Our duty of care
A global call to action to protect the mental health of health and care workers

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WISH 2022 Forum on the Mental Health of Health and Care Workers
Perhaps more than any time in recent history, the COVID-19 pandemic has emphasized the vital role that health and care workers play in caring for the global population. Yet it has become increasingly clear over the last three years that we – as policymakers, employers and, ultimately, society – have largely failed in our duty of care for these essential workers, particularly with regard to their mental health and wellbeing.

Even before the pandemic, challenging working conditions, ethical dilemmas, and high-stress environments were known to increase the likelihood of mental health conditions among this group. The unprecedented impact of COVID-19 on health services has exacerbated these issues and has also revealed stark gaps in how most health systems assess, manage and protect the mental health of their health and care workers.

This report examines the impact of the pandemic on the mental health of the health and care workforce. It highlights effective interventions to support mental health, and provides 10 policy actions to support this group and ensure global health security now and into the future. These actions respond to recent landmark decisions of Member States in the World Health Assembly and International Labour Conference that reaffirm the obligations of governments and employers to protect and safeguard the health and care workforce, ensuring decent work in a safe and enabling practice environment that upholds their mental health and wellbeing.

For generations the world has expected health and care personnel to deliver care to individual patients, their families and communities. The COVID-19 pandemic has made clear that the obligations implicit in duty of care extend to the systems which support those personnel.

It is time for a bold commitment to protect the health and wellbeing of our health workforce.
EXECUTIVE SUMMARY

Maintaining a healthy and productive health and care workforce is not only a moral imperative – it is essential to delivering safe, high-quality, patient-centered care to populations worldwide. Yet the COVID-19 pandemic has shown that our health systems are not providing adequate support for the mental health of our health and care workers. This is resulting in a growing workforce crisis that also threatens the delivery of care to entire populations.

This report looks at how policymakers can address the crisis and seize the moment to redesign how health is delivered, for the benefit of all communities. The report is presented in two main sections to examine: 1) the burden of COVID-19 on the mental health of health and care workers; and 2) interventions to support the mental health of health and care workers. The final section presents recommended policy actions.

Section 1: Burden of COVID-19 on the mental health of health and care workers

Throughout the pandemic, health and care workers experienced increased workloads, redeployment to unfamiliar settings and assignments, extreme fatigue, isolation, increased violence and harassment, stigma, and moral distress. They have often felt abandoned and undervalued by their organizations. All of these issues have led to increased mental health strain.

Prevalence estimates of mental health symptoms among this group during the pandemic range between 23 and 46 percent for anxiety and 20 and 37 percent for depressive symptoms according to a review of reviews between November 2021 and April 2022. Health and care workers reported that burnout and moral distress, which affect mental health and wellbeing, and which have long plagued the health workforce, worsened because of the pandemic. Estimates of burnout during the pandemic ranged from 41–52 percent in pooled estimates, with individual studies reporting even higher levels. Physicians and nurses experienced the highest levels of burnout compared to other health professions. Burnout was associated with increased contact with COVID-19 patients, lack of personal protective equipment (PPE), and work stress.

The rise of industrial action globally (including strikes and walkouts) impacted on the provision of essential health services. Health and care workers voiced concerns that were not a result of the pandemic alone,
but long-standing issues related to: a lack of risk allowance, insurance, overtime payment, or delayed salary; shortages in staff or equipment; and poor working conditions.

As the pandemic wore on, many health and care workers either left or reported their intention to leave work, signaling the need for urgent action to protect, support and maintain the health and care workforce.

Section 2: Interventions to support the mental health of health and care workers

Effective interventions should create enabling practice environments where the workforce’s mental health can thrive. Doing so requires individual-level interventions and psychosocial support, but also system-level prevention of risks and hazards to health and care workers’ mental health and wellbeing. Without this, individual psychosocial interventions will be futile, since the duration of effects are time-limited, and workers will be forced to rely on individual coping strategies or resilience training in working environments that continue to do harm.

Section 3: Policy actions

This report responds to recent landmark decisions at the World Health Assembly and International Labour Conference that have reaffirmed the obligations of governments and employers to protect the workforce, ensure their rights and provide them with decent work in a safe and enabling practice environment that upholds their mental health and well-being. Protecting and safeguarding this workforce is also an investment in the continuity of essential public health services to make progress towards universal health coverage and global health security. With clear political and technical consensus to act on the mental health and well-being of health and care workers, this report puts forward 10 policy-level actions across three main areas: the implementation of evidence-based intersectoral policies and plans; investment in mental health care and support; and strengthening human resources for health and care, including those for the mental health workforce.

These strategies are a starting point for governments and their partners to inform policy dialogue and action on addressing mental health at a time when investment in the essential health and care workforce is imperative for pandemic prevention, preparedness and response.
INTRODUCTION

The importance of mental health for an effective health and care workforce

A thriving workforce is essential for delivering safe, high-quality, patient-centered care and achieving universal health coverage (UHC) to meet the United Nations Sustainable Development Goals (UN SDGs) by 2030.\(^1\) Evidence suggests that health and care workers who find joy, fulfillment and meaning in their work are able to engage on a deeper level with their patients.\(^2\) Poor mental health can drive professionals away from their caregiving roles, increasing the gap between the demand for and supply of workers, and leaving some people without access to health services. Upholding health and care workers’ rights, and protecting their mental health and wellbeing, have a positive effect on ensuring that they, in turn, adequately fulfil their roles and responsibilities toward persons in their care.

A growing workforce crisis

Long considered a population at risk for increased likelihood of mental health conditions – due, in some cases, to repeated exposure to potentially traumatic events, high workload, and other challenging working conditions\(^3\) – health and care workers have recently experienced even greater strains on their mental health, adding to pre-pandemic pressure on this workforce.\(^4\) This is explored in Section 1.

