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Psychology support for COVID-19 patients in ICU and beyond

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1.0 The impact of COVID-19 on ICU patients' psychology and cognition

The anticipated psychological needs of critically ill COVID-19 patients are informed by clinical expertise from psychologists working in intensive care and rehabilitation, relevant COVID guidelines and the existing evidence-base regarding the known impact of an ICU admission and previous pandemics.

We are aware that the impact of COVID is likely to be wide-reaching. We anticipate psychological, cognitive, physical and socioeconomic effects that are likely to lead to long-term biopsychosocial rehabilitation needs and adjustment difficulties that if left unaddressed risk long term disability (British Society of Rehabilitation Medicine, 2020).

Regarding the known psychological impact of an admission to critical care, studies suggest that more than 50% of post ICU patients may develop symptoms of severe anxiety, depression or post-traumatic stress disorder in the months or years after leaving critical care (Wade et al., 2012; Hatch et al. 2018). Of note, patients with post-ICU traumatic stress symptoms may experience flashbacks and intrusive memories of delusional/hallucinatory episodes from delirium, as well as actual events experienced within the ICU (Jones et al., 2007; Wade et al., 2015d). It can be hypothesised that delirium experiences may be exacerbated in patients with COVID-19 due to the experience of receiving care from staff in PPE, undergoing prolonged ventilation, sedation, proning and paralysis (including awake paralysis), isolation from relatives, rapid transfers, an unstable physical picture (Koftis et al, 2020, and therefore we may see higher rates of psychological distress and persistent cognitive impairment in this cohort. Studies from other pandemics (e.g. MERS, SARS) suggest that health anxiety, chronic fatigue and fear of stigma and contamination are also prevalent in severely ill patients (e.g. Gardner & Moaleff, 2015). On the other hand, the level of social support within communities, the shared experience of the COVID-19 outbreak and the possibility that critically ill COVID-19 patients will have anticipated a hospital admission in the preceding hours/days may constitute valuable protective factors.

Increasing evidence shows that coronaviruses are not always confined to the respiratory tract and that they may also invade the central nervous system inducing neurological diseases & therefore patients are likely to experience cognitive impairments related to the direct effects of the virus, in addition to the iatrogenic effects of an ICU stay. In a retrospective case series of 214 patients with COVID-19, 36.4% (78 patients) had neurological manifestations, and these were more prevalent in more severe infections (Mao, 2020). In a prospective study, ischaemic stroke was diagnosed in 9 (2.5%) of included patients (Lodigiani, 2020).

Pre-COVID, a large prospective study of patients admitted to critical care demonstrated that after 12 months, approximately one quarter of patients had a significant cognitive impairment (Prandharipande et al., 2013), with length of delirium being a well-established risk factor (Rengel et al., 2019) for long-term cognitive impairment. The majority of people discharged from critical care experience a reduction in employment after 12 months and a risk factor employment status at 12 months is cognitive function (Norman et al., 2016).

The British Psychological Society' s(BPS) recent guidance on the psychological needs of patients with severe COVID-19 disease supports the position that common psychological and cognitive comorbidities associated with an ICU admission remain relevant (British Psychological Society, 2020). The BPS guidance additionally highlights the potential for long term respiratory problems and associated fatigue, which are both likely to have an impact on psychological and cognitive rehabilitation.

The BPS states:

"The psychological, functional and physical aspects of patients recovering from coronavirus infection should be considered together (biopsychosocial model). Looking at any of them in isolation risks poorer outcomes and inappropriate treatment. It is well known that psychological factors have an effect on morbidity and mortality outcomes of many health conditions."

Both psychological health difficulties and cognitive impairment are important domains of post-intensive care syndrome (Needham et al., 2012) along with the third domain of physical deficits. Hence there is a clear need for a multi-disciplinary team (MDT) approach in providing care for our COVID cohort.

2.0 Existing guidance

National Institute for Health and Care Excellence (NICE) guidelines recommend that critical care patients suffering acute stress should be identified and offered psychological support as part of their structured rehabilitation plan (National Institute of Clinical Excellence, 2009). A 2017 NICE quality standard was implemented to strengthen these requirements (National Institute of Clinical Excellence, 2017).

