

## Identification of post-traumatic stress disorder following ICU

### INTRODUCTION

At least 270 000 patients are admitted to intensive care units (ICUs) each year,<sup>1</sup> and up to 27% of these develop post-ICU post-traumatic stress disorder (PTSD).<sup>2</sup> This may be due to a variety of factors resulting in cumulative stress and trauma: fear of dying, invasive treatment, pain, delirium, inability to communicate, provision and withdrawal of sedation, experience of physical illness, immobility, and sensory and sleep deprivation.<sup>2,3</sup> Patients' families are also at risk of developing PTSD. One study suggested that the risk was as high as 33% for a family member with the main decision-making role,<sup>4</sup> and this risk was increased when incomplete information was provided to family members, when the relative died on ICU, and when they were closely involved in management and end-of-life decisions (the latter could be because relatives felt more responsible for their family member's management and therefore implicated in a negative outcome).

There is evidence that PTSD following traumatic experiences results in impaired daily functioning and reduced life course opportunities.<sup>5</sup> In addition to an ICU admission, other traumatic experiences may include road traffic accidents, assaults, and domestic violence, all of which GPs will encounter regularly. PTSD is also associated with high levels of disability, including up to 3.6 days of work lost per person per month, and annual lost productivity due to PTSD is estimated at over \$3 billion in the US alone.<sup>5</sup>

Specialists in intensive care medicine typically focus on the prevention of short-term mortality and the improvement in the patient's physical health. However, the intense focus on physical improvement can inadvertently result in neglect of the patient's mental wellbeing, particularly in patients who have a long ICU stay. Even once discharged from ICU, psychological support can be forgotten with a focus on the patient's physical rehabilitation and recovery in hospital before discharge. As GPs care for their patients over many years, they may be best able to identify

psychological distress in patients who have been discharged following an ICU admission, and in their families. However, most GPs will likely have very little exposure to this patient population each year in the context of primary care.

### SYMPTOMS AND RISK FACTORS

Box 1 illustrates the classical symptoms of PTSD. Some patients can experience these for many months after discharge, and qualitative research shows that content merges factual memories such as pain and bleeding with hallucinatory or delusional memories involving perceived persecution, aliens, torture, and conspiracy.<sup>6</sup> It is unclear which aspects of intensive care are most traumatising, but clinical risk factors include the use of benzodiazepines, duration of sedation, and mechanical ventilation, whereas psychological risk factors include a prior psychiatric history, experiencing hallucinations or delusions in intensive care, and memory or cognitive disturbance.<sup>2,6,7</sup>

Drawing on the experience of Taylor, Krige, and Fothergill, the authors wanted to highlight patient experiences that could inform post-ICU discharge care. Some patients, in a post-ICU clinic in North West England, describe detailed and complex delusions involving being moved around in a shopping trolley, being in a war zone, being in a coffin, and

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### Box 1. Characteristic symptoms of PTSD<sup>8</sup>

- Intrusive memories, which are emotionally arousing memories intruding into patients' minds.
- Feelings of panic and fear.
- Hyperarousal.
- Flashbacks or vivid reliving of trauma.
- Avoidance of situations that might trigger PTSD.
- Emotional numbing.
- Physical symptoms, including headache, dizziness, pain, sweating, trembling.

## REFERENCES

1. NHS Digital. *Hospital adult critical care activity 2015–16*. 2017. <https://www.gov.uk/government/statistics/hospital-adult-critical-care-activity-april-2015-to-march-2016> [accessed 28 Jan 2019].
2. Wade D, Hardy R, Howell D, Mythen M. Identifying clinical and acute psychological risk factors for PTSD after critical care: a systematic review. *Minerva Anestesiol* 2013; **79**(8): 944–963.
3. Jones C, Bäckman C, Capuzzo M, *et al*. Precipitants of post-traumatic stress disorder following intensive care: a hypothesis generating study of diversity in care. *Intensive Care Med* 2007; **33**(6): 978–985.
4. Azoulay E, Pochard F, Kentish-Barnes N, *et al*. Risk of post-traumatic stress symptoms in family members of intensive care unit patients. *Am J Respir Crit Care Med* 2005; **171**(9): 987–994.
5. Magruder KM, McLaughlin KA, Elmore Borbon DL. Trauma is a public health issue. *Eur J Psychotraumatol* 2017; **8**(1): 1375338.
6. Wade DM, Brewin CR, Howell DC, *et al*. Intrusive memories of hallucinations and delusions in traumatized intensive care patients: an interview study. *Br J Health Psychol* 2015; **20**(3): 613–631.
7. Ringdal M, Johansson L, Lundberg D, Bergbom I. Delusional memories from the intensive care unit — experienced by patients with physical trauma. *Intensive Crit Care Nurs* 2006; **22**(6): 346–354.
8. Brewin CR, Gregory JD, Lipton M, Burgess N. Intrusive images in psychological disorders: characteristics, neural mechanisms, and treatment implications. *Psychol Rev* 2010; **117**(1): 210–232.
9. Prinjha S, Field K, Rowan K. What patients think about ICU follow-up services: a qualitative study. *Crit Care* 2009; **13**(2): R46.
10. National Institute for Health and Care Excellence. *Development of a multidisciplinary post critical care clinic at Guy's and St Thomas' NHS Foundation Trust*. 2017. <https://www.nice.org.uk/sharedlearning/development-of-a-multidisciplinary-post-critical-care-clinic-at-guy-s-st-thomas-nhs-foundation-trust> [accessed 28 Jan 2019].
11. Jones C, Bäckman C, Capuzzo M, *et al*. Intensive care diaries reduce new onset post traumatic stress disorder following critical illness: a randomised, controlled trial. *Crit Care* 2010; **14**(5): R168.

