[58]**

The COVID-19 pandemic has generated many sources of stress and subsequent distress for health care workers, patients, and families. It is critical to be aware of the various feelings that may arise and try not to hide emotional reactions. Psychological first aid tenets provide a road map that fosters resilience for patients, providers, and health care systems to navigate the ethical dimensions of the COVID-19 pandemic.

- Acknowledge stress, pressure, and sacrifice. Acknowledgement from leaders and peers is vital for normalizing staff reactions and knowing that our experiences are shared.
- Adopt an ethical mindset. Early awareness of two or more ethical principles being at odds can cause moral distress and if recurrent, moral injury. Be proactive to mitigate harmful consequences.
- Lean on colleagues. Find ways to dialog through video chat, telephone, and email. Talk about your reactions and the distress you are experiencing. If moral distress arises, talk about it.
- Connect with patients. Create empathic interactions despite current barriers to usual care. Delivering evidence-based interventions promotes self-efficacy and reminds health care providers to not give up in the midst of overwhelming circumstances.
- Bolster resilience. There is continual need for resources that foster moral repair and resilience. Without such resources, personal guilt will erode professional confidence. Realize that you, your colleagues, and other health care providers may grapple with the moral residue of COVID-19 beyond its actual period of immediate threat.

**WU, K et al (2020) Analysis of Psychological and Sleep Status and Exercise Rehabilitation of Front-Line Clinical Staff in the Fight Against COVID-19 in China[59]**

There are psychological symptoms and sleep symptoms in front-line medical staff who participate in the fight against COVID-19, and they affect each other. Hospitals should improve emergency management measures, strengthen psychological counseling for clinical front-line medical staff, strengthen exercise intervention, and improve their sleep quality and mental health.

### XIAO, H et al (2020) The Effects of Social Support on Sleep Quality of Medical Staff Treating Patients with Coronavirus Disease 2019 ( COVID-19) in January and February 2020 in China[60]

Levels of social support for medical staff were significantly associated with self-efficacy and sleep quality and negatively associated with the degree of anxiety and stress. Levels of anxiety were significantly associated with the levels of stress which negatively impacted self-efficacy and sleep quality. Anxiety, stress and self-efficacy were mediating variables associated with social support and sleep quality. Structural Equation Modelling showed that medical staff in China who were treating patients with COVID-19 infection during January and February 2020 had levels of anxiety, stress, and self-efficacy that were dependent on sleep quality and social support.

### WU, Y et al (2020) A Comparison of Burnout Frequency Among Oncology Physicians and Nurses Working on the Frontline and Usual Wards During the COVID-19 Epidemic in Wuhan, China[61]

The aim of this study was to compare the frequency of burnout between physicians and nurses on the frontline wards and those working in usual wards.
A survey with a total of 49 questions was administered to 220 medical staff members from the COVID-19 FL and UWs, with a ratio of 1:1. General information, such as age, gender, marriage status and the Maslach Burnout Inventory for medical personnel were gathered and compared.
The group working on the FLs had a lower frequency of burnout (13% vs. 39%; $P < 0.0001$) and were less worried about being infected compared with the UW group.
Conclusion: Compared with medical staff working on their UWs for uninfected patients, medical staff working on the COVID-19 FL ward had a lower frequency of burnout. These results suggest that in the face of the COVID-19 crisis, both FL ward and UW staff should be considered when policies and procedures to support the well-being of health care workers are devised.

### YANG, L et al (2020) Urgent need to develop evidence-based self-help interventions for mental health of healthcare workers in COVID-19 pandemic[62]

It is important to ensure that evidence-based intervention strategies are employed so that already over-stretched resources can be maximized. Many barriers limit the implementation of conventional evidence-based

interventions in this emergent setting. First, traditional face-to-face psychotherapy is hard to implement immediately because of the quarantine policy for minimizing transmission of the virus. Second, not all healthcare workers willingly participate in the group or individual psychological interventions, as evidenced by recent experiences from China. Third, current evidence-based interventions commonly target single mental disorders, whereas a range of psychological responses and mental disorders are experienced by populations facing an emerging epidemic outbreak. Fourth, COVID-19 has spread worldwide including many low- and middle-income countries where significant gaps exist in access to mental health services, but traditional evidence-based interventions generally require substantial mental health resources. Given these challenges, urgent attention needs to be given to researching strategies to improve access to evidence-based psychological interventions for frontline workers, especially in LMICs. Self-help interventions offer a promising avenue because such interventions can be delivered through a variety of media, and self-help has been shown to be effective for a range of mental health problems. The WHO has developed an evidence-based self-help intervention called Self-Help Plus (SH+) for managing stress and coping with range of adversities. SH+ is based on principles of Acceptance Commitment Therapy and adopts a guided self-help format comprising pre-recorded audio sessions and an illustrated self-help book.

