

**SYSTEMS-BASED PRACTICE  
RESPONDING TO NATURAL DISASTERS  
Disaster Response and Children’s Mental Health  
July 2020**

**SYSTEMS-BASED PRACTICE: RESPONDING TO NATURAL DISASTERS  
OBJECTIVES\***

**Knowledge**

The resident will demonstrate an adequate knowledge of:

- 1) Core principles and practices of disaster readiness especially as it relates to planning for the needs of children, youth and families.
- 2) Systems of care approach to natural disaster preparedness, response and recovery.
- 3) Have a broad understanding of the current federal response systems for disasters and how this relates to mental health” (e.g., role of FEMA, ASPR, SAMHSA, “federal emergency status”).
- 4) The principles of culturally competent and trauma-informed care in disasters.
- 5) The role of child and adolescent psychiatry as part of a coordinated team and systems of care response to natural disasters.
- 6) Practice considerations for special populations of children, for example children with intellectual and physical disabilities, rural and lower-income communities, and immigrant and refugee youth.
- 7) Evidence-informed practices for disaster preparedness, response and recovery intervention.
- 8) The opportunities and limitations of telemedicine use in disaster response.
- 9) Self-care for health professionals and first responders.

**Skills**

The resident will demonstrate the ability to:

- 1) Identify strategies for working in collaboration with and across systems of care in preparedness, response and recovery.
- 2) Share knowledge about mental health-related responses and evidence informed practices important for the different phases of disasters.
- 3) Articulate how CAPs and child serving providers can assist children and families facing multiple socio-environmental stressors in a post-disaster period and support resilient communities.
- 4) Evidence skills and an orientation towards self-care.

**Attitudes**

The resident will demonstrate a commitment to gain knowledge to the following principles:

1. Recognize the psychological impact of disasters on adults, children, families, and the important role of child psychiatrists in supporting communities.
2. Engage in clinical practice that includes cultural humility and trauma-informed care in the context of disasters.
3. Using resources and protocols that exist within the system to provide patient disaster readiness and promote patient safety.

4. Recognize the role that communication and collaboration between child and adolescent psychiatrists and other providers can serve in offering care in disasters.
5. Appreciate the importance of community partnerships to address medical and mental health concerns and supporting community resilience and recovery.
6. Consider the differential impact that disasters can have in medically, psychologically and socioeconomically vulnerable populations within the framework of social justice and equity.

\*Appendix 1 describes the systems-based practice competency in the RRC Program Requirements<sup>1</sup>

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## OVERVIEW

Natural disasters, such as storms, fires, earthquakes, are increasingly frequent occurrences which significantly impact children, families, communities and systems of care. The recent events associated with the global pandemic of COVID-19 have also created a need for implementing a disaster level public health response. It is important that child and adolescent psychiatrists, health care providers and others serving children and their families. i.e., health care, schools, community agencies, child welfare, social services, faith-based organizations and others are informed about the principles and practices of disaster preparedness, response and stages of post-disaster recovery.

This module can be used as a self-directed resource or as part of a curriculum to address existing knowledge gaps for child and adolescent psychiatry fellows and other behavioral health trainees, child serving providers and systems of care serving youth and families.

## I. **FIRST THINGS FIRST: Principles of Disaster Response and a Systems of Care Approach**

This module focuses on natural disasters and responding to the mental health needs of children and adolescents by understanding and using a community-based systems of care approach. An appreciation for the psychiatric consequences of disasters and public health emergencies has increased significantly in the past decade. In the context of global climate change, the world is seeing an increasing impact of natural disasters, and environmental changes that require prevention, disaster response readiness and planning for potentially long-term multiphasic recovery. Child and Adolescent Psychiatrists (CAPs) and other child serving providers (hereafter child providers) need to play an important role in designing, implementing and evaluating mental health responses to disasters and especially regarding the impact of disasters on children and adolescents. Responsive, developmentally appropriate mental health services are an essential component of the disaster multi-systems response.

### **Important Definitions and Principles**

**Natural disaster:** a sudden and terrible event in nature (such as a hurricane, tornado, fire or flood) that usually results in serious damage and many deaths. Often disasters are a combination of natural and manmade events (e.g., starting a fire during dry season; faulty electrical systems causing black outs for months after a hurricane)

**A community-based system of care (SOC) approach:** is one in which a provider engages within or across various systems (schools, healthcare, mental health care, local welfare and child protection, community-based organizations, faith-based organizations and others) in order to influence child and family well-being and are an important part of a collaborative and strategic approach for optimizing the care offered to children and adolescents. The SOC approach also considers the sociocultural context children and adolescents live within and how this intersects with these systems of care. In using a community-based systems approach, providers are able to consider how trauma-informed and culturally responsive care can be delivered within systems, while being aware of both the internal cultures and functions of their organizations and other organizations.<sup>2</sup>

The systems of care approach include the following important core guiding principles of practice which are designed to:

1. Ensure availability of and access to a broad, flexible array of effective, evidence-informed, community-based services and supports for children and their families that addresses their physical, emotional, social, and educational needs, including traditional and nontraditional services as well as informal and natural supports
2. Provide individualized services in accordance with the unique potential and needs of each child and family, guided by a strengths-based, wraparound service planning process and an individualized service plan developed in true partnership with the child and family
3. Deliver services and supports within the least restrictive, most normative environments that are clinically appropriate

4. Ensure that families, other caregivers, and youth are full partners in all aspects of the planning and delivery of their own services and in the policies and procedures that govern care for all children and youth in their communities, states, territories, tribes, and nation
5. Ensure cross-system collaboration, with linkages between child-serving agencies and programs across administrative and funding boundaries and mechanisms for system-level management, coordination, and integrated care management
6. Provide care management or similar mechanisms to ensure that multiple services are delivered in a coordinated and therapeutic manner, and that children and their families can move through the system of services in accordance with their changing needs
7. Provide developmentally appropriate mental health services and supports that promote optimal social and emotional outcomes for young children and their families in their homes and community settings
8. Provide developmentally appropriate services and supports to facilitate the transition of youth to adulthood and to the adult-service system as needed
9. Incorporate or link with mental health promotion, prevention, and early identification and intervention to improve long-term outcomes, including mechanisms to identify problems at an earlier stage and mental health promotion and prevention activities directed at all children and adolescents
10. Incorporate continuous accountability mechanisms to track, monitor, and manage the achievement of system of care goals; fidelity to the system of care philosophy; and quality, effectiveness, and outcomes at the system level, practice level, and child and family level
11. Protect the rights of children, youth, and families and promote effective advocacy efforts
12. Provide services and supports without regard to race, religion, national origin, gender, gender expression, sexual orientation, physical disability, socioeconomic status, geography, language, immigration status, or other characteristics; services should be sensitive and responsive to these differences<sup>3</sup>

In the case of natural and other disasters, these principles help guide disaster preparedness and recovery. In fact, research has shown that communities considered “resilient” or responsive in the disaster context work actively in optimizing the use of these principles. Norris<sup>4</sup> suggested a set of theoretical models on resilience in post disaster communities that can be summarized by a quote from their article, Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness:

*“To build collective resilience, communities must reduce risk and resource inequities, engage local people in mitigation, create organizational linkages, boost and protect social supports, and plan for not having a plan, which requires flexibility, decision-making skills, and trusted sources of information that function in the face of unknowns.”*

The following real-life case examples provide illustrative framing on how natural disasters and crises affect children and their communities, the importance of preparing and responding across systems, consideration for the developmental needs of children, including children, families and communities in planning and policy implications.

## **Hurricane Maria 2017**

Hurricane Maria is an illustrative example of how systems of care relate to disaster responsiveness in the context of complex organizational, economic and healthcare challenges. Hurricane Maria was a deadly Category 5 hurricane that devastated Dominica, St Croix, and Puerto Rico in September 2017. It is regarded as the worst natural disaster in recorded history to affect those islands and was the deadliest Atlantic hurricane since Hurricane Mitch in 1998. The hurricane occurred on the context of preexisting economic troubles in Puerto Rico. With the median age of power plants at 44 years, an aging infrastructure across the island made the existing electric grid more susceptible to damage from storms. In addition, the healthcare and school systems were significantly economically depleted. Disaster response for children and families after the disaster were heavily dependent on the social resilience present in local community-based organizations like schools, faith-based and non-profit organizations. The creative organizing done by volunteer health care providers (both from the island and those who came from the mainland), teachers and parents were responsible for the processes to provide psychological support, ongoing school instruction, social activities and connections for students during many months of school and business closures and many months without electricity. In several instances' individuals were left without necessities such as water, food or medicine. The disruption in healthcare services ultimately contributed to many deaths on the island. Children who were vulnerable due to medical, developmental or mental health risks suffered disruption in much needed healthcare and educational services.

