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Research reveals mental health impact of COVID-19 on hospital healthcare workers

by University of Birmingham



Hospital healthcare workers reported higher rates of clinically significant mental health symptoms following initial Covid-19 pandemic peak Credit: CC0 Public Domain

Hospital healthcare workers reported higher rates of clinically significant mental health symptoms following the initial COVID-19 pandemic peak in the UK, new research led by the University of Birmingham has revealed.

A study, published in *BJPsych Open*, found around a third of hospital healthcare workers reported clinically significant symptoms of anxiety (34.3%) and depression (31.2%), while almost a quarter (24.5%) reported clinically significant post-traumatic stress disorder (PTSD) symptoms.

Over 2,600 healthcare workers employed by 10 NHS hospital trusts across the West Midlands took part in a survey between June 5th 2020 and July 31st 2020, in a study aimed at gauging the mental health consequences of the immediate aftermath of the initial COVID-19 pandemic peak in the UK.

The survey found:

- Those with a history of mental health conditions had at least two-fold increased odds of clinically significant symptoms of PTSD, depression and anxiety.
- Women, those with a history of physical illness, smokers, staff based on in-patient wards, emergency departments, and intensive therapy units, had an increased likelihood of clinically significant PTSD symptoms.
- Younger participants, women, and those who had either themselves or a close family member or friend been admitted to hospital with COVID-19, were around 50% more likely to report anxiety symptoms.
- There was an almost two-fold increase in odds of healthcare workers having symptoms of depression when they were based in an acute general hospital, compared with a mental health setting.
- Smokers were 50% more likely to report symptoms of depression and PTSD, but not anxiety.
- Those who reported adequate availability of personal protection equipment (PPE) and well-being support, and no 'morally uncomfortable' changes in working practices, were up to 50% less likely to have anxiety, depression or PTSD symptoms.
- Doctors and nurses were 20% less likely to report anxiety or PTSD compared with other hospital healthcare workers.

Just over half (55%) of those surveyed reported that adequate PPE was available at their workplace, while 30.8% said this was not the case. The majority (78.2%) were aware of well-being measures

implemented by their employer, however only 15.4% accessed any form of psychological support during the study period.

A third (33.1%) were redeployed as a result of the pandemic and 38.5% reported increased working hours. In addition, 51.2% reported 'morally uncomfortable' changes in the way they worked.

A total 720 (27.3%) were diagnosed with COVID-19 during the survey period, while 522 (19.8%) also reported a cohabitant had developed COVID-19. Also, 452 (17.1%) either themselves, or a close family member or friend, were admitted to hospital due to COVID-19.

The research team included Dr. Kasun Wanigasooriya, Professor Andrew Beggs, and Dr. Tariq Ismail.

First author Dr. Kasun Wanigasooriya, a Junior Doctor and a Ph.D. student at the University of Birmingham, said: "The pandemic has stretched the limits of healthcare systems to beyond capacity.

"Healthcare workers have been exposed to numerous stressors including a rapid escalation in workload; sudden changes in roles and responsibilities including critical decision-making; witnessing higher than the usual number of deaths; and contracting the virus themselves.

"It is essential that we ensure adequate access to both PPE and well-being support for all of our workforce on the frontline, particularly for those who may be at greater risk."

Author Professor Andrew Beggs, of the University of Birmingham, said: "Our findings show the vast majority of healthcare workers are aware of well-being support but very few access it.

"We hope that our research will highlight this important issue and will lead to more [healthcare workers](#) accessing the support they need."

Professor Neil Greenberg, from the Royal College of Psychiatrists, said: "Experiences of 'moral injury,' a term for distress as a result of violating one's moral principles, limited wellbeing support and lack of PPE are associated with higher levels of anxiety, depression and PTSD symptoms in hospital staff.

"These findings are concerning and must be addressed, especially during this current wave. Adverse symptoms not only have serious consequences for the workforce's mental health but can make it difficult to deliver high quality care.