“I feel like I was hung out to dry. Take chances with my health or abandon my patients were my only choices…”\(^5\)

Primary care practitioner, New York, US (May, 2020)

The projected shortfall of 10.2 million workers by 2030\(^6\) is a grave threat to achieving UHC and to global health security.\(^*\) The International Council of Nurses (ICN) estimated the nursing workforce shortage alone at 5.9 million globally pre-pandemic, and warned that a 4 percent quit rate as a result of the pandemic would increase the shortage to 7 million.\(^7\) Further, more than 115,500 health and care workers are estimated to have

\(^*\) These data and projections are based mainly on pre-COVID-19 trends. Two regions – Africa and the Eastern Mediterranean and Middle East – will shoulder an increasing burden of workforce shortages, amid growing demand for services.
died due to COVID-19 between January 2020 and May 2021, a figure that may even be a conservative estimate due to underreporting and limited reporting coverage.

The concept of ‘resilience’ in health and care workers

Resilience is often discussed in the context of individuals coping with stress, bullying and overwork. For health and care workers, it also means coping with immense burdens during the COVID-19 pandemic. However, the term ‘resilience’ is overused and poorly understood. Rather than serving to expose and challenge the conditions that create stressors and inequality, the focus on individual resilience can downplay the system’s responsibility to address the issues. Throughout this report, the authors have made the deliberate choice to avoid describing the need for individual health and care workers to be resilient. Instead, resilience is one of the attributes of well-functioning health systems. This is explored further in the WISH 2022 report *Building health system resilience: A roadmap for navigating future pandemics*.

The way forward

The world cannot afford to lose more health and care workers; meanwhile those who remain in employment face the burden of these shortages in staff workload, wellbeing, morale and the ability for staff to provide a good quality of care. This report describes the mental health burden on health and care workers almost three years into the COVID-19 pandemic, and calls for the protection of their mental health through widescale systemic interventions and long-term action, change and investment. In the words of the US Surgeon General, “Health workers have had our backs during the most difficult moments of the pandemic. It’s time for us to have theirs.”
SECTION 1. BURDEN OF COVID-19 ON THE MENTAL HEALTH OF HEALTH AND CARE WORKERS

The mental health toll of the COVID-19 pandemic and the accompanying social and public health measures has been significant for all members of society. Compared to pre-pandemic levels, anxiety disorders were estimated to have increased by 25.6 percent (an additional 76.2 million cases) in the first year of the pandemic, while major depressive disorders (MDD) increased 27.6 percent (an additional 53.2 million cases).14,15

Stressors on health and care workers

For health and care workers specifically, the pandemic has presented a host of role-specific stressors (as shown in Figure 1). Therefore, it is unsurprising that a 44-country survey found that health workers experienced higher levels of stress than other occupations in the first wave of the COVID-19 pandemic.16

Figure 1. Workplace stressors for health and care workers throughout the pandemic

The stress and politicization of the pandemic brought additional harassment and threats of violence to health and care workers (as shown in Figure 2),17 even as violence against health workers had been increasing before the COVID-19 pandemic.18
Health and care workers in conflict areas also suffered amid the global pandemic with continuing – and, in some cases, escalating – attacks on healthcare facilities, death and injury of health workers, and hijacking of ambulances. Health and care workers in humanitarian settings are already under pressure to allocate scarce resources, including medications, supplies, and access to specialized providers. COVID-19 heightened their stress due to fear of becoming infected and/or passing on the infection to family members, stigma toward health and care providers and their families, increased work demands, the restrictions of biosafety measures (such as physical isolation and wearing PPE), and reduced time and capacity to tap into social networks and to practice self-care.

Anxiety and depression symptoms in health and care workers

We conducted a systematic review of reviews published between November 2021 and April 2022 (methodology summarized in the Appendix) to assess the impact of COVID-19 on anxiety and depression in health and care workers. We found 21 systematic reviews which included data on the impact of COVID-19 on various mental health conditions; 16 included pooled estimates of symptoms (that is, estimates obtained from combining data from separate studies). None of the identified reviews compared pre-pandemic and pandemic levels of symptoms in the same population. Also, the overwhelming majority of studies reviewed were cross-sectional, meaning that they could only provide a single snapshot in time. The most commonly studied conditions were depression symptoms.
and symptoms of anxiety (see Figure 3), with fewer studies on post-traumatic stress disorder (PTSD), burnout and insomnia.

**Figure 3. Pooled estimates of the prevalence of anxiety and depression symptoms in health and care workers**

![Anxiety and Depression Prevalence Chart]

1. 95% confidence interval (CI): 21–26% | 2. 95% CI: 25–67% | 3. 95% CI: 16–25% | 4. 95% CI: 34–39%

*A similar point prevalence was found in a review from Spain, but with only two studies on health and care workers, the estimate had lower precision at 0.46 (0.14–0.80).

**Study limited to doctors.

***Health and care workers in direct contact with patients infected with COVID-19.


Results were mixed with regard to differences in depression and anxiety symptom levels between health workers working directly with COVID-19 patients and other health workers.

**Post-traumatic stress disorder (PTSD)**

**Figure 4. Pooled estimate of prevalence of PTSD among health and care workers**

![PTSD Prevalence Chart]

1. 95% CI: 12–25% | 2. 95% CI: 17–50% | 3. 95% CI: 16–45%

In a meta-analysis of the global prevalence of PTSD symptoms, the pooled prevalence estimate among health and care workers was 17 percent, but it was significantly higher among health workers in COVID-19 units and nurses compared to other health workers (see Figure 4). Again, study assessment tools were significant moderators of prevalence.

**Box 1. The hero narrative: helpful or hurtful?**

The pandemic saw the elevation of health and care workers to hero status, with ‘militaristic’ language and images comparing them to soldiers in a war against the virus. The hero narrative, while an expression of appreciation, may be detrimental to the mental health and wellbeing of these workers in the long term. Attributing heroic characteristics to health and care workers risks stifling debate about their scope of responsibilities and the ethical limits of the duty of care expected of them. Depicting heroism as the norm also put pressure on health and care workers to live up to that image, with potential negative psychological effects.\(^{27}\) Workers themselves found the hero treatment unhelpful and a distraction from institutions’ responsibilities for taking concrete actions, such as increasing staffing ratios.\(^{28,29}\)

“We don’t want to be heroes. We just want protection in line with OHS standards.”

