

Guidance on screening and active monitoring for post-traumatic stress disorder (PTSD) and other mental health consequences in people recovering from severe COVID-19 illness

There is an emerging evidence-base regarding the mental health consequences of recovering from severe coronavirus (COVID-19) illness. Given the very frightening and invasive nature of the COVID-19 critical care experience, the high risk of death and the potential for long-term medical complications, those most severely affected by COVID-19 are likely to be at high risk of developing trauma and stress-related mental health difficulties. There may also be features unique to the COVID-19 pandemic that exacerbate its psychological impact, such as being isolated from loved ones during and after admission.

In this paper we describe the principles of screening and active monitoring for PTSD and other stress-related adverse mental health outcomes in survivors of severe COVID-19 illness. We make specific recommendations on translating these principles into practice and give guidance as to how and when these should be implemented.

TARGET POPULATIONS

This guidance focuses on the needs of those who have survived critical COVID-19 illness, as a high-risk group for developing mental health difficulties including PTSD. The guidance is especially relevant to people who are treated in hospital critical care units or require any form of mechanical ventilation. This typically will include people treated in Intensive Care Units (ICU/ITU's) and High Dependency Units (HDU's). It may also be relevant for people who develop less severe COVID-19 illness and are treated in other in-patient settings such as respiratory wards.

Relatives of people admitted to hospital for severe COVID-19 illness may also experience psychological trauma, such as seeing a sedated and ventilated relative via video link from hospital and may have believed their loved one was going to die. They represent an additional at-risk group for PTSD and other mental health difficulties. The guidance outlined may also therefore be relevant to this group.

EVIDENCE BASE

This guidance draws upon a body of applicable research evidence and clinical guidelines derived from epidemics, mass casualty events and critical care settings. It is not an exhaustive set of recommendations. Rather, it is intended to inform planners and clinicians of the principles for addressing the mental health needs of people who have been critically ill with COVID-19 illness.

In general, up to 40% of people discharged from ICU report symptoms of anxiety, around 30% symptoms of depression and 20% symptoms of PTSD. These are similar rates to survivors of mass casualty events such as transport disasters or terrorist attacks.

Studies on mental health trajectories after similar infectious outbreaks have identified the prevalence of mental health difficulties as over 30% for PTSD, 15% for depression and 15% for anxiety disorders. There may be both an immediate impact on mental health and one that emerges over time. For example, rates of diagnosable mental health problems were present in up to 60% of survivors of SARS-CoV up to one year later. At 30 months, this had reduced to a third, including 25% with PTSD and 16% with depression. Survivors of other coronavirus outbreaks also report fear of stigma, of contaminating others, of contracting the illness again as well as chronic fatigue syndromes.

ADDRESSING PSYCHOLOGICAL NEEDS

As for anyone leaving critical care, the psychological needs for people recovering from severe COVID-19 illness are best considered alongside their physical, functional and social needs. In some hospitals, psychological services are already well embedded into critical care follow-up clinics. However previous experience with mass casualty incidents suggests that mental health problems in high-risk groups are often not detected through conventional routes such as primary care or hospital outpatient clinics. This tends to be because of the following reasons:

- Psychological needs may be overshadowed by a focus on physical recovery.
- Primary care and general hospital healthcare staff may lack time or experience in detecting mental health difficulties.
- Healthcare follow-up is designed to support physical recovery and may not match the longitudinal trajectories of mental health needs.
- There are wide local variations in the provision of hospital-based critical care follow-up clinics.

The international experience from other mass casualty events suggests that centralised outreach, screening and active monitoring - or “screen-and-treat” programs - helps minimise untreated morbidity and ensure survivors have equality of access to services. These programs may run alongside hospital rehabilitation programs but are best delivered by dedicated medico-psychological teams.