## Patient consent

Patient consent for publication has been given.

## Competing interests

The authors have declared no competing interests.

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seeing people violently killed including family and friends. Some patients report night terrors following discharge, sometimes experiencing terrifying dreams multiple times per night; one patient describes keeping clothes folded and shoes ready on his bed so that he can put them on and run before 'they' come and kill him.

Previous qualitative research has shown that 60% of patients wanted professional help to manage their intrusive memories, had either sought help already or planned to access it in the future, and felt abandoned without an opportunity to get more information.<sup>6</sup> Patients attending a post-ICU clinic reported valuing the follow-up as contributing to their physical, emotional, and psychological recovery.<sup>9</sup> It enabled continuity of care, offered them the opportunity to ask questions and make sense of what happened to them on ICU, and enabled them to talk about difficulties since discharge. They could then be referred to other services, including mental health services such as the community crisis team. Few patients mentioned seeing their GP for help; those who did felt that their GP had little knowledge or understanding of their ICU stay and could not answer questions about it, although a small number said that their GP referred them for counselling. This corresponds with the authors' experience of patients: notes reviewed from the authors' post-ICU clinic suggest that, despite some patients experiencing extremely distressing symptoms, they had not been to see their GP, stating that they 'don't want to trouble anyone'.

## POST-ICU CLINICS AND THE GP'S ROLE

The existence of post-ICU clinics offers opportunities for collaborative care working between primary and secondary care. The National Institute for Health and Care Excellence has published a learning case from Guys' and St Thomas' NHS Foundation Trust<sup>10</sup> that describes their successful development and integration of a post-ICU clinic model. The clinical team includes a critical care consultant, critical care nurse, physiotherapist, occupational therapist, psychologist, neuropsychiatrist, dietician, pharmacist, and nursing assistant. Although the patient's own GP is not a participant in the clinic itself, the clinical team aims to utilise both primary and secondary care to accelerate recovery, and ensure liaison with GPs so that GPs have good knowledge of what happened to their patient during their ICU stay.

On discharge from hospital, the authors would suggest that GPs should consider proactively inviting a patient who has had

an ICU admission to a consultation in order to discuss their experience and probe for PTSD symptoms. ICU discharge summaries describing the patient's stay should be forwarded to GPs for their information, so that they understand what has happened to the patient in more detail. Acting proactively, although it may initially increase the GP's workload, may prevent development of more severe symptoms and reduce the longer-term burden on the GP as well as the patient.

In addition to reviewing discharge paperwork that details some of the medical interventions, ICU diaries have been shown to be beneficial in reducing the incidence of PTSD, possibly through enabling patients to fill in the narrative of what has happened to them.<sup>11</sup> GPs should ask their patients what they remember of their ICU admission, and whether they have ongoing distressing memories. If an ICU diary has been completed, GPs should review it with the patient and help them to contextualise what happened to them, if the patient feels this would be beneficial. This is particularly important in areas that do not have post-ICU clinics or other forms of follow-up after ICU admission. GPs can offer signposting to mental health services and helplines, and give patients the opportunity to talk about the psychological impact of their experience. GPs can also recommend the intensive care support charity ICUsteps (<http://www.icusteps.org>) to patients, which provides local support groups and resources for patients and relatives (adults and children) about the intensive care environment and what to expect after leaving the unit, including physical and psychological challenges.

Post-ICU clinics should be funded by clinical commissioning groups and encouraged to take a multidisciplinary approach, including liaison with the patient's GP, particularly if the patient is felt to be at risk due to psychological distress. However, funding remains an ongoing challenge, and many hospitals lack capacity to meet the needs of patients, so GPs may be required to manage a shortfall of people who are unable to access clinics. In areas where there are no post-ICU clinics the authors suggest that GPs help patients to contact ICUs, requesting a visit and a meeting with an ICU consultant in order to gain information about what happened during their admission. Liaison between primary and secondary care, and ongoing input from GPs, are likely to be of significant benefit to patients, and may reduce the personal and public health impact of PTSD following ICU admission.

## Provenance

Freely submitted; externally peer reviewed.