General practitioner, Australia\(^{30}\)

**Burnout and moral distress**

Burnout, stress and other mental health issues among health and care workers were reported in 1,196 news articles pertaining to 129 countries between January 2020 and April 2022.\(^{31}\) The most frequently reported mental health impacts were stress (62 countries), exhaustion (57), burnout (46), anxiety (42), trauma (33) – including PSTD and secondary traumatic stress (STS) – and depression (25).

**Moral injury and moral distress**

In the medical context, moral injury is defined as a situation “when clinicians are ... expected, in the course of providing care, to make choices that transgress their longstanding, deeply held commitment to healing”.\(^{32}\) Moral injury refers to the harm that such an experience can cause an
individual and is complex. Moral distress refers to a problem arising from the circumstances an individual finds himself or herself in, which means that it can be addressed by removing the situational stimulus.33

Moral distress and moral injury have been applied in medical settings before COVID-19, but the pandemic has brought the terms to the forefront, as health workers found that they were not always able to provide the optimal standard of care, or witnessed end-of-life suffering with no ability to help.34 In 2021, a British Medical Association (BMA) survey found that COVID-19 was associated with an increase in an already high burden of moral distress, and that more than half of the respondents believed that insufficient staffing was one of the top five reasons for moral distress. Though not defined as a mental disorder, moral injury undermines well-being and is associated with burnout, depression, PTSD and suicide.35

Burnout

Burnout refers to a phenomenon in the context of the workplace where a person experiences emotional exhaustion, mental distance from work (depersonalization), and reduced professional efficacy. Burnout is not a medical condition, but it is included in the 11th Revision of the International Classification of Diseases (ICD-11) as a factor that affects health or causes a person to seek healthcare.36 It is also associated with increased medical errors and worsening patient safety.37

Administrative burdens, chronic under-funding, and lack of resources have long threatened the wellbeing and retention of health workers, but the pandemic has exacerbated the burnout crisis.38,39 In the US, the National Academy of Medicine (NAM) sounded the alarm on burnout before the COVID-19 pandemic, warning that it had reached “crisis levels” among the US health workforce, with 35–54 percent of nurses and physicians reporting symptoms of burnout.40 Meta-analyses of the prevalence of burnout during the pandemic mirrored these estimates, with a further increase in prevalence among physicians and nurses, as shown in Figure 5.
Figure 5. Prevalence of burnout among health and care workers during COVID-19

- 41–52% for all health care workers
- 66% for physicians and nurses

1. 95% CI: 26–57% | 2. 95% CI: 40–63% | 3. 95% CI: 51–81%


How mental health issues have evolved over the course of the pandemic

“I hope that personal protective equipment is available every day so that I don’t have to worry as much about myself or my colleagues getting infected.”

Nurse, China (2020)

Early in the pandemic, the fear of infection was very high, as were concerns about lack of PPE. In the first six months of the pandemic, many health workers experienced stress (33 percent) and sleep problems (37 percent) and many reported feeling fear (70 percent). In April 2020, a BMA survey found that only 12 percent of doctors said they felt “fully protected” from coronavirus infection at work, while 31 percent said they felt “not at all” protected. Similar responses were seen in the US, with 46 percent of primary care practices reporting no capacity for COVID-19 testing, and 51 percent reporting lack of PPE in March 2020.

“Being a health personnel makes you understand that you are a main source of contagion for the people you love and who are around you. I spent a full year without visiting my family, parents and sisters.”

Nurse, Costa Rica (October 2021)
As the pandemic wore on, burnout, mental/emotional exhaustion and stress increased. In June 2020, 44 percent of primary care clinicians in the US reported that their levels of burnout were at an all-time high. By September 2020, 53 percent said that their mental/emotional exhaustion had increased, and by December 2020, 76 percent said their mental stress was worse than it had been in the spring.47 Between April 2020 and February 2021, the proportion of respondents from the aforementioned BMA survey in the UK who reported suffering from work-related depression, anxiety, stress, or burnout made worse by the pandemic rose from 28 percent to 41 percent.48

“I find it frustrating and dumbfounding that many of my patients will trust my professional opinion when it comes to almost all of their healthcare needs, but they don’t trust my professional opinion regarding the COVID vaccines, and instead put their faith in some random Facebook or internet article.”

Primary care practitioner, USA (August 2021)49

With the introduction of COVID-19 vaccines, there was additional workload associated with vaccine roll-out but also a sense of hope that the pandemic was ending. Yet variant-induced surges, coupled with political debates and resistance among some segments of the public to vaccines, continued to take a toll on the mental health of the workforce. Anger and moral outrage against individuals who refused to have the vaccine began to emerge among health and care workers, compounding the feelings of guilt and moral distress.50

“I find myself completely at sea speaking to bereaved relatives. This kind of bereavement is not like any other I have had to deal with in my more than 30 years as a doctor.”

General Practitioner, UK (May 2022)51
Risk and protective factors for mental disorders during pandemics

An interplay of individual, organizational and broader societal-level factors influence the mental health of health and care workers (see Table 1). A number of studies identified women, young people and parents of dependent children as being at greater risk of psychological distress. These associations are noteworthy, considering that women make up about 70 percent of the global health workforce and frequently work in patient-facing roles as nurses, midwives and community health workers. The higher risk of negative mental health outcomes among younger health workers does not bode well for the future health workforce.

Staff expressed frustration about the effect of precautionary measures on their ability to do their jobs, but practical support from the employer, such as providing adequate supplies of appropriate PPE, was a critical factor affecting mental health. Other contributors were the work environment – including inadequate staff training in preparation for outbreaks and infection control procedures – job stress and dissatisfaction, workload, organizational support, and compensation, as well as societal stigma and discrimination toward and harassment of health and care workers.