Developing similar local and regional programs for COVID-19 survivors places their mental health needs on an equal footing to those from other mass casualty events, including the London bombings, Grenfell fire and Manchester Arena bombing. A similar model was successfully used to address the needs of healthcare staff after the Ebola epidemics. However, there may be important differences to using a screen-and-treat approach in response to a pandemic, given that significant levels of threat of illness may continue for some time.

Understanding the demographics and clinical variation in the affected group will be central to designing any mental health response. There may be multiple complications arising from COVID-19 illness, its treatment and the ongoing societal threat that interact in novel ways. Centralised and systematic collection of clinical data is the key to generating a body of knowledge and clinical experience about any “post-COVID-19” mental health syndrome for those recovering after critical care.

Age and geographical location will affect which mental health services may be involved with this group. Local services can vary widely in their skillset and remit, with differing resources available for children, working age and older adults. Ensuring continuity of care and access to treatment becomes even more complicated when the affected population is dispersed, rather than local to the hospital critical-care team, as may be the case for COVID-19.

There may also be particular barriers for people from Black and Minority Ethnic (BAME) and other disadvantaged groups in accessing mental health services. Given that severe COVID-19 illness disproportionately affects these communities, an effective psychosocial response will need to be proactive in identifying, engaging with, and adapting to their specific diversity needs in order to ensure equality of access. These complexities add further weight to the argument for a COVID-19 specific screen-and-treat program, which is also able to systematically monitor outcomes in order to inform future responses.

PRINCIPLES OF SCREEN-AND-TREAT PROGRAMMES

The purposes of a mental health screen-and-treat programme are to:

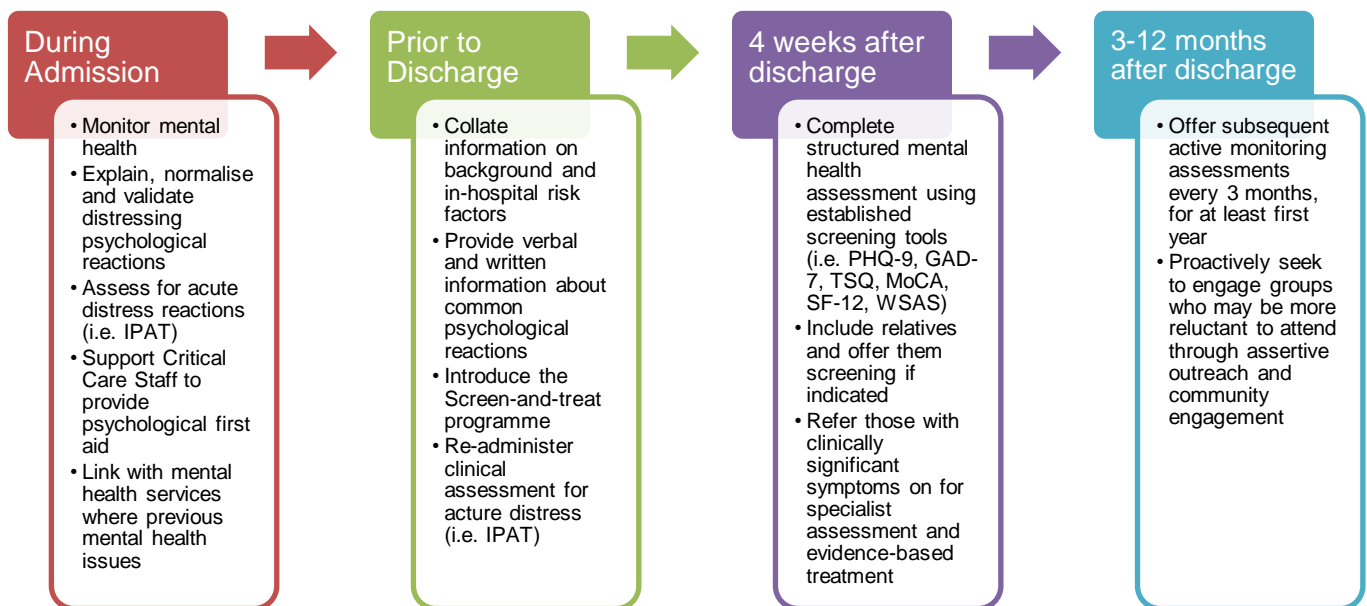
- Proactively identify and follow up the whole affected population.
- Administer brief self-report measures of mental health symptoms and functioning, to identify possible and emerging needs.
- Carry out a comprehensive assessment where people score above clinical thresholds.
- Develop treatment plans and offer appropriate treatment in a timely fashion.
- Provide advice and repeated follow-up where people score below thresholds in order to actively monitor the trajectory of their recovery