"While more research is needed to understand the impact of the pandemic on the workforce's mental health, it's essential that all NHS staff can access evidence-based psychological support, and in cases of mental illness, the right psychiatric treatment when they need it."

There were 2,638 eligible participants who completed the survey, which collected self-reported data on 24 independent variables, including sociodemographic, lifestyle and employment factors, and impacts on professional and personal lives.

More information: Kasun Wanigasooriya et al. Mental health symptoms in a cohort of hospital healthcare workers following the first peak of the COVID-19 pandemic in the UK, *BJPsych Open* (2020). DOI: [10.1192/bjo.2020.150](https://doi.org/10.1192/bjo.2020.150)

Provided by [University of Birmingham](#)

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Bracing for an Epidemic of PTSD Among COVID-19 Workers

The lessons we must learn from prior pandemic and disaster research.

Posted Apr 13, 2020



Doctors, nurses, first responders, hospital staff, and essential workers all over the world represent the frontline in the global war on COVID-19. In recent weeks, television networks, newspaper columns, and social media have been flooded with reports from health care professionals who are finding themselves overwhelmed with the sheer numbers of sick patients and fears about medical equipment shortages, including protective personal equipment. Their stories tell not only of their extreme exposure to the pandemic, in the course of their professional duties but of a painful struggle to reconcile their need to take care of their sick patients with fears for their own health, the health of their colleagues and loved ones.

As a PTSD specialist, it's my job to wonder about the cost of this war on the psyche of health care professionals, hospital staff, and other essential workers. What happens when a pandemic, such as this, impacts large swaths of essential workers in a discrete time period? What is the long-term impact of such mass traumatization? The last two decades have seen exponential growth in our understanding of disaster-related PTSD and, hence, an invaluable opportunity to apply these hard-earned lessons to the COVID-19 Pandemic.

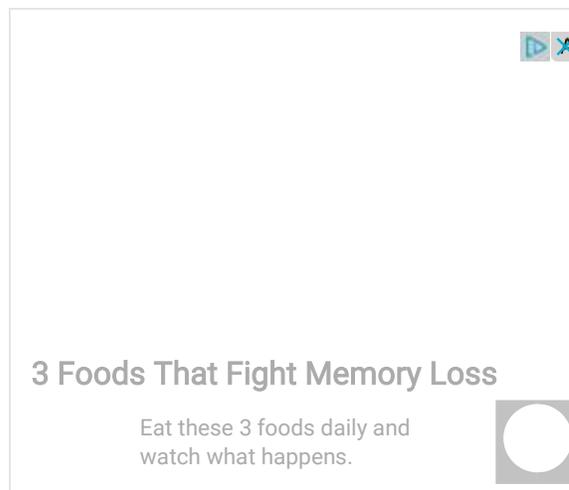
First, we know that while most frontline health care personnel will heal naturally from the psychological toll of this pandemic, a substantial minority won't. Indeed, PTSD is a well-established consequence for health-care workers who worked through deadly pandemics, such as Ebola. Case [studies](#) from doctors who worked through the 2014-6 Ebola Outbreak describe the unique stressors faced by health care workers such as the death of colleagues (a chilling reminder of their own vulnerability), the high stakes demands that force them to "carry on and defer" grieving and the processing of emotions and subsequent self-quarantine mandates which left them isolated from their traditional support systems.

Second, the intensity of exposure to disaster plays a big role in determining who will develop PTSD in the aftermath. Following the 2001 terrorist attacks on the World Trade Center, tens of thousands of both trained and untrained disaster responders were involved in the rescue, recovery, and clean up. In one [study](#) of over 3,000 responders, nearly one fifth developed PTSD and World Trade Center exposure, especially to death and human remains, was strongly associated with having PTSD years later. Indeed, half of the responders still had active PTSD more than ten years after the attacks. Such chronic PTSD takes a huge toll on individual life and often goes hand in hand with [addiction](#), [depression](#), and [suicide](#) as well as an increase in health conditions such as [chronic pain syndromes](#) and heart disease.