In terms of protective factors, studies found that employees who were older, or had more clinical expertise, suffered less psychological stress. A supportive and positive work environment, clear communication with staff, regular short breaks from clinical responsibilities, and confidence in precautionary measures were also helpful. Also found to be protective were providing psychosocial support and staff support protocols. Several studies further highlighted the importance of being able to access proper PPE. A general drop in disease transmission, as well as seeing infected colleagues recover contributed to improved psychological outcomes.
OUR DUTY OF CARE

Box 2. Gender equality during the pandemic

Women in general, and caregivers and mothers in particular, have faced a sharp increase in their unpaid care burden which has been linked to poorer mental health outcomes. Unpaid care work is a major factor in determining whether women enter and stay in paid employment. During the COVID-19 pandemic, women have experienced large declines in labor force participation across many countries. For those women who have remained in the health and care workforce, their working conditions have deteriorated, with evidence suggesting that they have faced higher rates of burnout and mental health conditions, including depression, anxiety and PTSD.

Recognizing the extent to which the pandemic has affected the physical and mental health of the health and care workforce differently based on gender is a fundamental step for creating effective and equitable health workforce planning and policies. Action areas to support gender equality for mental health and wellbeing include:

- Build a foundation for equality using legal frameworks to prohibit discrimination, violence against and harassment of women.
- Address workplace systems and culture by implementing organizational interventions specifically on workplace mental health support, including identifying barriers to access mental health support for women; and broadly on the prevention of risk factors, gender-specific workplace needs and improvement of working conditions for women.
- Promote strategies to support personal caregiving duties, including making caregiving leave equal for men and women, so that women in the workforce can focus on health service delivery and help minimize the risk of deterioration, burnout and absenteeism.
- Conduct gender analyses to ensure equal pay for equal work: assess gender pay gaps, capture the level of occupational segregation by gender, institute gender-transformative recruitment and retention strategies.
- Enable women to achieve with access to peer support mechanisms, mentoring, and fostering women’s leadership development.

Without proactive steps to consider a more gender equitable and inclusive workforce, crises will continue to exacerbate existing inequities, resulting in disproportionate negative impacts on women health and care workers.
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<thead>
<tr>
<th>Level</th>
<th>Risk factors</th>
<th>Protective factors</th>
</tr>
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<tbody>
<tr>
<td>Individual</td>
<td>• Inadequate training</td>
<td>• Frequent short breaks from clinical duties</td>
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<tr>
<td></td>
<td>• Lower levels of education</td>
<td>• Adequate time off work</td>
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<td></td>
<td>• Part-time employee</td>
<td>• Faith in precautionary measures</td>
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<td></td>
<td>• Less clinical experience</td>
<td>• Self-perception of being adequately trained and supported</td>
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<td></td>
<td>• Working in an administrative or managerial role</td>
<td>• Working in an administrative or managerial role</td>
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<tr>
<td>Personal</td>
<td>• Increased time in quarantine</td>
<td>• Adequate social support</td>
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<tr>
<td></td>
<td>• Staff with children at home</td>
<td>• Male</td>
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<td></td>
<td>• Personal lifestyle impact by epidemic/pandemic</td>
<td>• Higher household income</td>
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<td></td>
<td>• Infected family member</td>
<td>• Good physical health</td>
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<td></td>
<td>• Single or social isolation</td>
<td>• Older age</td>
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<tr>
<td></td>
<td>• Female</td>
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<tr>
<td>Psychological</td>
<td>• Lower perceived personal self-efficacy</td>
<td>• Supportive peers</td>
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<td></td>
<td>• Physical or previous mental health condition</td>
<td>• Family support</td>
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<tr>
<td></td>
<td>• Worries about risk of getting infected</td>
<td>• Sense of control and coping ability</td>
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<td></td>
<td>• Sense of loss of control</td>
<td>• Sense of duty/altruism</td>
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<td></td>
<td>• Disruption to personal life</td>
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<td></td>
<td>• Feeling unprepared</td>
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<tr>
<td>Level</td>
<td>Risk factors</td>
<td>Protective factors</td>
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<tr>
<td><strong>Organizational</strong></td>
<td>• High risk of contact with patients/ frontline worker</td>
<td>• Positive feedback to staff</td>
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<td></td>
<td>• Infected colleague</td>
<td>• Staff faith in service’s infection control procedures</td>
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<td></td>
<td>• Working in hardest hit area</td>
<td>• Infection control and precautionary measures in place/provision of protective gear/PPE</td>
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<td>• Job stress and dissatisfaction</td>
<td>• Effective staff training and education in preparation for outbreaks</td>
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<td></td>
<td>• Workload/hours and shifts</td>
<td>• Staff support protocols</td>
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<td>• Non-voluntary assignment to high-risk role</td>
<td>• Clear communication with staff/receiving up-to-date information</td>
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<td></td>
<td>• Testing recourse and PPE availability</td>
<td>• No infection among staff after start of strict protective measures</td>
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<td></td>
<td>• Perceived lack of organizational support</td>
<td>• Infected colleagues getting better</td>
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<td></td>
<td>• Perceived lack of adequate training</td>
<td>• Access to tailored psychological interventions based on needs of individual staff</td>
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<td></td>
<td>• Lack of confidence in infection control</td>
<td>• Availability of medical resources</td>
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<td></td>
<td>• No staff compensation by organization</td>
<td>• Peer support/having a cohesive team</td>
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<tr>
<td></td>
<td>• Increased contact with infected patients</td>
<td>• Balanced workload</td>
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<td></td>
<td>• Precautionary measures creating perceived impediment to doing job</td>
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<tr>
<td></td>
<td>• Forced redeployment to look after affected patients</td>
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<td><strong>Social network/societal</strong></td>
<td>• Worries about family members getting infected</td>
<td>• General drop in disease transmission</td>
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<td>• Social rejection/stigma</td>
<td>• Social support</td>
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<td></td>
<td>• Social isolation</td>
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Source: Adapted from Kisely et al (2020); Uphoff et al (2021).
SECTION 2. INTERVENTIONS TO PROTECT AND SUPPORT THE MENTAL HEALTH OF HEALTH AND CARE WORKERS

Safeguarding the mental health of health and care workers requires individual- and organizational-level interventions. Findings from the Magnet4Europe project, a four-year initiative to improve mental health and wellbeing among health professionals, showed that physicians and nurses placed a higher priority for their wellbeing on organizational changes – including improved staffing, reducing documentation burdens and allowing more time with patients – over resilience training or meditation space. In the COVID-19 pandemic, health workers reported the need for respite breaks, concerns about access to full vaccine and effective PPE, and the need for redeployment training as key factors for burnout and retention.