Then in 2020, the southern part of the Puerto Rico – the towns of Guanica, Ponce, and Peneulas – and other southern town were hit by a series of earthquakes that damaged several structurally vulnerable homes and buildings including many schools. Once again, teachers, parents and community partners found themselves creating outdoor schools under tents to provide ongoing educational services and supports for children and their families since school buildings were deemed unsafe for occupation. They sought the help of mental health providers for Psychological First Aid<sup>5</sup> and trauma-informed stress management for teachers, parents and children. Educators requested outside support for school materials, and assistance to formulate how to provide developmentally appropriate emotional and educational support for some of their most vulnerable children (e.g., children with autism and intellectual disabilities) in outdoor tent schools. The local and US government emergency management teams and the Federal Emergency Management Agency (FEMA) were present on the ground; however, coordination was challenging, e.g., the government delivered fewer number of tents than needed to provide outdoor instruction to two middle schools who needed sufficient space for their students, including additional tents to teach children with special needs.

## **COVID-19 Pandemic and schools 2020**

Although it may not be formally considered a natural disaster, the COVID-19 pandemic has had a profound impact on children's education, health and massive number of deaths and has created a national disaster level crisis.<sup>6</sup> Schools were closed in order to implement shelter in place procedures in an attempt to flatten the curve of viral transmission, illness and death. In the best-case scenario, schools seamlessly adopted online learning, students continued to interact virtually with each other, and parents were able to do their best as temporary teachers. For this

scenario to be realized, a series of factors had to come together: Schools needed to have the resources to implement remote learning, students needed to have access to computers, printers, and reliable internet connections at home, and parents needed to have the ability, time, energy, and patience to turn into home-school instructors, on top of other responsibilities and severe stress they were also facing. In the worst-case scenario, learning has simply stopped, and already acquired knowledge and abilities may have started to slip backwards.

Even many well-off families have struggled with successfully implementing remote learning and home schooling for their children. But the challenges have been greater for those already at a disadvantage.<sup>7</sup> Less-educated parents faced more obstacles in turning into temporary teachers, even more so if they are immigrants for whom English is a second language. For many single parents on low wages, squaring the education needs of their children with continuing to earn an income has simply be impossible.

In short, the disruption of schooling during the pandemic has and will continue to have disparate effects across the socio-economic ladder. The achievement gap between children from poorer and richer families is bound to rise. The pandemic has had a disproportionate impact on poor communities and communities of color. Illness and death have been experienced as a traumatic event for many children during COVID-19. Many elders, matriarchs and patriarchs, were lost to the virus, especially in vulnerable communities, further traumatizing children and families. Increased stress related to the pandemic, also placed children at risk of abuse while at the same time schools, pediatricians and child protection services experienced a decreased ability to reach children in order to determine whether they were safe. Unfortunately, the nation also experienced increasing racism, xenophobia and acts of violence against immigrants of many backgrounds, African Americans and those of Asian descent.

The above examples illustrate how both direct and indirect factors influence the impact of disasters and responses. **Direct and indirect** losses distinguish between the immediate and delayed losses sustained because of a **disaster**.

**Direct disaster losses** refer to directly quantifiable losses such as the number of people killed and the damage to buildings, infrastructure and natural resources.

**Indirect disaster losses** include declines in output or revenue, and impact on wellbeing of people, and generally arise from disruptions to the flow of goods and services, including healthcare, as a result of a disaster.

**A systems of care approach for preparing and responding to disasters includes an integrated response to both direct and indirect losses and considering disaster-induced trauma.**

**Figure 1** illustrates some of the ways direct and indirect losses may relate to one another in the context of natural disasters. All of these factors have relevance for services and the well-being of children and families, their physical and social environments. A multisystem approach facilitates action across both direct and indirect effects because it considers local cultural,

economic, social, developmental and environmental factors, which influence the immediate and longer-term impact of disasters.

**Figure 1. Direct and Indirect Effects of Disasters**



From Prevent Web. <https://www.preventionweb.net/risk/direct-indirect-losses><sup>8</sup>

Both the direct and indirect effects of disasters can result in **disaster-induced trauma and psychological distress**. The impact of potentially traumatic events, including disasters, can differ based upon whether the traumatic event was human or nature-induced, a one-time occurrence, a repeated occurrence in the past, or a repeated occurrence that continues in the present”.<sup>9</sup>

**Climate change** refers to significant changes in global temperature, precipitation, wind patterns and other measures of climate that occur over several decades or longer and although a natural phenomenon is accelerated by human activities. The risks and impacts of climate change on mental health are already rapidly accelerating, resulting in a number of direct, indirect, and overarching effects that disproportionately affect those who are most marginalized (e.g. loss of more fragile homes, destruction of farming, disproportionate impact on people in poverty).<sup>10</sup> Climate refugees, migration in order to escape droughts and other natural disasters, is increasing worldwide.<sup>11</sup> This evokes the need for preparation by mental health systems in order to adapt to increasing displacement and mobility of people and how to sustain mental health services or amplify these through healthcare centers, schools and other community organizations during surges in need.

**Solastalgia**<sup>12</sup> is a less well-known concept, a neologism that describes a form of emotional or existential distress caused by environmental change. It is best described as the lived experience of negatively perceived environmental change, which causes psychological distress (e.g., seeing burnt forests or storm-destroyed environments) and even grieving. In many cases, this is in

reference to the environmental transformation caused by global climate change and is important to consider in the development of trauma-informed interventions with children experiencing these changes, especially the acute changes disasters inflict. This concept can also relate destruction of a site of cultural, religious or other regional significance (e.g. destruction of the rain forest in Puerto Rico, destruction of a mosque, collapse of a well-known rock formation).

Here are some trauma-informed examples of interventions for healing, advocacy and action that illustrate and consider the connections between our relationship with changes in the physical environment due to disasters and trauma recovery:

- Helping children participate in the recovery of their school building, e.g. beautifying a newly rebuilt classroom, school or community space
- Participation in creating a commemorative art piece, mural, garden or other regenerative work in a community where there has been destruction.
- Taking care of effected animals or plants or engaging in traditional farming activities
- Creation of alternative virtual celebrations for end of school year or graduations in the case of COVID-19 pandemic.
- Rituals and faith-based activities for healing and ceremonial practices for grieving loss
- Climate change activism and other collaborative activities promoting caring for the environment and environmental justice

For example, Puerto Rican farmers are engaging children in traditional farming after Hurricane Maria while simultaneously providing local grown food for their families.<sup>13</sup>

After Hurricane Maria hit, people lived in shuttered elementary school classrooms; local people fed them. That same community spirit drove the reinvestment and restoration of botanical gardens, which provides a way for neighbors and others interested in learning about and helping preserve local culture and tradition through its endemic species and also begin to grow food in response to growing food insecurity exacerbated by the natural disaster.

Climate change and environmental protection is an area needing advocacy from the mental health field, and CAPSs are well positioned to explore and voice the psychological and developmental impact of climate change on children.

## II. The role of child and adolescent psychiatry in responding to natural disasters

Disasters and public health emergencies, such as epidemics, can lead to significant community-wide disruptions and mental health consequences. Children and adolescents may be particularly vulnerable to the traumatic consequences of disasters. Children and adolescents who have preexisting mental health needs and whose parents are also struggling with high levels of stress and/or are dysregulated may be among the most effected.<sup>14</sup> Anxiety and depression are common mental health problems that emerge or are exacerbated by disasters. For example, a study showed that children with pre-existing anxiety exhibited persistent aggression and internalizing problems after experiencing a tornado during which they feared for their life.<sup>15</sup>

Research has found that children and adolescents who are most directly exposed to the disaster and who experience losses may be more likely to suffer from depression and anxiety after disasters like earthquakes.<sup>16</sup> In addition, children and adolescents who have pre-existing anxiety and depression may be more at risk, especially if they experience disrupted social supports.<sup>17</sup> Infants and young children exposed to stressful post disaster environments, including parental distress and family displacement may experience delays or regression in achieving developmental milestones and disasters can have significant negative effects on perinatal health.<sup>18</sup>

Factors which have been found to promote resilience include adequate, consistent and sustained access to mental health care, spiritual resources, educational and environmental stability.<sup>19</sup> Child psychiatrists and other child providers have an important role to play in responding to disasters and across all of the phases of disasters, from preparedness and prevention to recovery. Mental health preparedness is an important component of health care system and community resiliency to disasters. Some relevant questions for CAPs to think about in regards to disaster preparedness and response include:

1. What resources and social supports are in place across child serving systems to assist children and their families in preparing for or responding to a disaster?
2. Identify the emergency evacuation services for children with special needs?
3. How would child protection services continue their support of foster care children and families?
4. What systems are in place to minimize disruption in behavioral health-care, pediatric care, services for children with neurodevelopmental needs, perinatal care etc.
5. Are there curriculum and educational materials or plans for schools, healthcare, communities to help them to be responsive to families during and after a disaster?
6. Is there a network of child providers and multi-disciplinary workers who are ready to be responsive to the medical and mental health needs of children and families? What are the mechanisms for their deployment?
7. What is the capacity for implementing and deploying tele-health, how rapidly can it be used and what is the network of providers available who can provide services through tele-health and across systems during and after a disaster?