SETTING UP A SCREEN-AND-TREAT PROGRAMME

Consider setting up regional mental health screening programmes either within hospitals or in the community. Screening teams could signpost patients to relevant community mental health teams, or screen-and-treat within the same team:

- Constitute the screen-and treat programme as a separate specialised team incorporating mental health clinicians and supervisors, rather than relying on existing critical care staff to run the programme.
- Be aware that existing critical care services are unlikely to have the skills or resources to undertake active outreach and monitoring at multiple time points, or to effectively assess, signpost and/or treat the likely variety of mental health needs.
- Embed the screen-and-treat programme alongside existing hospital outpatient rehabilitation services where possible. Where this is not feasible, set up the programme as a stand-alone regional hub.
- Use hospital records to flag and create a central register of people who have recovered from severe COVID-19 illness and have been discharged from hospital (both retrospectively and prospectively). Establish a minimum dataset of relevant demographic and clinical information. Agree consent and data sharing arrangements to facilitate proactive follow-up.
- Use data from the register alongside existing epidemiological evidence to estimate the potential prevalence, and resource implications, of emerging mental health and cognitive difficulties. Be aware some aspects will be unique to COVID-19 and so may not be easy to model accurately. Undertake an early scoping exercise to establish the feasibility of screening people within existing follow-up services.
- Implement risk-informed active monitoring for all those discharged from hospital critical care. Contact people for follow-up ideally within 4 weeks, and at least every 3 months in the first year after discharge from hospital. Use established screening tools to monitor the trajectory of their mental health and functioning.
- There may be advantages for the screen-and-treat programmes to be visible, well publicised and have a 'presence' within both the hospital and the community. Advertise a single point of access – both telephone and website – with accessible information about the purpose of programme including through audiovisual materials.

- As well as waiting for people to contact services, be proactive in identifying and making repeated attempts to contact people on the central register, both after discharge and at subsequent follow-ups. This should involve in-reach from specialist psychological trauma clinics where available.
- By comparing access rates to predicted prevalence estimates, identify where there may be barriers specific to a particular community. Facilitate access by working alongside existing community links and engaging community representatives. Consider deploying mental-health trained outreach workers into community centers or places of worship to improve access.



DURING THE ACUTE HOSPITAL ADMISSION

- Overcome barriers to personalised care caused by wearing personal protective equipment (PPE), for example, by attaching clinicians' names and photographs to gowns, or offering video-facilitated consultations without PPE.
- Provide verbal and written information about critical care procedures and treatment. Explain, normalise and validate distressing psychological reactions such as hallucinations.
- Be aware that language barriers are likely to exacerbate experiences of confusion, delirium and social isolation, so offer language interpreting and translated materials where possible, including through telephone/video interpreting.
- Monitor people's mental health during admission, particularly for those who experience extended admissions. When possible, undertake clinical assessments for acute distress reactions, which could include administering a brief screening measure such as the IPAT. Liaise with relevant services for those with a known history of mental health difficulties. Involve Liaison Psychiatry services where available.
- Support critical care staff to offer psychological first aid interventions that promote feeling safe, calm, connected and hopeful. Help patients orient to and understand the critical care environment and care processes.

- Provide resources to help distract, entertain and relax people, and to help them maintain contact with their relatives. Keep relatives informed of people's psychological health as well as their physical health.
- Support patients, relatives and nurses to keep an "ICU diary" where feasible, to support them in making sense of their experience afterwards. Continue the diary during the transition into other hospital settings prior to discharge.