Finally, the pre-pandemic conditions of any given community or hospital system must be given due consideration. [Research](#) done after Hurricane Katrina showed the pre-disaster conditions of disaster-hit communities mattered a great deal in determining the success of recovery efforts. Hospital systems that serve patients who routinely face poverty and social adversity will likely bear the brunt of COVID-19 related devastation and this, in turn, will translate to a larger psychological price paid by the health care workers caring for these communities.

To add to this, American Medicine was reporting an epidemic of burnout among doctors and nurses before

COVID-19 hit, so pre-existing issues related to the morale of these essential workers need to be factored in. Proactive steps to prevent further moral injury, vicarious traumatization and burnout will be vital in limiting further damage to staff emotional well-being and workforce attrition.



The collective lessons we have learned from prior disasters tell us what needs to be done to prevent an epidemic of PTSD among COVID-19 essential workers: in the [immediate term](#), fundamental resources to help secure their personal safety and in the mid to longer-term a systematic, coordinated response that provides [active outreach](#), identify vulnerable subgroups and, if necessary, offers psychological treatment. Fortunately, the mental health community has developed effective psychological therapies specifically tailored to treat and manage PTSD. There is no reason for this side effect of the COVID-19 pandemic to persist.

There is a dire need for systematic action to combat the mental health burden COVID-19 is placing on frontline health care personnel. For such actions to succeed requires more than lip service, trite words of sympathy and rhetoric, rather a long-term commitment to resources, funds and unequivocal societal support is what is needed.

Along with post-COVID-19 plans to resume normal living, reopen schools, businesses, and airports, we also need a well-defined pathway to ensure the psychological rehabilitation of those who served on the frontlines.

We all have too much to lose if such pathways fail to materialize.





[Shaili Jain, M.D.](#), is a professor of psychiatry at Stanford. She is the Medical Director of Behavioral Health Team VA Palo Alto

Online: [visit Dr. Jain's website](#), [Twitter](#), [Facebook](#), [LinkedIn](#)

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COVID-19-related mental health issues could have long-term effects on healthcare workers

Essential workers have the highest rates of adverse mental health outcomes compared to all other employment groups surveyed by the CDC.

Mallory Hackett (</news/author/140150>), Associate Editor

(</news/author/140150>)



Burnout among healthcare workers has been an issue even before the pandemic (<https://www.healthcarefinancenews.com/news/burnout-prevalent-healthcarecommunity-consensus-report-confirms>), but the physical and mental toll of working on the frontlines could have lasting mental health implications for months and years to come, according to Dr. Robert Cuyler, the chief clinical officer for Freespira, a prescription digital therapeutic for panic attacks and posttraumatic stress disorder.

"Healthcare folks are so focused on caring for their patients that it's sometimes after the disaster that you learn about the aftermath," he told Healthcare Finance News.

As a Louisiana native, Cuyler compared the possible fallout of the pandemic to the months following Hurricane Katrina. He recalled that the mental health consequences of Katrina didn't manifest for some people until months after the event.

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"People can be hyper-focused on their daily function and their daily duty and they make their way through it," he said. "It's only afterward that the real extent of the exhaustion, impairment, depression, et cetera really begins to creep in."

PANIC ON THE FRONT LINES

Beyond the anxiety, stress, depression and loneliness that many healthcare workers have reported experiencing during the pandemic

(<https://www.healthcarefinancenews.com/news/healthcare-workersexperiencing-burnout-stress-due-covid-19-pandemic>), Cuyler is worried about the risk of healthcare workers developing PTSD related to COVID-19.

Not only are frontline healthcare workers experiencing the sickness, death and devastation of the pandemic on a daily basis – and in some cases

(<https://www.healthcarefinancenews.com/news/california-covid-19-surgeleaves-hospital-nurses-frustrated-over-staffing-shortages>), are doing so with limited staffing and resources – but they are also repeatedly putting themselves at risk for infection.