### **III. Natural disasters, public health and the social-physical environments of children**

If a community is already experiencing the chronic stressors of poverty, crime, unemployment, and urban decay, the addition of a disaster and additional chronic stressors in the recovery period, can place more children at risk for mental health problems.<sup>20</sup> Chronic community stressors (e.g., economic hardship and neighborhood violence) are usually inter-correlated, exacerbated and lead to more significant problems when acute stressors are present.<sup>21</sup>

Thus, it is important to assess the aspects of the community microsystem that can support child and youth mental health post-disaster and to plan pro-actively. A secure neighborhood environment in which parents feel their child is safe and other adults monitor them and support them, may promote resilience and/or recovery post-disaster.<sup>22,23</sup> For this reason, community-based systems, which provide these supports, are important resources for families. Child and adolescent psychiatrists can work collaboratively to provide psychoeducation and trauma-informed approaches to supporting children, adolescents and families. Schools are usually central to this process and so are other child-serving systems of care.

After a disaster, individual recovery is tied to community recovery.<sup>24</sup> The recovery and reconstruction period can last for years after a disaster<sup>25</sup>, and so can the subsequent mental health needs and anxiety. This is particularly the case, when there is a real probability of re-occurrence (e.g., annual hurricane or fire seasons). When a community is at high risk for further disaster events the goal is not to achieve the pre-event normal, but rather to achieve a new equilibrium, review/revise infrastructure for stability, assist with healing, readiness and adaptation and preparation for future disasters. The buildings are rebuilt, the infrastructure is repaired, and there is the appearance of recovery. However, the community also needs to be prepared with disaster response protocols and resources in order to plan for the subsequent mental health response, future crises and even the unknown.

The psychological recovery of the disaster impacted population, can take much longer than the rebuilding of physical structures and that is why it requires a systems of care approach.

#### **Things to consider in working across systems for creating an environment of resilience and support with attention to potentially vulnerable or disenfranchised communities**

- 1) What medical and mental health services have been closed or have been more limited during the acute phase of the disaster? What resources are currently needed? Which services need to transition from FEMA and other emergency volunteers back to the community providers, when and how?
- 2) What basic needs, for example food security still need to be met, and who are the partners who can collaboratively assist in meeting those needs?
- 3) What additional services, consultation or supports do schools and other agencies need?
- 4) Which are the most vulnerable populations needing focused attention?

## **Addressing the needs of vulnerable and at-risk populations**

Although all children may be especially vulnerable in disaster situations, some may have particular vulnerability. Children who may experience heightened vulnerability include those exposed to maltreatment or poverty; children from minority backgrounds; refugee and immigrant children; children from families with limited language proficiency; children residing in foster care homes, halfway houses, shelters for domestic violence, and youth hostels; homeless and runaway children; children confined to juvenile detention centers; and children with medical illnesses, developmental disabilities, mobility challenges, and psychiatric disorders. Disasters can undermine the systems of safety that are in place to protect these children, leaving them vulnerable to secondary stressors associated with violence, neglect and loss of physical and emotional needs.

### Children with developmental and emotional disabilities

- Children with these special needs require attention regarding mobility for safe evacuation.
- CAPS and other child providers should work with families in making safe plans for evacuation and continuity of care in the aftermath of a disaster.

### Refugee and immigrant youth

- Families with refugee and immigration experiences may be vulnerable to reactivation of posttraumatic stress, and may be less likely to access services and care before, during and after disasters out of fear of immigration scrutiny.<sup>26</sup> They may be the most invisible yet most in need of supports which are culturally responsive and safe, and so partnerships with community-based organizations and others serving those communities is important.

### Children with medically complex needs

- Like children with other special needs, evacuation safety and continuous access to medical care is essential and needs to be part of a safety plan with the family and medical services.

### Other vulnerable populations include homeless families, and families living in poverty.

- Families living in poverty or who are suffering homeless, are vulnerable to experiencing even worse housing, food and financial insecurity and may be disconnected acutely from case management and social services. These families are also at heightened risk of suffering further displacement.
- CAPs and other child providers should work collaboratively for ensuring sustained communication across providers, with families and sustained services.
- Social agencies, providers of food and other resources such as faith-based organizations should have pre-disaster plans for providing for the needs of the community including vulnerable populations (e.g. food and supplies, healthcare, shelter).

#### IV. Trauma-informed systems of care and community preparedness

As part of preparedness activities, community and mental health leaders should promote contingency planning for continuity of care and unexpected events and resource provision in anticipation of a disaster. This requires an accurate assessment of children's and their families' needs, coping capacity, cultural and language preferences, and available support services. Community based systems of care which may be particularly relevant for serving vulnerable populations and with whom providers can collaborate in planning for/responding to disasters include:

- Family resource centers
- Women, infant, and children (WIC) providers
- Community centers
- Child care providers
- Home health agencies
- Faith-based organizations

A trauma-informed child and family service system is one in which all parties involved recognize and have resources to respond to the impact of traumatic stress, including caregivers, and service providers.

By definition, programs and agencies working within a trauma-informed system approach:

- Infuse and sustain trauma awareness, knowledge, and skills into their organizational cultures, practices, and policies.
- Act in collaboration with all those who are involved with the care of children and families and across sectors.
- Use the best available science, to maximize physical and psychological safety
- Facilitate the recovery of the child and family, and support their ability to thrive.

#### Table 1: Creating Trauma-Informed Systems of Care and networks<sup>27</sup>

A service system with a trauma-informed perspective is one in which agencies, programs, and service providers:

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1. Routinely screen for trauma exposure and related symptoms combined with collaborative and compassionate conversations regarding risk, needs, coping and resilience.
  2. Use evidence-based, culturally responsive assessment and treatment for traumatic stress and associated mental health symptoms.
  3. Make informational resources available to children, families, and providers on trauma exposure, its impact, and treatment.
  4. Engage in efforts to strengthen the resilience and protective factors of children and families impacted by and vulnerable to trauma.
  5. Address parent and caregiver trauma and its impact on the family system.
  6. Emphasize continuity of care and collaboration across child-service systems.
  7. Maintain an environment of care for staff that addresses, minimizes, and treats secondary traumatic stress, and that increases staff wellness.
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These activities are rooted in an understanding that trauma-informed agencies, programs, and service providers:

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1. Build meaningful partnerships that create mutuality among children, families, caregivers, and professionals at an individual and organizational level.
  2. Address the intersections of trauma with culture, history, race, gender, location, and language, acknowledge the compounding impact of structural inequity and racism, and are responsive to the unique needs of diverse communities.
- 

### **Questions: Checking your Understanding**

Which of the following are important social factors which can influence children's responses after a disaster?

- a) Resourcing and supporting schools to restart classes as soon as possible and successfully support their students
- b) Continuity and coordination of medical and behavioral health services
- c) Social support for children and their caregivers
- d) The provision of trauma-informed care
- e) **All of the above**

All of the following are systems of care approaches that CAPs can utilize post disaster EXCEPT

- a) Services are planned in collaboration with all of the systems of care serving a child and family
- b) Provide family-centered and culturally responsive care
- c) Make educational resources available to children, families, and providers on trauma exposure, its impact, and treatment.
- d) **Limit posttraumatic care to licensed child and adolescent psychiatry services**

## V. The Phases of Disaster Response

The phases of disasters framework from SAMHSA<sup>28</sup> provides guidance on how one might work within a community-based and trauma-informed approach depending on the phases of a natural disasters. While each survivor experiences a disaster as an individual, he or she also experiences it as part of a community. The following are the phases of a natural disaster with some adaptations to specify the roles of CAPs and ways to support children and families.

**Pre-disaster phase (anticipating an event):** Characterized by fear and uncertainty. An example would be a community in hurricane season. This is the time for systems planning in order to maximally prevent adverse mental health outcomes, especially for vulnerable children and families.

**Phase 2:** This is the impact phase and includes strong emotional reactions to the disaster during and in the early aftermath and can vary based on the type of disaster. Addressing Maslow's Hierarchy of needs and use of Psychological First AID are important in this phase.

**Phase 3:** This is the heroic phase, is characterized by a high level of activity with a low level of productivity. During this phase CAPs can provide tools and supports for helping with stress management for frontline responders, organizations and families.

**Phase 4:** This is the honeymoon phase which often is accompanied with optimism that things will return to normal quickly. As a result, numerous opportunities are available for CAPs, other providers and organizations to establish and build rapport with affected people and groups, and to build relationships with stakeholders. This phase typically lasts only a few weeks.

**Phase 5:** During the disillusionment phase, communities and individuals realize the limits of disaster assistance. The disillusionment phase can last months and even years. It is often extended by one or more trigger events, usually including the anniversary of the disaster or an additional new disaster (e.g., a second hurricane or a later earthquake). CAPs can continue to assess and provide clinical and organizational consultation that addresses stress related responses, including provider burnout. This phase also requires screening and monitoring for the emergence of mental health problems including suicidality and substance use disorders in clinical settings and in the community population.