**YIN, X et al (2020) A study on the psychological needs of nurses caring for patients with coronavirus disease 2019 from the perspective of the existence, relatedness, and growth theory[63]**

During extraordinary epidemic situations, needs for existence, relatedness and growth coexisted among clinical nurses and affected each other. The existence needs were mainly reflected in health and security needs, whereas the relatedness needs consisted mainly of interpersonal needs, humanistic concern needs, and family needs; further, the growth needs consisted mainly of knowledge needs. More attention should be paid to clinical nurses' needs to protect their health.

**ZAKA, A et al (2020) COVID-19 pandemic as a watershed moment: A call for systematic psychological health care for frontline medical staff[64]**

The COVID-19 pandemic is a watershed moment for health care systems that are manifestly ill prepared for pandemics on this scale. Healthcare systems require a step-change in preparedness to deal with future pandemics.

Psychological systems as well as medical systems of health care require huge investment and major upgrading in readiness for future pandemics.

**ZHANG, C et al (2020) Survey of Insomnia and Related Social Psychological Factors Among Medical Staff Involved in the 2019 Novel Coronavirus Disease Outbreak[65]**

We aimed to investigate the prevalence rate of insomnia and to confirm the related social psychological factors among medical staff in hospitals during the COVID-19 outbreak.

Our study found that more than one-third of the medical staff suffered insomnia symptoms during the COVID-19 outbreak. The related factors included education level, an isolation environment, psychological worries about the COVID-19 outbreak, and being a doctor. Interventions for insomnia among medical staff are needed considering the various socio-psychological factors at play in this situation.

**ZHANG, J et al (2020) Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: A model of West China Hospital[66]**

The COVID-19 epidemic has brought serious social psychological impact to the Chinese people, especially those quarantined and thus with limited access to face-to-face communication and traditional social psychological interventions. To better deal with the urgent psychological problems of people involved in the COVID-19 epidemic, we developed a new psychological crisis intervention model by utilizing internet technology which integrates physicians, psychiatrists, psychologists and social workers into Internet platforms to carry out psychological intervention to patients, their families and medical staff. We hope this model will make a sound basis for developing a more comprehensive psychological crisis intervention response system that is applicable for urgent social and psychological problems.

**ZHOU, Y et al (2020) Tackling the mental health burden of frontline healthcare staff in the COVID-19 pandemic: China's experiences[67]**

To reduce the risk of mental health problems among frontline healthcare staff, on February 11, the National Health Commission, the Ministry of Human Resources and Social Security and the Ministry of Finance of China jointly issued a guideline entitled "Key Measures on Improving the Working Conditions of Frontline Healthcare Workers: Caring for the Physical and Mental Health of Healthcare Workers" (2020). The guidelines addressed improving the work and rest hours for frontline healthcare workers,

strengthening their occupational health and safety conditions, and crisis psychological intervention and counselling. The latter included assisting their families to deal with daily life requirements, creating a safe working environment, and securing their financial status. Other measures also included the establishment of timely telehealth psychological services and the provision of on-site mental health services for frontline healthcare staff in isolation hospitals. To conclude, when frontline healthcare staff are responding to any epidemic of severe infectious disease, mental health problems are common. The development and implementation of timely and appropriate mental health interventions as well as social and financial supports could effectively address the mental health status of frontline healthcare staff. The experiences from China in tackling the mental health challenges in frontline healthcare staff may benefit other countries who are fighting the COVID-19 pandemic.

### ZHU, J et al (2020) Prevalence and Influencing Factors of Anxiety and Depression Symptoms in the First-Line Medical Staff Fighting Against COVID-19 in Gansu[68]

The prevalence rates of anxiety and depression symptoms among doctors was 11.4% and 45.6%, respectively. History of depression or anxiety (T=-2.644, p= 0.010, 95%CI: -10.514~-1.481) was shown to be a risk factor for anxiety symptoms in doctors, while being male (T=2.970, p=0.004, 95%CI: 2.667~13.521) was a protective factor for depression. The prevalence rate of anxiety and depression symptoms among nurses was 27.9% and 43.0%, respectively. History of depression or anxiety was a common risk factor for anxiety symptoms (T=-3.635, p=0.000, 95%CI: -16.360~-4.789) and depression symptoms (T=-2.835, p=0.005, 95%CI:-18.238~-3.254) in nurses. The results of partial correlation analysis controlled for gender and history of depression or anxiety indicated that the total score of positive coping was negatively correlated with the total score of anxiety (r=-0.182, p=0.002) and depression (r=-0.253, p=0.001).
The first-line anti-epidemic medical staff have high anxiety and depression symptoms and adopting positive coping styles will help to improve their negative emotions.