The Intensive Care Society's GPICS-2 (Faculty for Intensive Care Medicine, 2019) now recommends that ***all*** critical care units should have a practitioner psychologist to coordinate psychological assessments and interventions and a growing number of these expert staff have been employed. For some services, psychologists are integrated into critical care teams and available to both inpatient and follow-up services. In some circumstances they can offer ongoing psychological interventions. **This is not consistent across ICUs and requires urgent addressing.** NICE Guidance CG83 recommends a multidisciplinary follow-up clinic for patients post ICU - a recommendation further supported in the GPICs-V2, which supports the provision of trained practitioner psychologists to provide psychological interventions to patients following discharge.

Some respiratory teams (acute and community) and pulmonary rehabilitation services may have psychology services, where some of these patients may be referred or supported within an MDT context. However, uptake of pulmonary rehabilitation can be poor. A recent document reviewing the utility of psychologists in respiratory rehabilitation indicates once again that an embedded psychology presence has individual, system and economic benefits (London Respiratory Network, 2016).

More generally, rehabilitation whether delivered locally through community teams or within specialist rehabilitation services requires a multi-disciplinary approach, which addresses psychological as well as physical needs (BSRM, 2020). Furthermore, patients with complex neuro-rehabilitation needs require early identification of these needs, which include cognitive and neuro-behavioural impairments. Therefore, practitioner psychologists are highlighted as a crucial member of the rehabilitation team from the ICU to community services.

2.1 Screening tools

It is recommended that ward or early discharge assessment includes brief screening for the following elements. These are also recommended in the BPS guidelines

Minimum recommended screening set	
Construct	**Screening measure**
Anxiety	Generalised Anxiety Disorder (GAD-7)
Depression	Patient Health Questionnaire (PHQ-9)
Post-traumatic Stress Symptoms	Trauma Screening Questionnaire (TSQ)
Cognitive difficulties	MOCA or ACE-III
Supplementary domains for screening	
Daily routines including sleep/wake routine (Consider the WHO Disability Assessment Schedule 2)	
Evidence of returning to normal activities	
Impact on family or other social relationships	
Other disorder specific measures as clinically indicated	

Given that screening tools are designed to be over-inclusive they are likely to elicit false positives; of course, this risk increases with multiple screens. We therefore recommend:

- Services coordinate so screening results can be shared within a collaborative pathway, to avoid unnecessary repetition, risk of error and sub-optimal use of resources. This will be more likely if services use the same screening tools in a unified way
- A cautious approach to completing screening tools over video or telephone calls, due to the possibility that doing so threatens the validity of the screen (particularly relevant to cognitive screens)
- Any issues flagged by screening need to be acted upon including onward referral and clinical discussion as relevant

3.0 Recommendations for practice

3.1 Short Term (first 0-3 months)

Within this time bracket, we would suggest watchful waiting approach with ongoing psychological support when concerns regarding psychological and cognitive functioning are identified, in line with existing national guidelines. Recent guidance regarding the assessment and treatment of Post-Traumatic Stress Disorder (PTSD) supports early identification, monitoring and treatment for adults with clinically significant symptoms (National Institute of Clinical Excellence, 2018). However, these patients may have complex multifaceted unmet needs and will potentially need case-by-case consideration.

Regarding the impact of psychological trauma, we know that most patients are inherently resourceful, and the majority will recover without formal psychological therapies.

Conversely, early detection of cognitive impairments will facilitate identification of those requiring specialist neurorehabilitation.

We recommend:

Intervention: patient/family

- Psycho-education, information and advice to patients and families. E.g. ICU Steps, ICS COVID psychology documents, delirium education
- Utilising basic Psychological First Aid principles. E.g. promoting safety, calm, self-efficacy, connectedness and hope (COVID Trauma Response Working Group, 2020)
- Early screening should be completed during ICU admission. E.g. CAM-ICU Intensive Care Psychological Assessment Tool (IPAT; Wade et al., 2014).
- Ongoing delirium monitoring and management during hospital admission. There is early clinical evidence emerging that severe COVID-19 is characterised by intense/and or extended delirium. There may be other local variations that may be impacting this).
- Early screening following discharge for cognitive impairments (e.g. MoCA or ACE-III) to facilitate psycho-education for patient and family and identification of patients who require a referral to a specialist neuro-rehabilitation service. Given the range of barrier to cognitive functioning during hospital admission (pain, anxiety, delirium, sleep deprivation, sedative medication, environmental factors) we strongly recommend caution when interpreting cognitive screens administered during an inpatient admission.