**Phase 6:** The reconstruction phase, is characterized by an overall feeling of recovery. Individuals and communities begin to assume responsibility for rebuilding their lives, and people adjust to a new "normal" while continuing to grieve losses. The reconstruction phase may continue for some time beyond that. Following catastrophic events, the reconstruction phase may last for years and can vary based on the recovery response to the physical and social needs of communities. CAPs can be involved in an ongoing way in designing and/or providing interventions and care to support community resilience, and preparedness. There is a great opportunity to work across child serving systems of care, collaboratively with schools, healthcare, recreation, faith-based communities in this phase.

## **VI. Responsibility of Government and Federal Agencies, Red Cross, and other organized disaster response**

### **The Federal Emergency Management Association (FEMA)**

The Federal Emergency Management Association (FEMA) has the primary purpose to coordinate the response to a disaster that has occurred in the United States and that overwhelms the resources of local and state authorities. The governor of the state in which the disaster occurs must declare a state of emergency and formally request from the president that FEMA and the federal government respond to the disaster.

Ideally, initial disaster services are provided within a hierarchical incident command structure established by local, state, and federal governments. During the impact and immediate post-impact phases of a disaster, interventions may include emergency shelters, family assistance centers, medical and pediatric health care settings, schools, and community-based programs.

Another important federal agency the, **US Department of Health & Human Services, Office of the Assistant Secretary for Preparedness and Response (ASPR)** leads the nation's medical and public health preparedness for, response to, and recovery from disasters and public health emergencies. ASPR collaborates with hospitals, healthcare coalitions, biotech firms, community members, state, local, tribal, and territorial governments, and other partners across the country to improve readiness and response capabilities. This is important because State and local governments have primary responsibility for disaster management. However, FEMA has authorized **the Substance Abuse and Mental Health Services Administration (SAMHSA)** to provide mental health funding to states experiencing a major disaster that overwhelms state and local resources. These monies fund SAMHSA's **Crisis Counseling Assistance and Training Program (CCP)** which supports adult and child needs assessment, individual and group crisis counseling, public education, and referral.

The CCP does not supplant local existing services in the community but supplement them. Services are strengths based, outreach oriented, and are usually delivered in nontraditional settings e.g. in churches, schools, community centers. The CCP also funds training and education for mental health professionals and paraprofessionals and community partners.

While on-the-ground support of disaster recovery efforts is a major part of FEMA's charter, the agency provides state and local governments with experts in specialized fields including behavioral health disaster responders.

### **FEMA and vulnerable populations**

In order to provide an adequate response—communities need to work collaboratively with emergency management programs to map the language needs, and to identify where the most vulnerable populations are located so that preparation, prevention and response can be specified.

First response utilizes Maslow's Hierarchy of Need, composed of six hierarchical needs:

(1) Food, water, and shelter;

- (2) Safety;
- (3) Social support;
- (4) Stress reaction;
- (5) Grief and loss;
- (6) Assimilation and accommodation.

Disaster mental health workers need to be aware of these needs when working with disaster survivors, lower level needs are met before higher level needs can be met. Psychoeducation and communication in diverse population are tailored to reflect the language, culture, values and social structure of a community.

CAPs can assist in offering information, first response and resources on mental health, which are culturally appropriate for the community. CAPs can be involved in identifying service's needs, deficits, and potential impact of the disaster on children and families and vulnerable populations through a guided risk assessment-- A qualitative or quantitative approach to determine the nature and extent of disaster risk by:

- Analyzing potential hazards
- Evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend

The United Nation Office for Disaster Risk Reduction offers a resource on guidelines for conducting quality risk assessments.<sup>29</sup>

1.1.1. Questions: Checking your Understanding
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## **VII. Evidence-Based interventions for responding to disasters for children**

Mental and behavioral health considerations should be integrated into public health, medical, and pediatric disaster management. In the intermediate and longer-term phases of response and recovery, systems of care may extend to settings such as primary health care settings, schools and preschools, daycare settings, youth centers, faith-based institutions, and volunteer organizations. The role of CAPs within these systems of care include being knowledgeable about the disaster emergency plans within the organizations they serve and participating in the delivery of trauma-informed services. Offering consultation, information and psychological support for the adults that take care of children and families, e.g. teachers, child protection services, pediatric providers.

During disasters, children are one of the most vulnerable populations in regards to the potential mental health consequences. Because children are impacted by both the specific nature of the disaster and the emotional distress experienced by their parents, their teachers, and the people in their community it is important to take both an individual family approach and perspective.<sup>30</sup> Vulnerability increases for children experiencing the cumulative impact of multiple traumas (e.g. natural disaster in addition to pre-existing violence exposures) and children may have distinct needs pre-disaster, as well as during the acute and post-disaster period. The following are evidence-based interventions to consider across these phases and for the particular developmental needs of children:

### **Pre-Disaster**

The first stage in pre-disaster planning for children is developing personal and family preparedness plans. In addition, psychiatrists and other mental health professionals should be trained in mental health interventions and trauma-informed practices, which can help prevent children from developing post-traumatic symptoms in the acute stages and aftermath of a disaster. Training of evidence-based treatment and trauma informed practices in schools, child welfare organizations, other community and faith-based organizations can prepare these systems to be responsive to the mental health needs of children, adolescents and families in the acute stages of disasters.

**Preparing communication with children and adolescents** should be approached in developmentally appropriate ways. Because traumatized children normally express their feelings through play and art rather than verbal communication, it is important to have a supply kit ready with art supplies, hand puppets, emergency vehicles, doctor's kits, and a dollhouse with dolls of different ethnic backgrounds.<sup>31</sup>

**Collaboration with media outlets** can be helpful for preparing a trauma-informed media plan. A plan should be in place, for media partners with multi-language capacity so that diverse populations can be reached. Outlets and appropriate information materials providing guidance for parents who may need to seek professional help for their children, should be made ready for dissemination.

## Acute Phase

**Psychological First Aid for Children (PFA)** is an evidence-informed modular approach to help children, adolescents, adults, and families in the immediate aftermath of disaster and terrorism. The evidence base supports that PFA helps speed the healing process after a disaster by improving adjustment and resilience in children following a disaster.<sup>32</sup>

PFA for children incorporates a series of strategies by which parents, teachers, and community resources give basic psychological support for infants, children, and adolescents.

PFA includes the following practices and offerings to survivors of disasters:

- **Listen**—allow children the opportunity to share their experiences and express their feelings, validate feelings and provide appropriate and honest reassurance that adults will protect them.
- **Protect**—when possible, reestablish structure, routines, and stability for children, such as returning to school and after-school activities. Educate parents, teachers, and children about the typical reactions that infants, children, and adolescents experience during the acute disaster phase. For example, young children may become clingy, or adult may observe some regression in a child's development, like potty training. Adolescents may show feelings of guilt or misplaced responsibility.
- **Connect**—Reestablish children's normal social relationships and connections with family, friends, neighbors, teachers, and other community resources
- **Model calm and optimistic behavior**—In times of crisis, children and adolescents observe adults' reactions, learn from their cues, and follow their lead. So helping the adults in children's lives-practice calm behaviors, emotional regulation, predictability and reliability is essential.
- **Teach**—Help children, adolescents, and the adults who care for them to understand the range of common stress reactions, and the ways that such reactions may affect them in school or other settings. In addition, teach children to understand some ways to cope with stress, and provide the opportunity for them to participate, even peripherally, in recovery efforts. Teaching coping strategies, mindfulness, emotional regulation or expression through arts.

PFA serves as an evidence-based resource for front line intervention and prioritizing the immediate needs of the population. PFA can be adapted to fit the cultural and religious beliefs of the community impacted by the disaster and related psychoeducation materials are available in multiple languages. The evidence base supports that psychological first aid helps speed the healing process after a disaster by improving adjustment and resilience in children.<sup>32</sup>

## Post-Acute Phase

During disasters, children may sustain multiple losses, including loss of family members and friends, loss of school and daytime routines. Returning to a sense of regularity during the post-acute phase in the first few weeks after a disaster can help children emotionally recover. Families can help restore this sense of regularity by implementing mealtime and bedtime routines. When possible, reopening schools, churches, and community after-school programs also creates a sense

of structure, routine, and support. As this module is written, the US is experiencing a partial return of routine activities, such as summer camps, during the beginning of a multi-phased recovery period from the COVID-19 pandemic crisis.

**Cognitive Behavioral Therapy** is helpful for ongoing treatment of symptoms of depression, anxiety and PTSD. Recent studies of disaster victims have shown that increased risk for PTSD is associated with how the child experiences and interprets the event. Cognitive behavior therapy (CBT) has emerged as the best validated therapeutic approach for children and adolescents who experienced trauma-related symptoms, particularly symptoms associated with anxiety or mood disorders. Cognitive-behavioral therapy (CBT) can help children learn how to identify and change destructive or disturbing thought patterns that have a negative influence on behavior and emotions. Cognitive-behavioral therapy focuses on changing the automatic negative thoughts that can contribute to and worsen emotional difficulties, depression, and anxiety. Psychopharmacology can serve as an adjunct for more moderate to severe symptoms.