Organizational-level interventions

WHO and International Labour Organization (ILO) have issued guidance for the occupational safety and health of workers in public health emergencies, including job/task rotations to reduce exposure to risk factors and strains, scenario-specific training on standard operating procedures to enable workers to deal with the emergency competently and effectively, and making available adequate and properly fitted PPE. The guidelines also emphasize the importance of good communication and clear information-sharing to give workers a sense of control and a chance to express concerns.

Updated interim guidance by WHO and ILO (February 2021) addresses occupational risks “amplified by the COVID-19 pandemic” – including psychological distress, stigma, discrimination, physical and psychological violence and harassment. Although the guidelines do not specify mental health risks, the proposed measures target worker concerns and risk factors associated with poor mental health outcomes (as outlined in Section 1). Guidance for the health and safety of workers in the COVID-19 pandemic includes:

• safe staffing levels and fair allocation of workloads.
• rest breaks and time off between shifts.
• supportive supervision, and training on Infection Prevention and Control (IPC) practices.
• paid leave and policies for workers to stay home without loss of income in case of being unwell, or in self-quarantine and self-isolation.
Box 3. Australia: Government investment in mental health services for health and care workers

In response to the pandemic exacerbating existing mental health concerns in health and care workers, the Australian Federal Government boosted investment and took co-ordinated action with a national framework – Every Doctor, Every Setting – to scale up interventions for the mental health and wellbeing of the health and care workforce as a national priority. One key initiative borne out of this investment is TEN – The Essential Network for Health Professionals, a digital-first mental health service that uses an integrated blended care model where health and care workers can access a range of self-guided resources and/or person-to-person services.

To date, TEN has reached over 52,000 people. Preliminary data indicated a troubling mental health landscape: Symptoms of psychological distress were reported by 84 percent; more than half reported moderate (or greater) depression, anxiety and impaired functioning; and 32 percent reported clinically significant post-traumatic stress disorder (PTSD) symptoms. More than 90 percent reported burnout symptoms such as disengagement and exhaustion. Doctors and nurses appear to be the most affected.

Wide-ranging stakeholder engagement and observational research assessing the acceptability and usability of TEN has been used to optimize the uptake and continuous improvement of this initiative. In almost all of these consultations, stigma was reported as the main barrier to accessing mental health services for all occupations, with doctors in particular reporting concerns regarding mandatory reporting. One respondent stated:

“I think there’s also a fear of repercussion that if you divulge that you’ve got this mental illness or mental health issues … you could potentially lose your job.”

In response, TEN is confidential and can be accessed anonymously; service usage is not linked to the national Medicare system that generates permanent health records accessible by colleagues. National programs to support health and care workers’ mental health should be accessible, tailored to individual needs, confidential and monitored for effectiveness.

* Data from the research is unpublished, manuscript is forthcoming.
Psychosocial interventions

Evidence is limited on effective interventions for improving the mental health of health and care workers in mass outbreak situations. While there are studies on a range of individual- or group-level psychosocial interventions delivered to health workers during the COVID-19 pandemic, there is a dearth of high-quality studies evaluating the effectiveness of interventions delivered in previous mass outbreak settings.97

Box 4. Qatar: Insights from a national mental health helpline

In April 2020, the Hamad Medical Corporation (HMC) Mental Health Service (MHS), in collaboration with the Ministry of Public Health and Primary Health Care Corporation (PHCC), established the National Mental Health Helpline (NMHH), aimed at offering easy, confidential and timely access to mental health support for health and care workers and the general public.

The NMHH has a fully integrated interdisciplinary team, co-ordinated by a team of nurses trained as triage and shift co-ordinators. This frontline triage team is supported by a team of psychiatrists and interventional psychologists, ensuring that callers have access to psychological intervention and treatment when necessary. All staff are trained using a standardized evidence-based resource pack to ensure that they are adequately prepared to offer support. As mental health needs increased in both complexity and scope as the pandemic wore on, training was adapted in 2021 to include grief and compassion fatigue.

The HMC MHS actively promoted the NMHH through posters across HMC and PHCC, awareness videos on social media, the System Wide Incident Command and Control (SWICC)/Tactical Command group messages, and via embedding a message to HMC screen savers. Staff whose managers submitted their contact information also received a standardized psychosocial support call, offering positive coping strategies. In addition, the NMHH team also offered incident debriefing in response to incidents in clinical areas, as well as a variety of wellbeing educational webinars.

The NMHH dealt with more than 43,000 calls in the first two years of operation; though only about 1 percent of calls each month are from
health and care workers, even though their calls are prioritized. However, the NMHH’s other activities have reached just over 10,000 health and care workers since April 2020.

In our systematic examination of reviews (as described in Section 1), only two were identified as looking at the effectiveness of psychological support and psychosocial interventions to mitigate adverse mental health outcomes among health workers in disaster settings and outbreaks.\(^{98,99}\) In those reviews, interventions based on evidence-based protocols involving individual- and group-based cognitive behavioral therapy (CBT) were effective in reducing PTSD and anxiety, while single-session interventions were less successful. Despite methodological concerns, the largest statistical and clinical differences appeared to result from comprehensive interventions that included clear mental health and psychosocial components, as well as increased staffing, PPE provision and training.\(^{100,101}\)

There is evidence that staff with the highest burden of mental health conditions were the least likely to request or receive support.\(^{102}\) This highlights the importance of systematic and clear pathways to mental health services that safeguard confidentiality and protect against stigmatization. In its updated guidance on mental wellbeing at work, the National Institute for Health and Care Excellence (NICE) in the UK recommended providing mechanisms for early and confidential identification and management of mental health needs, ensuring that workers are aware of support resources through dedicated focal points, with referral options that are free from stigma (see Box 5).\(^{103}\)
Box 5. Stigma associated with seeking mental health support

Stigma is a powerful social process associated with labeling, stereotyping and separation, leading to status loss and discrimination within a context of power. Stigma toward persons suffering from mental illnesses is widespread and can influence the help-seeking behavior of all groups, particularly health and care workers.