Intervention: system

- Psycho-education, information, training for professionals involved in on-going care. E.g. ICS COVID psychology documents, delirium training
- Awareness that PPE is a barrier to effective communication and assessment
- Trained psychologists providing consultation to the MDT management and a psychologically informed ICU/ ward environment
- Workforce requirement: An embedded ICU Psychologist, available to assess (or supervise/organise the assessment of) patients within the ICU and upon step-down to the ward.

3.2 Medium-term (3-12 months after ICU)

Intervention: patient/family

- Planned review, as per standard critical care recommendations, at MDT Critical Care follow up clinic. Expert psychological facilitation may be required to support a return to the ICU unit and or return of an ICU diary, to optimise impact and reduce potential for re-traumatisation
- Screening of mood, trauma, cognition and adjustment; screening tools should be consistent across every stage, but bespoke measures should be used where required and delivered by a Practitioner Psychologist
- Referrals and treatment for evidence based psychological interventions for e.g. mood, trauma, fatigue, delivered by trained psychological professionals
- Screening for persisting cognitive impairments, with referral for neuropsychological assessment and rehabilitation in those presenting with significant impairments
- Raise awareness of unique, perhaps complex family experiences, e.g. bereavements within families from the same illness, survivor guilt. This may allow signposting to community services such as bereavement counselling, local mental health services, ICU steps, etc.
- Consider providing bereavement clinics, run by a highly skilled MDT. This offers family members the opportunity to make sense of what happened to their deceased loved one during their critical care admission and have the opportunity to have questions answered.
- Families may have been unable to retain the information they were given by medical teams during their relative's admission.
- Given the homogeneity of the group, it may be feasible to run a group session to signpost to wider services, connect patients and families with shared experiences.

Intervention: system

- Consultation and training for internal and external services to promote awareness and early identification of patient/ family needs. E.g. primary care

3.3 Long term (>12 months after ICU)

Intervention: patient/family

- Recovery and rehabilitation progress will require close monitoring by primary care services and onward referrals to appropriate psychological services or further rehabilitation teams when required (London Respiratory Network, 2016). Service availability will vary by area; possible services might include psychology services embedded within local pulmonary rehabilitation teams, general clinical health psychology teams within acute Trusts, community mental health recovery teams and IAPT long term condition services.
- Delayed trauma response and unresolved health needs may have significant psychological impacts at this stage. It will be important to monitor psychological risk factors (e.g. isolation, withdrawal, hopelessness) and to involve urgent psychiatric/psychological services when required. Best practice involves awareness that an initial negative screen does not indicate the absence of risk and avoidance of the message that support is time limited. We concur with other guidance recommending screening for anxiety, depression and PTSD at three month intervals during the first year following discharge (COVID Trauma Response Working Group Rapid Guidance, 2020).
- In addition to post-traumatic symptoms, some patients will experience significant anxiety and/or depression or anger that will impact on their recovery. Prevalence of psychological adjustment issues in other diseases is 30-40% (cardiac/oncology). The evidence from SARS suggests that at 1-year 26% of patients had not returned to work.
- Broader issues may need to be supported by community teams/ social/ welfare care systems e.g. Social issues, disability concerns, and financial issues, return to work relationship difficulties (including intimate).

Intervention: system

- Closer working relationships between psychologists working across acute, community and social care settings, to compliment MDT approach to rehabilitation
- Patients in need can be linked to local services such as the Citizens Advice Bureau or legal support structures to support financial, social, housing and benefits concerns that might otherwise impact on physical/psychological recovery and the likelihood of return to work.

4.0 Recommendations for the wider system

This care requirement is not novel. We believe the PINC-UK model of integrated professional Psychologists in critical care teams and ICU follow up services is essential for the care and rehabilitation of both COVID and non-COVID patients.