**Trauma-focused CBT (TF-CBT)** is one type of specialized CBT treatment that has proven to be effective in children and adolescents who have been trauma survivors.<sup>33</sup> The focus of this therapy is on reconstructing the traumatic experience to desensitize the child to the trauma and to allow the child to achieve mastery over the situation. TF-CBT consists of psychoeducation, stress management, relaxation exercises, affect identification and modulation, cognitive restructuring, exposure therapies such as trauma narratives and drawings, identification of themes such as guilt and revenge, conjoint child and family sessions, and safety enhancement.<sup>34</sup>

**Play psychotherapy** is a type of psychodynamic psychotherapeutic treatment that is particularly appropriate for young children and expression through play and art has been found to be helpful in reducing anxiety and externalizing behaviors.<sup>35</sup>

In addition, community based and faith-based organizations are important partners in offering a vast range of expressive, cultural, spiritual/religious-based trauma recovery activities for survivors. These offerings can include the opportunity for nurturing personal and communal prayer, reading religious or spiritual text, use of the creative arts, connection with nature, meditation and visualization and activism.

## **Psychopharmacology**

There are no current studies available that show evidence for using psychopharmacology as a prevention to developing PTSD or other mental health disorder in children during or after a disaster.

Although most children do not require medication, some children, especially those requiring hospitalization may manifest symptoms or diagnoses that are can improve with medication. The use of psychotropic medications is discouraged in socially disorganized disaster settings because the recommended follow-up monitoring may be impossible. Psychopharmacological treatment may be indicated in hospital settings, where recommended baseline laboratory tests, ongoing monitoring, and child psychiatric consultation are possible. Children who are prescribed medications prior to a disaster need a plan for continuous care, especially children with agitation, disruptive, dysregulation and neurodevelopmental disorders, or psychosis.<sup>36</sup>

## **VIII. Consulting Across Systems of Care**

CAPs can assist with access to care through collaborations across health care and other organizations to promote recovery and rebuilding, address disrupted services/resources, and provide consultation services after a disaster. Through a combination of consultation, direct services (in-person and remote), psychoeducation and advocacy, CAPs and child providers can contribute quite significantly to child well-being during disasters.

### **Supporting the vulnerable**

Children who live in poverty and lack adequate housing, nutrition, and health services, attend poorly resourced schools, and/or are exposed to community violence are at greater risk poor mental health. These stressful conditions increase risk for co-morbid depression and PTSD.<sup>37</sup> We are also beginning to increase our understanding of the impact of racial/ethnic discrimination on anxiety, depression, and behavioral disorders.<sup>38</sup> Pre-existing mental health problems that can be worsened after a disaster include anxiety, depression, ADHD<sup>39</sup>, and behavioral or conduct programs. Adults with pre-existing mental health disorders are similarly at heightened risk for PTSD and severe distress; when they are also parents they may be less emotionally and materially available for their children.<sup>40</sup>

It is important to identify and address risk factors for disaster-induced trauma and distress. This includes supporting families with lost social supports, displacement, physical injury, job loss, financial stress, reliance on care systems.

### **Strength-based approach**

It is also important that clinicians take a strength-based approach to work with clients and their families. Assessing and supporting protective factors requires both curiosity and cultural humility.<sup>41</sup> This can be challenging for clinicians working with diverse populations from cultures which are different from their own. For that reason, it is important to work closely with leaders from the community who understand the cultural context and history of the effected community.

Working across systems, CAPs and other child mental health providers can be most successful by:

- Emphasizing respectful, thoughtful, and consistent leadership to empower community stakeholders to act accordingly to address their specific communities' needs;
- Building capacity around community academic telehealth partnerships;
- Creating environments and relationships in schools and other community settings (even if virtual) that help children develop and sustain self-regulation skills, relational skills, problem-solving skills, and involvement in positive activities; and
- Promoting parenting competencies, positive peers, caring adults, positive community environments.

## **Mental Health System**

Preparation of sustainable and ongoing provision of mental health services is essential for disaster preparedness with children, adolescents and their families. CAPS and child providers are important collaborators for community leaders, pediatric health services, community-based organizations (CBOs) including faith-based organizations.

In a disaster, medical, mental health and education resources are usually disrupted. CAPs and child providers are negatively affected themselves. Roads and communication systems are disrupted and it can take a while before connections are re-established. Mental health providers must respond to the acute, preventative and long-term mental health consequences of a disaster. For all of these reasons providers and clinicians have argued for the importance of disaster preparedness a graduated service response that starts with less intensive interventions which may be more effective in reducing symptoms, impairment, and improving the quality of life of individuals with mental health problems across the phases of a disaster.<sup>42</sup> Bower and Gilbody<sup>43</sup> outline recommendations that underpin a stepped-care approach. The accessibility assumption suggests starting with minimal intervention therapies such as Psychological First Aid, psychoeducation and emotional regulation skills, connecting to supports, and providing for basic needs. The key features of stepped-care models are:

- 1) Starting with a low-intensity or primary prevention intervention, monitoring to establish treatment benefits or lack of response,
- 2) Screening for higher level needs and then stepping up to a higher intensity treatment either in person or remotely.<sup>44</sup>

## **Pediatric and Primary Health Care**

The growth of integrated health care settings facilitates access to mental health services and can optimize risk planning and community-tailored response to local disasters.<sup>45</sup> The current evidence suggests that primary care may be well suited to implementing interventions related to prevention, detection, and early intervention of trauma-related problems including those which are a result of disaster.<sup>46</sup> In many areas of the country the threat of natural disasters is ongoing, for examples in settings where there are hurricanes seasons or fires. The American Academy of Pediatrics has provided guidelines to pediatricians' roles in disaster preparedness.<sup>47</sup>

This guidance includes recommendations for offering:

- Anticipatory guidance on home disaster preparedness can be provided in the pediatric office or as a community focus.
- Family preparedness includes training in cardiopulmonary resuscitation, rendezvous points, lists of emergency telephone numbers, and an out-of-state friend or relative to whom all family members can contact after the event to report their whereabouts and conditions.

- Home preparedness such as storm shutters or earthquake proofing should be covered. Parents should maintain emergency supplies of food, water, medicine, a first aid kit, and clothing.
- Family members should know the safest place in the home, make special provisions, know community resources, and have a plan to reunite.
- Medications for chronic illness and resources for technically dependent children should be included in the action plan.

In addition, CAPs and other child providers can play an important collaborative role with pediatricians in assisting with mental health screening and psychiatric evaluations using evidence-based assessment practices and measures<sup>48</sup> for identifying posttraumatic disorders. providing mental health consultation, psychoeducation, and direct services either in person or in using telemedicine/ telepsychiatry for homebound or relocated families and with school systems.

### **Schools and the Educational System**

Schools are a natural site for partnerships to conduct assessments of and deliver services to children exposed to disasters and for preparedness; activities. There are currently efforts to standardize mental health screenings (e.g., depression, anxiety) and trauma exposure using the Adverse Childhood Experiences (ACE) survey<sup>49</sup>, even as protocols for using the ACE screener still being debated.<sup>50</sup> Traumatized parents, experiencing their own grief, may not be reliable reporters of their children's mental health problems, may not seek mental health evaluation for their children, and may be unable to provide the intense support their children require.

Child mental health professionals should first meet with school administrators and with teachers alone to ensure teachers are adjusting well and are not directly traumatized themselves, and then there is great opportunity for collaboration. For example, widespread screenings at schools accessing a broad range of symptoms with standardized measures can detect many children who otherwise would go unnoticed. In addition to being sites for screening, schools can serve as treatment centers. Many high schools have begun to implement school-based mental health programs; clinical social workers and psychologists are often available to offer direct therapeutic care and referral to specialty care. Increasingly, these services are expanding their capacity to respond to disasters within the community, such as the impact of Hurricane Katrina on New Orleans schools.<sup>51</sup> Schools without such clinical settings often have at minimum a school nurse on the front lines of preparations for emergencies such as school shooters and pandemics.<sup>52</sup> Larger staffing options might include a psychologist or counselor onsite that can assist with assessment, referral, and some limited therapy options. CAPs can participate as part of a clinical team, to offer support to children, teachers and families and offer a trauma-informed system of care. In the aftermath of a disaster, CAPs can work with schools to screen and identify children in need of additional behavioral health services. School wide interventions can serve as primary prevention and help against the development of PTSD or anxiety disorders in children and can be done collaboratively between mental health providers who are school based and the community.

The Cognitive Behavioral Intervention for Trauma in Schools (CBITS) program is a school-based, group and individual intervention which is also culturally informed.<sup>53</sup> It is designed to reduce symptoms of post-traumatic stress disorder (PTSD), depression, and behavioral problems,

and to improve functioning, grades and attendance, peer and parent support and engagement, and coping skills. CBITS therefore, is one example of an evidence-based intervention which can be implemented in schools is a group or community wide way to assist with coping skills regarding anxiety, stress, emotional regulation and psychoeducation in the aftermath of a disaster.

During and immediately after the disaster, children and families may be isolated or displaced and so schools and mental health providers can work together to reach out to families in their homes or new locations to screen for trauma, educational/development needs, medical and psychological needs, basic needs and triage for services often with the assistance of telephonic or video technology.

