

Meadows Mental Health Policy Institute

Hurricane / Tropical Storm Harvey Impact on Child and Youth Mental Health

Hurricanes and other natural disasters can have long and harmful effects on the mental health of children, youth, and adults.^{1,2} Based on the latest epidemiological research on the effects of disasters on mental health, the Meadows Mental Health Policy Institute (MMHPI) has estimated that we should expect to see significantly higher rates of posttraumatic stress disorder (PTSD) and other mental illnesses for children and youth in the Harvey-affected regions, with dramatically higher rates in those that experienced the most destruction.

Unfortunately, most of the research on the rates of mental health needs following hurricanes has been based on Hurricane Katrina and other severe events. While, in many ways, the scope of overall destruction was comparable between Harvey and Katrina, there were also important differences (such as a much higher loss of life in Katrina). So, we primarily have worse case estimates that likely do not apply to some subset of the Harvey-affected areas. Some regions may see similar rates of increased mental health concerns, but others likely will see lower rates of increase.

Regardless of the level of destruction in a specific community, we expect to see a similar pattern of increasing rates of mental health needs over time. Post-Harvey, we expect rates to begin to increase 60 to 90 days after the hurricane, and then, in the absence of an assertive, coordinated effort to respond quickly to these mental health needs, to progress as follows:

- For children and youth, needs could continue to build to a peak at around 18 months, then slowly reduce after 24 months, although the exact timing can depend on the particular mental health condition.³
- The increased prevalence of serious/severe needs would be primarily driven by a worsening of baseline symptoms for existing cases, not necessarily increases in new cases. In the worst affected areas, new cases will increase by about 20%,⁴ but rates of

¹ McLaughlin, K. A., Fairbank, J.A., Gruber, M.J., Jones, R.T., Lakoma, M.D., et al. (2009). Serious emotional disturbance among youth exposed to Hurricane Katrina two years post-disaster. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48(11), 1069-1078.

² Kessler, R. C., Galea, S., Gruber, M. J., Sampson, N. A., Ursano, R. J., & Wessely, S. (2008). Trends in mental illness and suicidality after Hurricane Katrina. *Molecular Psychiatry*, 13(4), 374–384.

³ Weems, C. F., & Graham, R. A. (2014). Resilience and trajectories of posttraumatic stress among youth exposed to disaster. *Journal of Child and Adolescent Psychopharmacology*, 24(1), 2–8. Marsee, M. A. (2008). Reactive aggression and posttraumatic stress in adolescents affected by Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology*, 37(3), 519–529. McLaughlin, K. A. et al. 2009, cited above.

⁴ The approximately 20% increase is a general estimate that is based on pre-hurricane estimates from the National Comorbidity Survey Replication – Adolescent Version (Kessler et al., 2010) and post-hurricane estimates of non-severe PTSD in children and youth, as well as the pattern of changes in all disorders among adults.

severe need will double and, in some cases, may increase at even higher rates.⁵

- In general, the impacts are greater for adults (particularly parents of students), often because adults bear the brunt of post-disaster stresses and children are relatively more resilient emotionally; adult needs can continue to trend higher even after 24 months.⁶

More specifically, we should expect the following trends in the worst affected areas (those with Katrina levels of destruction and pre-disaster gaps in resource):

- For children (ages five to 11 years) at 18 months out (peak), rates of PTSD could be as high as five (5) times greater than MMHPI's best estimates of pre-hurricane PTSD rates in young children,^{7,8} and rates of other severe mental illnesses could be up to 50% higher.⁹
- For youth (ages 12 to 17 years) at 18 months out (peak), rates of PTSD could be as high as three (3) times higher,^{10,11} and rates of other severe mental illnesses could be up to 90% higher.¹²
- The trends for adults can continue to increase even after 24 months, with rates of PTSD for parents/caregivers and school personnel ranging up to six (6) times higher, and rates of other severe mental illnesses among parents and caregivers up to twice as high.¹³

Common Behavioral Reactions Among Children and Youth

The number of hurricane-caused stressors strongly predicts the likelihood that someone will have a serious and concerning mental health condition. Recognizing and responding supportively to common reactions that children and youth may experience after a disaster – and providing mental health supports to students – will almost certainly reduce predicted increases in the overall prevalence of mental health conditions. The National Child Traumatic Stress Network (NCTSN) identifies examples of common emotional reactions in children, which are listed below:

- Feelings of insecurity, unfairness, anxiety, fear, anger, sadness, despair, and worries about the future;
- Fear that another hurricane will hit them again;

⁵ This estimate draws on separate studies of both PTSD and serious emotional disturbance (SED). See: McLaughlin et al. (2009), Marsee, M.A. (2008), and Weems, C. F., & Graham, R. A. (2014), all cited above.

⁶ However, among children who reported particularly high levels of hurricane-related stress, rates of SED were found to have increased over time, even at 27 months after Katrina. See McLaughlin et al. (2009), cited above.

⁷ Marsee, M. A. (2008), cited above.

⁸ Weems, C. F., & Graham, R. A. (2014), cited above.

⁹ See McLaughlin, K. A. et al. (2009), cited above.

¹⁰ Marsee, M. A. (2008), cited above.

¹¹ Weems, C. F., & Graham, R. A. (2014), cited above.

¹² See McLaughlin, K. A. et al. (2009), cited above.

¹³ Kessler, R. C., et al. (2008), cited above.

- Believing myths or folklore to explain the cause of the hurricane;
- Disruptive behaviors, irritability, temper tantrums, agitation, and hyperactivity;
- Clinging/dependent behaviors or avoiding activities or situations;
- Physical symptoms such as stomachaches, headaches, loss of appetite, nightmares, and sleep problems;
- Increased concerns regarding the safety of family members, friends, or loved ones; and
- School-based problems with decreased motivation and school performance.

Youth may exhibit some of the above reactions, too, but they may also exhibit:

- Socially withdrawn, angry, or irritable behavior;
- Risky behavior (including increased use of alcohol or drugs); and
- Conflict with authorities.

Of course, not all of these behaviors require medical attention or direct intervention. If problems are severe at any time or if a student experiences any of the problems above for more than six weeks post-Harvey, that student should see their primary care provider or a behavioral health care provider for additional treatment, where they could be further screened and treated for PTSD or other serious mental health conditions, such as depression.

For more information on mental health resources related to Harvey Recovery, please visit:

https://tea.texas.gov/Harvey_Recovery_MH/.