



## What is Medical Trauma?

### Overview

- ✓ Medical trauma is defined as a set of psychological and physiological responses to pain, injury, serious illness, medical procedures and frightening treatment experiences.<sup>1</sup>
- ✓ Medical trauma can be viewed as an acute onset of a disrupted physiological system in which the ongoing threat is internal (i.e., the body) and may be long term or permanent (e.g., cancer treatment).<sup>2</sup> This differs from an external trauma (e.g., car accident) where once the event ends, the external threat ends.

### What Aspects of Medical Events Might Be Psychologically Distressing?

- ✓ The nature of the illness or injury (e.g., sudden, life-threatening)<sup>3</sup> and related treatment (e.g., intubation).<sup>4,5</sup>
- ✓ Shock and loss of sense of control associated with diagnosis.<sup>3,6,7</sup>
- ✓ Life-altering complications or unexpected medical intervention (e.g., emergency cesarean section).<sup>8</sup>
- ✓ Conditions of hospital environment (e.g., constant noise, frequent medical checks, sleep disruption).<sup>9</sup>
- ✓ Hallucinations caused by delirium (e.g., belief that staff are torturing patient).<sup>9,10</sup>
- ✓ Perceived or actual mistreatment by medical providers (e.g., forced to receive unwanted intervention).<sup>9,11</sup>

### Medical Events and PTSD

- ✓ Per the *Diagnostic Statistical Manual (DSM-5)*, medical events must be “sudden, catastrophic events” to qualify as traumatic events and therefore qualify for a diagnosis of PTSD.<sup>12</sup>
- ✓ Posttraumatic stress symptoms related to medical events, regardless of PTSD diagnostic status, have been found to be related to psychosocial outcomes.<sup>13</sup>
- ✓ Conceptual models including the Integrative Trajectory Model of Pediatric Medical Traumatic Stress<sup>1,14</sup> and the Enduring Somatic Threat model<sup>2</sup> have been developed to understand the unique psychological features of medical trauma that may not be captured by a PTSD diagnosis.

### What Are the Symptoms of PTSD Resulting From Medical Trauma?

- ✓ Posttraumatic stress symptoms after medical trauma may present as:
  - Persistent intrusive thoughts or memories of aspects of the medical event (e.g., replaying the memory of getting the diagnosis).<sup>6</sup>
  - Significant distress when confronted with reminders of the medical trauma (e.g., medical appointments).
  - Disruptions in treatment adherence due to trauma-related avoidance.<sup>9</sup>
  - Overutilization of health care (e.g., health-related checking behaviors) related to hypervigilance.<sup>3,9,15</sup>





## How Common is PTSD Following Medical Trauma?

It is common and expected for patients to have some difficult reactions in the days or weeks following a medical trauma. These reactions will naturally decrease over time for most patients.

**Children and Adolescents.** An estimated 80% of ill or injured children and their families experience some traumatic stress reactions following a medical trauma. Between 20-30% of parents and 15-25% of children experience persistent traumatic stress.<sup>1</sup>

**Adults.** Among adults, estimates of traumatic stress reactions vary depending on the type of event. Approximately one-third of traumatically injured patients experience PTSD or depression symptoms post-injury.<sup>16</sup> Approximately 20-30% of ICU patients experience PTSD symptoms.<sup>9</sup>

## How can PTSD Resulting from Medical Trauma be Addressed?

- ✓ Treatment for PTSD resulting from medical trauma should incorporate the same elements used in gold-standard PTSD treatments. Specific areas of focus may include:
  - In behavioral therapies, identifying and processing sensory memories (i.e., re-experiencing of physical sensations not clearly associated with a memory).<sup>9</sup>
  - In cognitive therapies, addressing appraisals related to changes to the body and physical ability, missed developmental milestones, identity and role disruptions, occupational functioning and changes in interpersonal functioning.<sup>7,9</sup>
  - Integration of health and rehabilitation psychology principles such as:
    - Pain management strategies to accommodate new or exacerbated pain.
    - Expectation management strategies in collaboration with other providers (e.g., education, normalization) to support adjustment.
- ✓ The nature of medical trauma provides a unique opportunity for implementation of system-level prevention, assessment and early-intervention programs.
  - Trauma-informed care (i.e., acknowledgement of medical trauma and incorporation of knowledge into organizational culture, policies and procedures) may reduce risk for development of PTSD following medical trauma.<sup>17</sup>
  - Integrated behavioral health teams in medical care settings may help to minimize medical trauma or increase access to early intervention for PTSD related to medical trauma.<sup>6,13,18-20</sup>

## For further information check out:

- [Pediatric Medical Traumatic Stress Toolkit for Healthcare Providers](#) developed by the National Child Traumatic Stress Network for assessment tools and comprehensive treatment considerations.
- [Oxford Centre for Anxiety Disorders and Trauma](#)'s Post-ICU PTSD Therapist Guide for treatment considerations unique to the experience of the ICU.
- [Managing the Psychological Impact of Medical Trauma](#) by Flaum Hall and Hall for a comprehensive overview of medical trauma and its consequences in adults.

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