An important population to consider in primary care and schools are **children with special medical, psychiatric and educational needs**. Some important things to consider and to plan for pre-disasters for this population include:

- Evacuation plans especially for children whose physical mobility or cognitive abilities complicate their capacity for a safe and rapid evacuation
- Continuous access to medical and psychiatric care as needed
- Continuous special education services in order to avoid potential disruptions in educational and development services, including home-based and wrap around services for vulnerable children.
- Continued access to testing and early intervention services for children for whom these services are critical at particular stages of development in order to be the most successful
- Ensure continuous access to medications including psychopharmacology where appropriate

### **Juvenile Justice, Child Welfare and Institutionalized Youth**

Child Welfare System. An estimated 600,000 children are in the foster care, a portion of the larger number who navigate the child welfare system each year. Planning is most effective when it is coordinated with federal, state, county, and local juvenile justice agencies, child welfare or foster care system as well as with the state's emergency management agency, law enforcement and the courts, emergency medical services (EMS), human services, public health, fire, and public works departments, to name a few.

It is important to have agreements with the courts, child welfare agencies, and other youth-serving agencies regarding procedures for evacuation in an emergency. This should be developed during a pre-disaster planning process and kept on file. Agreements with the juvenile courts should specify the circumstances under which nonviolent offenders can be released to their families in the event of an evacuation and the procedures for the release. Conducting a Vulnerability Assessment for child welfare and juvenile justice institutions is important before an emergency operations plan is written, a vulnerability assessment should be conducted to determine which emergencies a facility is at greatest risk of experiencing.<sup>54,55</sup> This research will help determine the threats that merit special attention in planning. Planners should gather information about the potential hazards, available resources, and geographic or topological characteristics that could affect emergency operations. The results of the vulnerability assessment can then serve as an indispensable guide in the shaping of the emergency plan.

Remember to advocate for:

- Evacuation of children in foster care and juvenile justice settings
- Continuous access to medical and mental health care as needed
- Ensure continuous access to medications including psychopharmacology where appropriate
- Continuous access to the child or adolescent's regular treatment team
- Care coordination and navigation to services as needed and especially if there is disruption in care services intake, treatment planning and delivery.
- In the case of foster care, how to support children within their foster home setting, including continuous services (e.g. mental health, reunification plans) in the context of displacement.

Behavioral health community-based organizations (CBOs) and other related systems (e.g., child welfare, juvenile justice) do not always have the infrastructure for sustaining mental health services during and after disasters. Academic institutions need to rapidly partner to provide practice guidance, teaching, and telehealth consultation support to these CBOs and other systems to truly build self-efficacy in providers for delivery and overall, long-term capacity for providing telehealth access to much-needed child behavioral health care. Community and cross-sector collaborations are important for mounting an effective response to disasters for institutionalized children.<sup>7</sup>

#### 1.1. Questions: Checking your Understanding

## **IX. Telepsychiatry, telemedicine, and public health for community resilience**

**Telemedicine** (also referred to as "telehealth" or "e-health") allows health care professionals to evaluate, diagnose and treat patients in remote locations using telecommunications technology.

**Telepsychiatry**, a subset of telemedicine, can involve providing a range of services including psychiatric evaluations, therapy (individual therapy, group therapy, family therapy), patient education and medication management.

Telehealth technology can be particularly helpful in disasters by providing relief and continuous care when people are forced to evacuate from their homes. As natural disasters become more frequent, the number of forced evacuations will continue to increase. Often, people are in such a great rush to evacuate that they leave medications, medical equipment, or medical instructions behind. Other times, they simply do not bring enough medication to sustain themselves throughout the entirety of their displacement. Telehealth can allow physicians to speak with patients and continue to monitor their chronic illnesses, as well as prescribe medication to pharmacies near their temporary relocation spots.<sup>56</sup>

The stress of leaving home, possibly being separated from loved ones and the destruction of belongings takes a large toll on the mental health of victims of natural disasters. Hurricane Katrina, for example, resulted in the evacuation of 80 percent of the city of New Orleans before displacing evacuees for weeks to months. This event triggered many hurricane survivors to experience mental health problems, most notably depression and PTSD. In Puerto Rico after Hurricane Maria months of no electricity, isolation due to blocked roads and the exodus of mental health and other health care providers from the island resulted in tremendous need for accessible mental health services, including telephonic and other technology supported services which was made evident by the escalated rates of suicide line calls in the aftermath. During the COVID-19 pandemic there has been greater awareness within mental health of the potential benefits of technology and greater availability of both video and telephone-based care delivery. For many individuals and families, this has enabled them to maintain contact with their mental health therapist and/or psychiatrist.

Telemedicine is helpful for responding to emergencies and disasters and providing access to pediatric care to remote and otherwise underserved populations, and there are three steps in response to disasters for which it can be helpful:

1. Before the incident: The most important activity is the emphasis on prevention and preparation phases of disaster, for example, taking inventory of technology needs and families who may otherwise experience disruption in care during a disaster if preparations are not made ahead of time for telemedicine access.
2. After the incident: Hour to weeks after the accident, triage and care outreach to children and families in need.
3. Rehabilitation: After the incident when the physical and mental health effects in society remain, offering ongoing psychoeducation, capacity building, prevention and direct care of mental health needs.

Barriers to telemedicine expansion include regulation issues, inadequate payment for services, technology costs and sustainability, culture, demand, knowledge, expertise, priorities and the lack of technology infrastructure on a national scale. Although certain challenges have constrained more widespread implementation, telemedicine's current use including during the COVID-19 pandemic, bears testimony to its effectiveness and potential. Telemedicine's widespread adoption will be influenced by the implementation of key provisions of the Patient Protection and Affordable Care Act, technological advances, and growing patient demand for virtual visits.

### **The benefits of providing telehealth and telepsychiatry**

- Can happen through various means such as telephones, email, texting or video conferencing
- Supports shelter in place without disruption in care
- Can be a vehicle for providing tailored psychoeducation
- Can include integrated decision support tools for triaging and managing care
- Provides access to specialized consultation and opportunity for virtual learning communities
- Facilitate triage by first responders
- Address infrastructure disruption and recovery
- Maintains therapeutic connections even with displaced patients/ communities
- Screening and public health surveillance for mental health needs longitudinally through technologically facilitated data sharing and conferencing
- Building collaborative systems of care using integrated remote technology

There are also limitations to the use of telehealth and telepsychiatry which warrant consideration and problem solving. Telepsychiatry is limited in its reach for communities who do not have internet services (e.g. rural communities, with the housing insecure). Some families may not have private and safe spaces where they can access mental health services remotely (e.g. highly congregate living situation, domestic violence and abuse situations. Telepsychiatry may not offer sufficient access for young children, neurotypical children, psychotic youth) and there is a barrier to ongoing observation and surveillance of children at high risk for abuse or with acuity of need.

Questions: Checking your Understanding
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## X. SELF-CARE

### **Burnout, compassion fatigue, secondary trauma**

Responding to disasters is both rewarding and challenging work. Sources of stress for emergency responders including child providers working to support children and families during a disaster may include witnessing human suffering, risk of personal harm, intense workloads, life-and-death decisions, and separation from family.

Responders experience stress during a crisis. When stress builds up it can cause:

- Burnout – feelings of extreme exhaustion and being overwhelmed.
- Secondary traumatic stress – stress reactions and symptoms resulting from exposure to another individual's traumatic experiences, rather than from exposure directly to a traumatic event. This can be experienced as emotional exhaustion, depersonalization, a decrease in the ability to function.

**Stress prevention and management** is critical for responders to stay well and to continue to help in the situations they are addressing. There are important steps responders should take before, during, and after an event. To take care of others, responders must be feeling well and thinking clearly.

### **Compassionate Reflection and Self-Care for Well-being**

There are several factors which can cause providers to become vulnerable to the effects of stress during disaster work. These can relate to past experiences, degree of exposure to the disasters, traumatic exposure, sense of helplessness to help self or others, working in extremely vulnerable or negatively impacted populations/ communities, experiences of racism, discrimination, and prior negative experiences. The more stressed a provider is, the less they are able to care for themselves or others. This underlines the importance of self-care which can take be practiced in many ways, but at the heart of it is compassion for self and others. Some ideas on how to practice self-care:

- Practice self-compassion. There is no road map. You are doing the best you can in a difficult situation. Take your situation day by day or hour by hour, if needed. Take breaks from work when you can.
- Recognize the valuable role you and your colleagues play on the front lines of disasters. Remind yourself that despite challenges, you are making a difference and taking care of those most in need.
- Validate any emotions you might be feeling. There is no right or wrong way to process the experience. It is normal to feel a range of emotions including being overwhelmed, frustrated or angry, worried, anxious, restless, agitated, sad or fatigued.
- Find ways to see the positive. It can be easy to get overwhelmed. Try to find the hopeful stories about communities coming together to support local businesses, feed hungry

children and families, donate money and critical supplies, and recognize the ways you can contribute through your expertise.