PRIOR TO DISCHARGE FROM ACUTE HOSPITAL

Collate information on background and in-hospital risk factors for PTSD and other common mental health difficulties. Use these to identify those most at risk of subsequent difficulties and therefore requiring priority follow-up.

- Background factors include:
 - prior experiences of psychological trauma, victimisation and discrimination
 - prior experiences of illness
 - recent losses, social stressors
 - lack of psychosocial support including those associated with lockdown measures.
- In-hospital factors include:
 - subjective fear, helplessness and acute distress
 - disturbances of consciousness - experiences of confusion, delirium and psychological detachment including out-of-body experiences.
 - disturbances in memory - memory loss or fragmentation
 - blood oxygen levels – lowest recorded
 - witnessing deaths
 - intubation and invasive procedures
 - length and type of sedation,
- Offer those who wish the opportunity to go through their care records and "ICU diary" and answer any questions they have about their care. This can help them make sense of their experience and reduce distress around gaps in their recall.
- Provide verbal and written information about common psychological reactions during and after critical care, including PTSD and delirium if relevant. Offer advice on helpful coping and encourage people to share this information with, and seek the support of, friends and family. Provide contact information for relevant charities and service-user groups, such as ICU Steps.
- Reassure people that psychological difficulties will often improve naturally, and equally that there are effective psychological treatments if they do not. Introduce the screen-and-treat programme. Highlight the benefits of engaging with the active monitoring component to provide a "safety net" around emerging difficulties, and help direct the person to appropriate treatment as required.
- Re-administer a clinical assessment for acute distress reactions, including a brief screening instrument such as the IPAT. Use this to identify those patients at highest risk of future mental health problems, and prioritise them for early follow-up screening.

SCREENING, ACTIVE MONITORING AND TREATMENT

Ideally four weeks after discharge from hospital, complete a structured mental health assessment using established screening tools for depression (PHQ-9), anxiety (GAD-7), PTSD (TSQ), cognitive (MoCA) and health-related impairment (SF-12, WSAS):

- Invite relatives to take part and offer them screening assessments to identify any symptoms arising from psychological trauma. At the minimum, provide them with self-screening questionnaires alongside information about common psychological reactions and self-referral pathways for accessing support.
- Establish the trajectory of people's psychological symptoms after discharge from hospital. Where there are significantly distressing symptoms, collaboratively agree whether to refer for evidence-based psychological interventions immediately or to continue actively monitoring symptoms with the hope that recovery will occur naturally.
- Ask people about new losses or stressors since discharge. These may include having loved ones who have contracted COVID, new bereavements, and job or income loss.
- Offer everyone structured rehabilitation and guided self-management interventions for symptoms of breathlessness and tiredness, to support them in resuming normal activities and to help compensate for cognitive difficulties. Consider providing both as written and video formats to improve accessibility.
- Refer those with clinically significant mood, anxiety, PTSD or other psychological symptoms on for specialist mental health assessment and evidence-based treatment. If possible offer treatments within the screening service and as soon as practical, in order to improve continuity of care and limit the impact of mental health difficulties on physical recovery.
- Refer people presenting with significant and/or enduring cognitive impairment for neurological examination, comprehensive neuropsychological and/or neuropsychiatric assessment, and cognitive remediation therapy.
- Offer subsequent active monitoring assessments every 3 months, at least for the first year. This will help to determine if symptoms have resolved naturally and guard against delayed-onset difficulties. Avoid giving the message that the support is time limited (although a set period of funding may need to be agreed).
- Offer video or phone sessions for patients who cannot attend appointments in person, especially if they have ongoing health problems or disability. Be aware that clinical settings and reminders, such as ID badges, may elicit distress or trigger symptoms of PTSD. Encourage people to use "here and now" grounding objects or reminders to facilitate your interactions, such as recent photos, calming scents or unusual objects not found in critical care settings.
- Promote patient choice in terms of type and setting of treatment. Be aware that some may prefer to take medication or to seek treatment elsewhere. Consider providing BAME specific mental health services and ensure equity of access by routinely offering interpreters and translated materials where needed.
- Psychological treatments may need to be adapted for the complexities of the critical care experience, the interaction of psychological and physical symptoms, and to support adjustment to long-term health consequences. This may require enhanced supervision and training clinicians delivering treatments.
- Consider community engagement in order to ensure equity of access for BAME people and others who may be disadvantaged by disability or social circumstance. Where necessary adapt psychological treatments to people's experiences, needs and preferences.