Health and care workers are more prone to suffer in silence due to the perceived stigma associated with suffering ‘mental illness’, as well as the fear of losing their medical license. This hesitation to seek help or disclose mental health problems can lead to an over-reliance on self-treatment and low peer assessment. In medical practice, admitting to a mental condition can sometimes lead to ostracism and judgment from colleagues. Many are concerned that a diagnosis of depression or similar mental illness may imply that they are unable to provide quality care; they fear losing their community’s respect and their own reputation. As a result, their livelihood and families’ financial security may be jeopardized.

Therefore, interventions targeting this group should focus on combating the stigma associated with seeking treatment and encourage the healthcare workforce to speak up when experiencing mental ill health.

The obligation of ‘duty of care’ includes both physical and mental health protections

Governments and employers have a responsibility to provide a safe and healthy working environment for all staff and to make reasonable adjustments to meet the specific needs of individuals, which is now agreed by Member States as the fifth fundamental principle and right at work. It is the mandated obligation of the system to protect workers through the prevention of harmful physical or mental stress due to conditions of work, and to recognize the right of everyone to a world of work free from violence and harassment, including gender-based violence and harassment.

It is vital to focus on system-level prevention of risks and hazards to health and care workers’ mental health and wellbeing. Without this, individual psychosocial interventions will be futile, since the duration of effects are time-limited, and workers’ application of individual coping strategies or resilience training will be minimized in working environments that continue to do harm. This should be a high priority in times of crisis, but also on an ongoing basis. Preparing health and care workers for the demands and
psychological impacts before, during and after events such as COVID-19 is essential to minimize risks and prevent mental distress.117

Findings of our review point to wider and systemic risk factors leading to mental health issues and burnout of staff. Individual interventions should be delivered alongside efforts to protect the functioning of the health system, ensure safe and decent working conditions to retain workers and, in turn, preserve their motivation to continue protecting the health of others.118 WHO and WHPA found that across five global health workforce professions, personnel interpret the lack of systemic protection mechanisms for their safety and security, health and wellbeing as being undervalued.119

In May 2022, the Seventy-fifth World Health Assembly adopted the resolution on human resources for health (WHA75.17), calling on Member States to fulfill a duty of care by using the WHO global health and care worker compact (the Global Care Compact)120 in line with the WHO Global Code of Practice on the International Recruitment of Health Personnel.121 The Global Care Compact compiles and references existing international legal instruments, labor laws and regulations, and States’ obligations, providing technical guidance on how to protect health and care workers and safeguard their rights. Its framework for action encompasses:

- **Preventing harm** from dangers and hazards in work, with infection prevention and control; provision of mental health and psychosocial support; protection in fragile, conflict and vulnerable situations; and protection from violence and harassment.

- **Providing support** with fair and equitable compensation and social protection in enabling work environments; ensuring time for workers to access the care they need.

- **Promoting inclusivity** of rights, protections and enablers for equal treatment and non discrimination.

- **Safeguarding rights** to: collective bargaining; individual empowerment; whistleblower protections; and freedom from retaliation.

**Promoting enabling practice environments where positive mental health and wellbeing of the workforce thrive**

In addition to their legal obligations for duty of care, employers should also be proactive in developing a supportive culture. Enabling practice environments – health and care settings that support excellence and decent work conditions – have the power to attract and retain staff, provide quality patient care and strengthen the health and care sector as a whole, according to the World Health Professions Alliance.122
To transform workplace culture to empower health and care workers, organizations must:123–125

• develop organizational policies that are equitable and inclusive.
• ensure that health workers are not deterred from seeking appropriate care for their physical health, mental health and/or substance use.
• encourage a fair and supportive workplace environment with a commitment to occupational safety and health.
• provide educational opportunities.

One successful example is the International Pharmaceutical Federation’s FIPWiSE toolkit for positive practice environments for women in science and education.126 This toolkit identifies and addresses inequalities in workplace environments that affect women in these fields. It has been implemented in countries around the world and provides an example for recruiting, rewarding and retaining women in the workforce.

Box 6. What COVID-19 means for the future of the workforce

“When I feel like giving up. I care so much for my patients but how long can I keep this up?”

Primary care practitioner, USA

The physical and mental strains – and levels of reported burnout – experienced by health and care workers responding to COVID-19 raise questions about the future of the workforce. Over the course of the pandemic, these workers were alternately valorized as ‘heroes’ and vilified, even to the point of physical attacks.127 Between January 2020 and June 2022, there were 1,613 reported (to WHO) attacks on healthcare, including more than 700 on health and care personnel.128 These attacks deprive people of urgently needed care, endanger health and care workers, and undermine health systems.

In the UK, the British Medical Association (BMA) warned of impending staff departures due to stress and burnout, and the adverse impact on patient safety.129 In a May 2020 BMA survey, 15 percent of respondents said they planned to leave the National Health Service (NHS), take early retirement, or work elsewhere once normal services were resumed. By February 2021:

• 18 percent of doctors were “more likely” to consider leaving the NHS for another career within a year.
• 26 percent were more likely to take early retirement.
• 26 percent were more likely to take a career break within a year.\textsuperscript{130}

Similarly, the NHS Staff Survey 2021 (of more than 600,000 workers*) found:

• 31 percent thought often of leaving the organization.
• 23 percent would probably look for a job at a new organization in the next 12 months.
• 17 percent would leave as soon as they could find another job.\textsuperscript{131}

In the US, a survey supported by the American Medical Association of more than 20,000 health and care workers across 124 institutions between July and December 2020 found the reported intention to leave practice within the next two years at 24 percent among doctors and 40 percent among nurses.\textsuperscript{132} Burnout, workload and stresses associated with COVID-19 explained the intent to leave or to reduce working hours. Several studies showed that the mental health of nurses was more adversely affected in the pandemic compared to other health professions.

Between January 2020 and April 2022, news articles pertaining to 76 countries reported industrial actions by health workers, including threats of strikes.\textsuperscript{133} Overall, the main actors in industrial actions in 2020 and 2021 were nurses, who comprise 59 percent of health workers globally. Reasons for the action included lack of risk allowance, insurance, overtime payment, or delayed salary; shortages in staff, equipment, supplies; and poor working conditions in general.