## OTHER

**BRITISH PSYCHOLOGICA SOCIETY (2020) [Briefing Paper] The psychological needs of healthcare staff as a result of the Coronavirus pandemic**[69]

This is a guide for leaders and managers of healthcare services who will need to consider the wellbeing needs of all healthcare staff ¾ clinical and non-clinical ¾ as a result of the Coronavirus outbreak. It offers practical recommendations for how to respond at individual, management and organisational level involving the appropriate utilisation of expertise within their practitioner psychologist and mental health professionals and anticipates the psychological reactions over time, and what people may need to recovery psychologically from this.

**BRITISH PSYCHOLOGICAL SOCIETY (2020) [Webinar] The psychological needs of healthcare staff**[70]

In light of the situation that healthcare staff now find themselves in, BPS president David Murphy and lead clinician Julie Highfield conducted a webinar to address some of the thinking and frameworks around the current psychological landscape for health workers.

**McGUIRE, B et al (2020) How to support mental health among frontline healthcare workers in a pandemic**[71]

It is important to protect the mental health of frontline healthcare workers during the COVID-19 pandemic because they shoulder a large burden of treating people who are affected by the disease; however, the current guidelines about mental health protection for frontline healthcare workers typically relate to incidents such as terrorist attacks and natural disasters. The mental health needs of frontline healthcare workers in this long-term pandemic are unknown. A project funded by HRB and IRC at NUI Galway will gather information about the experience and needs of frontline healthcare workers during the pandemic in Ireland and overseas and will develop best-practice principles to support the mental health of frontline healthcare workers for this and future pandemics.

Produced by the members of the National Health Library and Knowledge Service Evidence Team[†]. Current as at 02 June 2020.This evidence summary collates the best available evidence at the time of writing and **does not replace clinical judgement or guidance**. Emerging literature or subsequent developments in respect of COVID-19 may require amendment to the information or sources listed in the document. Although all reasonable care has been taken in the compilation of content, the National Health Library and Knowledge Service Evidence Team makes no representations or warranties expressed or implied as to the accuracy or suitability of the information or sources listed in the document. This evidence summary is the property of the National Health Library and Knowledge Service and subsequent re-use or distribution in whole or in part should include acknowledgement of the service.

The following PICO(T) was used as a basis for the evidence summary:

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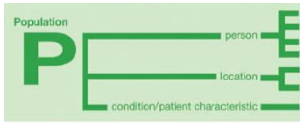
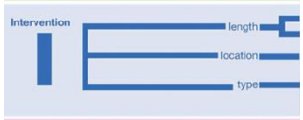
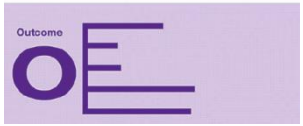
|  | HEALTH CARE WORKERS WORKING IN THE COVID-19 PANDEMIC |
|  | PSYCHOLOGICAL SUPPORTS |
|  | |
|  | IMPROVED MENTAL HEALTH/PREVENTION OF LONG-TERM MENTAL HEALTH ISSUES |

The following search strategy was used:

CORONAVIRUS OR (MH "CORONAVIRUS+") OR COVID-19 OR CORONA VIRUS OR WUHAN N2 VIRUS OR "2019-NCOV" OR "2019 NCOV" OR SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 OR SARS-COV-2 OR "2019 AND (NEW OR NOVEL) AND CORONAVIRUS"
AND
PSYCHOLOG* OR MENTAL HEALTH OR MH "OCCUPATIONAL STRESS" OR MH "COMPASSION FATIGUE"
AND
STAFF OR EMPLOY* OR HEALTH CARE WORKER* OR HEALTHCARE WORKER* OR DOCTOR* OR NURSE OR NURSES OR NURSING OR HEALTH CARE STAFF OR HEALTHCARE STAFF OR HEALTHCARE PERSONNEL OR HEALTH CARE PERSONNEL OR CLINICIAN OR CLINICAL STAFF OR (MH HEALTH PERSONNEL+")

Helen Clark, Sligo University Hospital [Author]; Pauline Ryan, Librarian, University Hospital Waterford [Editor]; Brendan Leen, Area Library Manager, HSE South [Editor]



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