- Encourage self-monitoring and offer self-referral information at each stage of the active monitoring process in case people want to seek help between assessments.
- Offer, or help people to access, peer support groups for those affected by COVID-19 illness. Peer support groups should be facilitated by people with mental health training and supervision and should also provide information and help to access services.

AVOID

- Do not offer single session individual or group psychological debriefing in hospital or after discharge. Do not offer other psychological interventions that lack an evidence base for the identified problem or need.
- Do not assume people's mental health needs or trajectories based on point-in-time assessments. Problems can emerge or develop over time, and there can be interactions with physical and social comorbidities.

ABOUT THE COVID TRAUMA RESPONSE WORKING GROUP

The COVID Trauma Response Working Group has been formed to help coordinate trauma-informed responses to the COVID outbreak. We are made of psychological trauma specialists, coordinators of the psychosocial response to trauma and wellbeing leads at NHS Trusts. The working group is being coordinated by staff at University College London and the Traumatic Stress Clinic based at St Pancras Hospital in Camden and Islington NHS Trust. We are very grateful to our clinical and scientific colleagues in other NHS trusts and universities who are contributing to this work. We hope that this work is helpful to our colleagues involved in the care of patients affected by the COVID pandemic.

AUTHORS

Dr Sharif El-Leithy - Traumatic Stress Service, South West London & St George's Mental Health NHS Trust
 Dr Idit Albert – South London & Maudsley London NHS Trust and Kings College London
 Dr Jo Billings, University College London
 Jennifer Birch - University of East Anglia, Norfolk and Norwich University Hospitals NHS Foundation Trust
 Dr Mary Robertson - Traumatic Stress Clinic, Camden & Islington NHS Foundation Trust
 Prof Chris Brewin – University College London
 Dr Kim Ehntholt - Traumatic Stress Clinic, Camden & Islington NHS Foundation Trust
 Dr Lorna Fortune – North Middlesex University Hospital and Barnet, Enfield & Haringey NHS Trust
 Dr Talya Greene - University College London and University of Haifa
 Dr Nick Grey - Sussex Partnership NHS Foundation Trust and University of Sussex
 Dr Laurine Hanna - Camden & Islington NHS Foundation Trust and University College London Hospitals NHS Trust
 Dr Helen Kennerley – Oxford Cognitive Therapy Centre and University of Oxford
 Dr Deborah Lee - Berkshire Healthcare NHS Foundation Trust
 Dr Dorothy Wade - University College London Hospitals NHS Trust
 Dr Michael Bloomfield - Traumatic Stress Clinic, Camden & Islington NHS Foundation Trust, University College London

AUTHOR CONTRIBUTIONS AND METHODS

An iterative approach was adopted to develop these guidelines. An initial version of the guidance was developed by a multidisciplinary working group comprised of clinically practicing and academic clinical psychologists and psychiatrists (SE-L, JeB, JoB, TG, MB). Meetings were held via video-conference to discuss the draft until consensus was achieved. The document was then augmented and reviewed by the Trauma Response Working Group by video-conference, with additional written consultation from clinicians with expertise in Liaison Psychiatry (LH) and Critical Care Health Psychology (DW). The revised guidance was circulated to the working group members and discussed via video-conference for further input and refinement. Finally, consensus was reached regarding this publication through review by all authors.

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