Providers can make small changes to their routine and can improve their overall mood and protect their mental health during a disaster. An important way is to seek out support from family or friends and find other simple self-care tactics that help.

### **Resources for self-care**

- Contemplation, prayer, ritual, meditation, yoga
- Self-awareness Deep listening
- Peer supervision and social support
- Arts and cultural
- Sleep hygiene, exercise and nutrition

The Veterans Administration's National Center for PTSD maintains resources section on self-care strategies (e.g., mobile apps that health care workers who have limited time for self-care may find useful).<sup>57</sup>

Following disasters, many individuals will manage distress without intervention or will rely on community support from neighbors, friends, and family. Traditionally, research on stress and trauma has focused on negative sequelae of adversity. Over the last decade an increasing emphasis has been placed on growth in the aftermath of adversity. **Posttraumatic growth**, described as reflecting “positive change experienced as a result of the struggle with trauma”<sup>58</sup> refers to the transformative quality of responding to highly adverse events<sup>59</sup> which may be present in addition to the negative sequelae (i.e., posttraumatic stress symptoms) that has been the focus of most of the trauma literature. Although the majority of studies on posttraumatic growth have focused on adults, studies increasingly shows that children can also experience posttraumatic growth.

By the same token, medical professionals, front-line workers and other providers responding to disasters may also experience posttraumatic growth, and this may be achieved by practicing self-care in some of the many ways already described above.

## **XI. Legal and ethical issues in responding to a crisis**

The legal and ethical issues related to disaster response are complex, rapidly changing, and occurring at a time of great transition in our society. States are currently the leading source of legal authority for dealing with a public health crisis, and laws are different in each state. If you are involved in a disaster response there are important questions to consider regarding confidentiality, liability and Good Samaritan laws. Some disaster situations allow for temporary reciprocity of license across state lines, or temporary prescribing allowance.

Good Samaritan laws exist in both the U.S. and Canada, but the legislation isn't uniform. Most laws don't apply to medical professionals when they are on the job, but do offer some protection when they respond to an emergency off the clock. States can vary a great deal in regards what they include within Good Samaritan Statutes.<sup>60</sup> Statutes typically don't protect a person who provides care, advice or assistance in a willfully negligent or reckless manner. However, like any type of legislation, Good Samaritan laws are interpreted in court and the results may not benefit the bystander. An important principle to remember is that taking extraordinary measure should be undertaken only in life or death situations. Whatever situation you are in, anticipate and discuss with a team the parameters of such actions. Consult and/or note what you do and why and document it. Understand the terms of confidentiality in the setting but of course patient safety comes first and so any knowledge related to immediate risk of safety to self or others need to be communicated appropriately and a protocol for such communications in place. Check your malpractice policy coverage for inclusion or not of your activities/ or inquire what malpractice coverage the organization you are working with in the disaster context provides.

Be clear about the expectations of your involvement and the local applicable laws.

The questions that disaster volunteers or frontline providers should ask in each situation includes, although is not limited, to the following:

1. What is my role as a volunteer, what I am being asked to do in this specific disaster response situation or volunteer arrangement?
2. Will I be paid for what I am providing (if you are paid this usually negates good Samaritan role)?
3. What good Samaritan laws apply locally and in the context of the work I will be doing and what is my protection?
4. What government/what organization am I volunteering with? What liability insurance do they provide if any? What licensing, prescribing and care provision agreements do they have with local setting?

You should make sure you understand the scope and specifics of your involvement in each and every disaster situation with which you become involved.

### **Ethical Principles**

Important to disaster response is consideration of ethical principles such as “do no harm” justice and equity. For example, special attention is required to avoid distributing aid unevenly due to a

lack of coordination or a complex security situation. Following the 2010 Haiti earthquake, people living immediately outside of the relief camps objected to the disparity in services between the camps and neighboring communities. In, Puerto Rico, and New Orleans's poorer communities and communities of color were disproportionately affected by hurricane disasters and medical and financial recovery support were not equitably distributed to the population. In addition, it is important to not displace existing providers, caregivers and culturally appropriate ways of addressing mental health with temporary and fleeting services.

**Moral injury** is a concept that has reemerged in interest during the COVID-19 pandemic. It refers to an injury to an individual's moral conscience and values resulting from an act of perceived moral transgression, which produces profound emotional guilt and shame, and in some cases also a sense of betrayal, anger and profound "moral disorientation".<sup>61</sup> Providers may experience moral injury in situations where there is rationing of scarce health care resources such as ventilators or limited ability to provide behavioral health services when patients are in desperate need of help (e.g. poor telehealth capacity or inability to reach homeless patients and other vulnerable populations).<sup>62</sup>

Moral injury is a systems issue, as it usually relates to ethical decision making in the context of limited resources, policies and how the responses to these are practiced.

The National Academy of Medicine's Action Collaborative on Clinician Well-Being and Resilience offers a wealth of actionable resources to support the development of well-being-focused programs and policies across sectors.<sup>63</sup>

## **XII. Illustrative Vignettes**

The following vignettes are included in order to offer illustrative examples of natural disaster situations in which the principles of a systems of care approach apply. These cases reflect real life situations experienced by communities who have experienced disasters and from the vantage point of child serving providers. The questions that are included with the vignette aim to stimulate discussion, self-directed reflection and review of the principles of a trauma-informed, culturally responsive systems of care approach.

### **Vignette 1**

#### **A HIGH SCHOOL IN PUERTO RICO AFTER HURRICANE MARIA**

Escuela Margarita Janer Palacios is a high school in Guaynabo PR with students who ranged from 14-18 years old. You meet with a group of teachers to learn about their experiences with Hurricane Maria. The teachers share that there are children at the school who lost everything during Hurricanes Irma and Maria; some went 6 months without electricity. They also share that many of the children seemed depressed and anxious after the Hurricane. Over one year later, some still seem somewhat depressed. They also share that after Maria, the kids wanted to come back to school right away because they wanted to get out of the house and they wanted to be with each other.

The hurricane blew open the roofs of houses and literally showed just how much the students were suffering. Before the disaster, the teachers had not realized just how poor many of the students are. One teacher reported that after one of her student's home roof blew away, and as the trees were made bare around her home, you could see how little the family had.

Many teachers were also affected. One teacher shared, "I had no electricity from October to February. I had to go stay at me family's house and later I bought a generator. There were 19 people living in the house at a time. Several teachers had to go through this. It affected me. I felt exhaustion and desperation while teaching. It was important for us to reopen school as soon as possible, even though that did not happen. The storm happened in September and we reopened in December. It was the parents and the community that stepped up and fixed things in the school and by December, we had electricity. Even with this, we still had to advocate and push the department of education to get the school reopened and in order to provide the services we needed. I felt helpless about being able to help the students and their families. We felt it was so important to get school back on track so the children could have some regularity in their lives again. Right after Maria, doctors and psychologists visited the school to talk to the children but there has not been access to regular care since".

The University of Puerto Rico School of Education organized programming for various schools and communities called CAUCE (*Centro de apoyo a la comunidad de camino a la recuperación*) // Community Support Center on the Road to Recovery.<sup>64</sup> They created resources like the

"Sueños en el Junque" - a fictional story used as a tool to help kids help speak about the hurricane and children developed drawings to express their emotions following the hurricane. The university worked with community organizations to hold expressive arts sessions during which children expressed sadness and hope. In addition to drawings, the children made music or sang to express themselves, some drew, and some shared stories. The teachers and adults also shared their stories.

### **Some Questions to Consider:**

Think about responding to the needs of this school and community with consideration for the following community systems approach, trauma-informed and culturally responsive principles

- Child-centeredness
- Family-focused care
- Community-based and centered
- Multi-system approach to helping this school and many others
- Cultural Humility-what are some of the cultural factors to consider?

- 1) What would have been helpful responses to assist students, teachers and families at this school in the immediate aftermath of the disaster?
- 2) If consulted to advise the principal at the school one year later, what would you recommend to reduce or prevent mental health risks for students and for teachers in future disasters?
- 3) How might CAPs work with schools in reducing traumatic stress in those affected by the hurricane using a trauma-informed response?
- 5) What are some ways that mental health professionals outside of Puerto Rico could collaborate with colleagues, schools, teachers and systems of care in Puerto Rico to assist this and/or other schools or communities in an organized and sustained way?
- 6) Could telemedicine play a role in response, and in what way?

## **Vignette 2**

### **A CAP's development regarding working in Disaster Response**

The following vignette by Kaye McGinty MD offers an opportunity to illustrate how one CAP evolved in her understanding of post-disaster work and an example of how child providers can be involved in disaster response. Read the vignette which also includes some focused questions for reflection and highlighting some of the principles we have learned throughout this module.