Practitioner Psychologists take a biopsychosocial approach to assessment and provide a formulation driven approach to understand the patient/family/staff need. However, this needs to be integrated in the context of a well-functioning and funded MDT

There is likely to be a drive for recruitment for psychologists in ICU; however, this is still a specialist area. PINC-UK is available as a body of established ICU psychology expertise to lead, develop, support and supervise this initiative.

In order to develop and provide appropriate and equitable services for ICU patients, with regards to their psychological and cognitive rehabilitation, we would suggest the following:

- A UK wide training package for ICUs in assessing psychological distress and delirium led by PINC-UK with the ICS and associated members
- A UK wide training package for post ICU step down wards to manage delirium
- GP training for Post Intensive Care Syndrome
- Clear links to 3rd sector such as ICU Steps for patient education and support
- Investment in embedded ICU psychology services, which include scope to offer specialist outpatient follow up services (including contributing to ICU follow-up clinics and the provision of outpatient psychological therapies adapted to patients with difficulties associated with PICS when required).
- Additional, broader outpatient resources in psychological therapy services for traumatic hospital stay delivered by specialist psychological therapists
- Making use of new technologies and telehealth
- Consider family inclusion in follow up clinics
- Work with hospital/ community bereavement services and offer ad hoc bereavement review sessions to help make families make sense of their relative's ICU admission

In order to improve and monitor rehabilitation in a comprehensive manner, we would also support the development of the following:

- Investment in psychology services within the wider rehabilitation network (e.g. cardiac, pulmonary and neuro-rehabilitation services)
- Investment in training for staff and broader expertise in managing traumatic impacts of working in healthcare.
- Primary care education focusing on the complex, multifaceted physical, cognitive and psychological issues that might arise from a critical care admission
- Increased collaboration between ICU and mental health teams to understand the nature of PICS and how best to deliver in evidence-based practice

References

1. COVID Trauma Response Working Group Rapid Guidance. (2020). 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
2. Gardner, P. J., & Moallef, P. (2015). Psychological impact on SARS survivors: Critical review of the English language literature. *Canadian Psychology/Psychologie canadienne, 56*(1), 123-135. http://dx.doi.org/10.1037/a0037973
3. Needham DM, Davidson J, Cohen H, Hopkins RO, Weinart C, Wunsch H, et al. Improving long-term outcomes after discharge from intensive care unit: report from a stakeholders' conference. Critical Care Medicine 2012 Feb;40(2):502-9
4. Norman, B. C., Jackson, J. C., Graves, J. A., et al. (2016). Employment Outcomes after Critical Illness: An analysis of the BRAIN-ICU Cohort. *Critical Care Medicine, 44 (11)*, 2003-2009
5. Pandharipande PP, Girard TD, Jackson JC, et al. Long-term cognitive impairment after critical illness. *N Engl J Med*. 2013;369(14):1306-1316. doi:10.1056/NEJMoa1301372
6. Rengel, Kimberly F. MD; Hayhurst, Christina J. MD; Pandharipande, Pratik P. MD; Hughes, Christopher G. MD Long-term Cognitive and Functional Impairments After Critical Illness, Anesthesia & Analgesia: April 2019 - Volume 128 - Issue 4 - p 772-780. doi: 10.1213/ANE.0000000000004066
7. Wade DM, Howell DC, Weinman JA, Hardy RJ, Mythen MG, Brewin CR, et al. Investigating risk factors for psychological morbidity three months after intensive care: a prospective cohort study. Critical care2012 Oct;16(5): R192
8. Wade DM, Brewin CR, Howell DC, White E, Mythen MG, Weinmart JA. Intrusive memories of hallucinations and delusions in traumatized intensive care patients: An interview study. Br J Health Psychol. 2015 Sept; 20(3): 613-631
9. Wade DM, Hankins M, Smyth DA, Rhone EE, Mythen MG, Howell DC, et al. Detecting acute distress and risk of future psychological morbidity in critically ill patients: validation of the intensive care psychological assessment tool. Crit Care. 2014 Sept; 18(5):519