"We've got this kind of double whammy that goes on with the combination of this exterior traumatic exposure as well as all of the reasons that people are fearful of bodily symptoms," Cuyler said.

Already, the traumatic stress of the pandemic is being researched in healthcare workers.

Essential workers had the highest reported rates of adverse mental health outcomes compared to all other employment groups surveyed by the Centers for Disease Control and Prevention.

([https://www.cdc.gov/mmwr/volumes/69/wr/mm6932a1.htm?](https://www.cdc.gov/mmwr/volumes/69/wr/mm6932a1.htm?s_cid=mm6932a1_w)

s_cid=mm6932a1_w) More than 38% of essential workers reported having a COVID-19-related trauma- and stressor-related disorder. Comparatively, about 25% of nonessential workers reported the same.

Specifically, among healthcare workers, the prevalence of trauma-related symptoms is as high as 35%, according to a report from *Frontiers in Psychology*

(<https://www.frontiersin.org/articles/10.3389/fpsyg.2020.569935/full>). Symptoms were particularly common in women, nurses, frontline workers and workers who experienced physical symptoms of COVID-19.

HELPING HEALERS HEAL

Cuyler's company, Freespira, offers a potential treatment route for those on the frontlines experiencing PTSD and panic attacks.

Freespira is based on a body of research that shows a link

([https://erj.ersjournals.com/content/37/5/1068#:~:text=Post%2Dtraumatic%20stress%20disorder%20\(PTSD\)%2C%20as%20the%20most,those%20without%20PTSD%203%2C%2011.](https://erj.ersjournals.com/content/37/5/1068#:~:text=Post%2Dtraumatic%20stress%20disorder%20(PTSD)%2C%20as%20the%20most,those%20without%20PTSD%203%2C%2011.)) between PTSD and respiratory dysfunction.

"Not only when people are panicky, but even just in their ordinary life, people have very irregular breathing. They sigh, they yawn, they hold their breath, they breathe in what we call 'chronic hyperventilation,'" Cuyler said. "These researchers really posed an interesting question: If you can teach people how to normalize their respiration, would it make a difference?"

Using the Freespira sensor and the accompanying app, patients train their breathing to lessen the symptoms associated with panic attacks and PTSD.

The treatment plan is 28 days long and involves two 17-minute sessions a day where the user is guided through breathing techniques while adjusting their inhaled and exhaled CO₂ in the normal zone.

For patients that completed the program, 68% were in remission one-year posttreatment and 91% had significant symptom reduction as long as one year after treatment, according to a study that evaluated Freespira at Alleghany Health Network in Pittsburgh (<https://link.springer.com/article/10.1007/s10484-02009465-0>).

"What people do is they learn to spot when their breathing becomes irregular and they learn this paced breathing technique that they can deploy when they're feeling stressed," Cuyler said.

The study also looked at healthcare cost savings after Freespira was used among Highmark (/directory/highmark) Health's members and found a 35% reduction in any-reason medical costs, a 68% decrease in pharmaceutical costs and a 65% reduction in emergency department costs for the year after treatment.

Cuyler also pointed out that skill-building interventions may be a way to break down the mental health stigma among healthcare workers that keeps many from seeking help.

Studies (<https://psychiatryonline.org/doi/full/10.1176/appi.ajp-rj.2018.131101>) have shown healthcare personnel from medical students all the way to physicians oftentimes don't seek mental health interventions over fears about licensing and hospital credentialing as well as being seen as weak and as an embarrassment by their peers.

If anything, the pandemic has accelerated the breaking down of stigmas, thanks to the growing prevalence of telehealth and digital mental health services, according to Cuyler.

"What we've seen that has been a really good trend is we're seeing a real destigmatization of accessing mental health services," he said. "And it's increasingly just become [apparent that] we need to learn how to take care of ourselves."

Twitter: @HackettMallory

Email the writer: mhackett@himss.org (mailto:mhackett@himss.org)