The International Council of Nurses has warned that the estimated 5.9 million pre-pandemic shortage of nurses has been exacerbated by the pandemic and could lead to more severe shortages, especially in lower and lower-middle income countries.\textsuperscript{134} In responding to this shortage, the report calls for shifting the focus of policies from individual-level interventions to ones that create a healthier and more productive working environment (p. 28):

“An essential part of this response must be to shift the policy, professional and management focus from individual nurses having to ‘cope’ and ‘be resilient’ with unbearable pandemic-driven work burdens, to one where employers and organisations take responsibility for creating and maintaining supportive working conditions and adequate staffing.”

* All data points represented an increase from previous years.
SECTION 3. POLICY ACTIONS

The COVID-19 pandemic has drawn attention to the role of all essential workers, including the health and care workforce. This attention has provided impetus to international governance decisions in the 2022 meetings of the World Health Assembly and the International Labour Conference that have reaffirmed the obligations of governments and employers to protect the workforce, ensure their rights and provide them with decent work in a safe and enabling practice environment that upholds their mental health and wellbeing.

Investing in the health and care workforce is an essential consideration for the continuity of essential health services and the public health functions that are essential to make progress towards universal health coverage and health security. Protecting and safeguarding this workforce is also an essential investment, and their right to a healthy and safe working environment is now an obligation as the fifth fundamental principle and right at work.

This is therefore the opportune moment to reimagine how governments and employers deliver on health and wellbeing, accounting both for the services to individuals and communities and the obligations to health and care workers that provide those services. It is an opportunity to consciously invest in a national health system where the rights to health and a safe working environment are paramount, so that workers, patients and communities can equally thrive.

Box 7. A public policy response to prioritizing mental health for health and care workers in Chile

The mental health of health and care workers has been a key priority for the government of Chile since the start of the pandemic. The Presidential initiative ‘SaludableMente’ was established across nine ministries and convened a National Social Committee of more than 50 national and local government representatives, health specialists, academics and persons with lived experience to "strengthen the country’s strategy and organize a single voice in the fight against the coronavirus," where mental health became a part of the national pandemic response. A key pillar of their work was protecting and supporting the mental health of health and care workers.
Reports surfaced that up to 25 percent of professionals in health teams experienced moderate to severe depressive symptoms and those who worked more than 44 hours had more depressive symptoms, especially women, nurses, and ambulatory care personnel from Primary Home Care services.\textsuperscript{137} The significantly increased risk of mental health conditions for women – who make up 73 percent of Chile’s health and care workforce – has since been confirmed in a recent study, which also found that their working conditions, particularly support from leadership and peers, served as protective factors.\textsuperscript{1} This points to the need to consider the workload and working conditions, as well as gender-supportive policies linked to the protection and support of health and care workers.

The intersectoral group of experts in the National Social Committee put forward four strategic areas for action, and ensured their delivery at the national level:\textsuperscript{138}

1. Developed and implemented a national plan\textsuperscript{139} the protection of mental health in health and care workers using the latest evidence from national and international research which incorporated indicators of psychosocial risk, work absenteeism and response capacity of the health services.

2. Generated a social communication plan which incorporated psychoeducation to the general population, stigma and discrimination reduction strategies, and elimination of the ‘hero’ metaphor from media.

3. Strengthened and developed the government infrastructure and the regulatory frameworks to guarantee the surveillance of interventions to protect the mental health of workers in the health and care sectors, which included a tripartite working group to evaluate and modify the legal role of the employer in establishing sufficient prevention and protection of mental health at work.

4. Established a Working Group for the evaluation and strengthening of prevention and therapeutic programs in mental health and occupational safety and health, to co-ordinate and sustain their implementation in the long term.\textsuperscript{140}

In Chile, the public policy responses to address the mental health consequences of the COVID-19 pandemic for health and care workers has been characterized by the co-ordinated implementation of mental health plans, budget expansion and the establishment of inter-agency and intersectoral working groups to oversee sustained implementation and monitoring.

\textsuperscript{*} Results from unpublished dataset; manuscript is forthcoming.
Evidence-based options are available and should be applied at scale

Commitment to a co-ordinated, whole-of-government approach is needed. The policy and systems changes to protect, safeguard, and ensure the rights of health and care workers alongside the delivery of integrated health and care services engages ministries responsible for education, employment, finance and health, within each country.

Implementing and promoting systemic changes will be especially important in low- and middle-income countries, where population needs are greatest, access to mental health services for all remain severely constrained\(^{141}\) and shortages of health and care workers present a threat to equity and universal health coverage.\(^{142}\)

This report groups the policy actions into three categories: evidence-based intersectoral policies and plans; investment in mental health care and support; and strengthening human resources for health and care (see Figure 6).

**Figure 6. Policy-level strategies to protect the mental health of health and care workers**

In co-operation with the workforce and their professional associations, countries and all relevant stakeholders can use these strategies as a starting point to inform policy dialogue and action on addressing mental health for health and care workers.

**Implement evidence-based intersectoral policies and plans**

- Apply the political consensus from the World Health Assembly and the International Labour Conference to every national setting.
  Convene and promote intersectoral dialogue across ministries of
health, labour, social welfare, education, human rights protection and finance; engage employers and workers in the shared responsibility to protect and safeguard the health and care workforce.

- **Review and strengthen national policy and regulatory frameworks for mental health services, as well as occupational safety and health.** Ensure occupational safety and health policies prioritize the mental health and wellbeing of staff by addressing policy barriers for decent work using international labor laws and technical guidance in the Global Health and Care Worker Compact.\(^{143}\) Mental health plans should consider the principles in the *WHO Comprehensive Mental Health Action Plan 2013–2030*, and put in place appropriate institutional, legal, financing and service arrangements to ensure that needs are met and that mental health is promoted.\(^{144}\)

- **Align and integrate national policy approaches on mental health, occupational safety and health and pandemic preparedness.** Policies should ensure the health system is prepared for all hazards, able to rapidly transition to emergency measures while simultaneously respecting international benchmarks to protect and safeguard the health and wellbeing of the workforce. WHO’s Intergovernmental Negotiating Body,\(^{145}\) in its most recent deliberations in July 2022 has identified a mechanism to inform and adopt an international instrument on pandemic prevention, preparedness and response. This is an important opportunity to ensure duty of care for health and care personnel is included and elements of protecting and safeguarding their mental health and wellbeing are integrated in the instrument.

### Invest in mental health care and support

- **Improve monitoring and surveillance of mental health needs** among the health and care workforce, and monitor resource requirements and provision. Expand the uptake of existing tools at the health system level and ensure accountability for the implementation of national, regional and organizational level strategies. Participation of health and care workers with lived experience of mental health conditions is essential.

- **Increase access to quality, confidential mental health care** for all health and care workers. Tailor national responses to the local context, health and care workers’ feedback and the international evidence base. New infrastructure should be established to sustain and supplement existing support programs for health and care workers’ mental health, and be strengthened countrywide.
• **Condemn and combat the stigmatization of health and care workers directly involved in the COVID-19 pandemic response** and address the negative psychological impacts of the pandemic response. Incorporate stigma-reduction strategies into public mental health programs, increase efforts to de-stigmatize mental health across society.

• **Invest in mental health research to generate the necessary evidence and inform policy and regulatory solutions.** Research on the impact and effectiveness of policy responses is particularly required. This should include research into the long-term effectiveness and cost-effectiveness of individual-level and organizational-level interventions for mental wellbeing and the identification of the needs of different groups at work. The evolving work on protection and safeguards for health and care workers in the Seventh Global Symposium on Health Systems Research presents an immediate opportunity for research dialogue in October 2022.

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**Strengthen human resources for health and care**

• **Recruit, expand and retain a diverse health and care workforce** to deliver on essential health services and the essential public health functions. As evidenced throughout the pandemic, national and facility shortages increase burden and stress on the remaining personnel, risking quality of care and ultimately global health security. Human resources for health investment should be prioritized and aligned with the *Global Strategy on Human Resources for Health: Workforce 2030*.

• **Optimize and anticipate the workforce needs to scale-up mental health services** for health and care workers as well as the public. This should be consistent with the *WHO Comprehensive Mental Health Action Plan 2013–2030* with multidisciplinary, integrated mental health and social care teams in community-based settings that are supported with ongoing training and supervision; and whose working conditions, financial remuneration and career progression opportunities attract and retain the mental health workforce.

• **Invest in workplace environments and culture** that prevent burnout, promote staff wellbeing, and support quality care; this includes the obligations and roles of governments and employers for occupational safety and health; eliminating organizational policies that penalize employees for seeking mental health and substance use care.
SECTION 4. CONCLUSION

The costs involved in scaling up services and appropriately supporting mental health represent an investment in human resources for health that will strengthen health systems immediately, and in the future.\textsuperscript{151} The challenges for health systems, further complicated by the emergence of new, more infectious variants of COVID-19 and other public health emergencies, will persist. Failing to tackle physical and mental health and to ensure decent work and fair pay has negative impacts that include decreased motivation, absenteeism and reduced retention. In countries with existing workforce shortages and under-resourced health systems, this becomes even more critical.\textsuperscript{152,153}

The impact of inaction is enormous and transcends health systems. Common mental health disorders are estimated to cost the global economy $1 trillion per year, largely a result of lost productivity.\textsuperscript{154} If mental health care was to be increased even to a moderate level of accessibility for health and care workers throughout the world, it would have great returns on investment by way of improved health, workforce productivity, and general economic benefits.

This report promotes duty of care as a legal obligation; it is also a moral obligation which makes economic sense. A protected, safe, healthy workforce is one that can better respond to threats, including conflicts and humanitarian emergencies in addition to future pandemics. Increased and sustained funding is needed to develop the health and care workforces required to deliver the services that are critical to fulfilling the rights of our populations now and in the future.\textsuperscript{155}
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REFERENCES


131. NHS. NHS Staff Survey 2021. NHS and Survey Coordination Centre. Available at: https://www.nhsstaffsurveys.com/static/b3377ce95070ce69e84460fe210a55f0/ST21_National-briefing.pdf [Accessed 28 June 2022].


APPENDIX: SYSTEMATIC REVIEW OF REVIEWS METHODOLOGY

Methodology highlights

Databases searched:
- Medline
- L.OVE: Living Overview of Evidence (Epistemonikos Foundation)
- Public health + : NCCMT McMaster
- Trip Medical Database
- NICE: National Institute for Health and Care Excellence
- ACCESSSS from McMaster PLUS™

Publication dates of included studies:
- 1 November 2021 - end April 2022

The review question was formulated using the PE(C) O framework:
- **P (population):** health and care workers: physicians, nurses, community health workers, physical therapists, pharmacists, and others.
- **E (exposure):** exposure to COVID-19.
- **C (comparison, if available):** general population within the same study or pre-pandemic levels in the same population.
- **O (outcome):** a mental health outcome, including burnout, stress, anxiety, depression, suicidal ideation, trauma, insomnia, sleep disturbances.

Other inclusion criteria:
- Article type must be a quantitative systematic review with or without meta-analysis.
- Articles must be in English and available in full text.

Search flow chart

292 references imported for screening as 292 studies
19 duplicates removed
273 studies screened against title and abstract
245 studies excluded
28 studies assessed for full-text eligibility
5 studies excluded
3 outcome not mental health
1 did not include primary studies
1 incorrect article type (letter to the editor)
23 studies included

Challenges, limitations, future directions

There are many methodological challenges to studying the effect of the pandemic on mental health, especially when trying to pool prevalence estimates and summarize the results across a vast number of settings. First, there is considerable heterogeneity among studies, in part because of the variety of instruments with different psychometric properties used to measure symptoms of mental disorders. Even when the same instruments were used, the cutoff points for elevated symptoms may be different, thus mixing levels of severity. While it is understandable that studies were expedited for pragmatic needs, the implications for validity and generalizability of findings complicate the pooling and interpretation of these findings. Importantly, the pandemic context, which is highly relevant for mental health, has itself become highly heterogeneous, with countries experiencing surges at different times.

Bibliography


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