#### **My Previous Experiences living in hurricane zones**

Having lived in hurricane zones for 35 years I was very stubborn about getting Red Cross disaster training. It wasn't my interest to rush in to an area where I was unfamiliar with the culture and surroundings. I had seen so many mental health professionals and a few psychiatrists swoop in to Eastern NC over the years for 4-6 weeks and then disappear as fast. I am not sure how much they actually accomplished but there were usually many negative comments from the locals. The locals frequently felt they were abandoned and our patients thought the same. Living in a rural area the local psychiatrists were working very hard during those times in the hospital and clinics and were glad that someone else came to help in the shelters. But then as we had more hurricanes, we did notice that some came for very short times and seemed to be interested in publicity. My family and I would help by volunteering at the food bank, collecting and distributing children's toys and games at the shelters, and donating money and items to local charities.

#### **Change of Heart and ready to help**

In 2016, 2017 and 2019 we were hit by hurricanes in Eastern NC and the devastation was enormous. Having retired in August of 2019 I was available after Hurricane Dorian hit Ocracoke Island, NC. I was part of a group of child psychiatrists from the NC AACAP regional organization that were ready to volunteer to help the youth and families of Ocracoke Island. We had found out they had no child mental health services. We were not interested in the short-term response immediately after the hurricane. We wanted to provide clinical services after the immediate post-disaster period and then help them find a long-term solution for child mental health services.

With my experience with systems of care, knowledge of the region, and recent retirement, I volunteered to work with the local officials to see how our group could volunteer our services. Additionally, we connected with one of our members who is an expert in disaster response. In the meantime, I connected with two mental health professionals (psychiatric nurse and social worker) who were going to the island to provide emergency mental health services through the state response funded by FEMA. The nurse had been going to Ocracoke for years in collaboration with the Ocracoke Health Center. Then, I contacted Hyde County Schools and talked with the exceptional children's coordinator, the director of student services and eventually the Ocracoke school counselor. We quickly set up a face to face meeting, and I was given emergency responder status by the state of NC to take the ferry to the island. Before I went I was able to discuss a strategy with our local CAP disaster expert. He helped me think through a process for the school staff regarding disaster response and to consider screening all of the students for traumatic experiences/response with their guardian's permission.

Luckily, I had been to Ocracoke Island before and knew some of the history. I quickly read a few books that I had bought over the years to learn more.

### **Ocracoke Island, NC**

Ocracoke Island is the southernmost barrier island of the Outer Banks, NC. Ocracoke Island was very important in the early years of the United States with the shipping trade. Goods moved through these waters to mainland NC. The early “O’Cockers” were pilots who guided ships through the local waters and seafarers. During many wars (Revolutionary, Civil and World War II) the island was involved in the conflicts. The island was very remote until the state ferry system began serving the island in 1961 and the community water system was built in 1977. It has become a tourist destination since the 1980’s. Ocracoke is part of Hyde County which is one of the poorest NC counties. The Ocracoke School is the only school remaining in NC that serves preschool to 12<sup>th</sup> grade students. Hyde County has the fewest number of students in the entire state. The island has about 900 permanent residents including those who are natives (30%) and the rest have relocated to the island. About a third of the islanders are of Hispanic origin from many countries and Spanish is the first language for many of these adults.

Hurricane Dorian struck Ocracoke on September 9, 2019 with a “wall of water” coming back down the Pamlico Sound and flooding the island. Some residents had evacuated but many had stayed as they had for generations. There were no fatalities or serious injuries. However, most of the families on Ocracoke Island had damage from the hurricane. Many of their homes and vehicles flooded, and many lost most of their possessions. Many businesses also flooded. FEMA declared the area a disaster for government agencies and systems, but not for individuals. The State of NC provided small business loans and other assistance. There was an outpouring of help from many relief agencies including the American Red Cross, Samaritans Purse, NC Baptist Men, NC Methodist Men and many others. The Outer Banks Community Foundation was helping with their disaster fund and the Ocracoke Interfaith Relief and Recovery Team was formed to help organize many of the efforts and donations. Many homeowners and business owners did not have flood insurance due to the exorbitant costs. When they did have insurance, the payments were frequently delayed for months.

Many of the adults lost their jobs as a result of the hurricane. The economy is primarily based on tourism and they are very dependent on working during the eight-month tourist season for their yearly income. Hurricane Dorian resulted in loss of income for three months in 2019. They reopened for duck hunters in January 2020 only to close again in March due to the COVID-19 virus outbreak. There are state employees (school staff, ferry system staff, DOT staff) and federal employees (park service, post office, health center) that have continuous employment; as well as the staff of the grocery store, the bank, and the realty companies.

### **Ocracoke School**

The school was damaged and as a result the students were out of school for a month. School reopened in October 2019. The students were separated into three different physical locations now. It was very challenging for everyone to deal with having the students and staff in three different locations in the village. Especially devastating was losing their school gym which was

the site of so many school and community activities in the past. Basketball is the favorite island sport and students were not able to have any home games for the middle or high school basketball teams on the island. The gym was the community gathering spot for years and many locals told me how devastating it was to lose this building.

### **Questions for discussion/reflection**

1. In the vignette so far, what are some of the core principles and practices of disaster readiness you read in the story\_especially as it relates to planning for the needs of children, youth and families?
2. What are some of the principles of a systems of care approach to natural disaster preparedness, response and recovery which are reflected?
3. How does the CAP work collaboratively with disaster emergency systems like FEMA?
4. What role do principles of culturally competent and trauma-informed care in disasters apply?

### **First Visit to Ocracoke after Hurricane Dorian**

In early November 2019 I was invited to join the two emergency mental health workers for my first visit and stayed in their temporary housing. During that short visit I was able to meet with school administrators and staff at the temporary school sites, visit the emergency management site at the fire station and drive around the village. The school staff was desperate to have some help and originally thought all 170 children should be seen by a mental health professional. They explained that all of the school staff had received disaster training the previous year. I had also brought copies of Psychological First Aid training for the school as a reference. We discussed the possibility of screening the children for traumatic experiences and they pursued this idea after discussions with their school county administrators. They hoped to get an idea of the number of students with moderate to severe trauma experiences/symptoms with the results of the screening instruments. Unfortunately, they did not have internet services, a student health center, a school nurse, or medical record capabilities.

An impromptu dinner was organized that night. I met the family physician (FP) from the Ocracoke Health Center (OHC). The OHC is a Federal Qualified Health Center (FQHC). Along with the school counselor, the student services director, and the two emergency mental health workers we had a vibrant discussion. The FP has been working at the OHC for nine years and knows the island and residents well. She was very knowledgeable and supportive of our efforts. The school officials wanted services but had no system in place to support such an effort. It became clear that we needed to coordinate with the OHC because they had an established clinic with a staff that was trusted by the residents, as well as the interest and potential to support child mental health services for the short-term and long-term. The FP encouraged me to talk with the CEO of the health center. However, they warned me that in the past the school and the OHC had contracted with mental health therapists for services but they

had been very inconsistent. They wanted to have services that were consistent, continuous and coordinated.

### **Joining the Ocracoke Health Center**

The OHC is the only medical facility on the island. There are also emergency medical technicians on the island that handle emergencies and can transport patients off island if needed by ferry or helicopter. The OHC has a staff of eight and provides a variety of services. They have had telehealth capabilities for almost ten years. In addition, they have had adult psychiatric services for over twenty years provided once a month by an adult psychiatrist from Vidant Beaufort Hospital in Washington, NC (three-hour trip). She primarily sees chronically mentally ill adults and did see some children if needed. The FP also provided mental health services to adults and children.

As suggested, I talked to the CEO soon after my trip. She explained that they could not have volunteers work at the clinic because to use the electronic health record (EHR) you needed to be an employee or contractor. So, I was hired by the OHC as a contractor in order to provide child mental health services. They were desperate for services and I was hired very fast. Another benefit they could offer was living in their second-floor apartment. This was important due to limited housing after the hurricane and chronic lack of housing on a small island.

### **Children's Behavioral Health Service at OHC**

Once I arrived and started at the OHC I had to develop a children's behavioral health service and the EHR component for my practice within the primary care clinic. Referrals to my clinic could be from the youth, the parents/guardians, the school staff or the OHC staff. The school staff had criteria for referral including results of the screening. Services provided included psychiatric evaluations, individual therapy, dual therapy with preschoolers and their mothers, family therapy, medication management and case management. Collaboration with OHC staff, Ocracoke school staff and other child serving system professionals was also an important function. Soon my schedule was full and I increased my time commitment from 20 to 32 hours a week. For the first 10-12 weeks I was seeing 10+ new patients a week plus having follow-up appointments with established patients.

Luckily, I speak a form of Spanish (Southern US Puerto Rican Spanish) and that came in handy because I saw many families from various Spanish speaking countries. Typically, the parent(s) speak Spanish and the children speak English. Some of the children are bilingual and some are not. I found out later that one of the female leaders of the Hispanic community in Ocracoke was one of the first parents who brought her child for evaluation. Once she spread the word about my services, I was inundated with Hispanic families especially grateful that I spoke Spanish. Of course, my Spanish was a bit rusty and I would mix English/Spanish together as I had learned in Puerto Rico. But we made it through usually with the help of their children!

My schedule has been booked and my show rate approaches 95%. That is an amazing feat in a rural area. I have seen children from 4 years to 18 years. I am seeing many middle school students who seemed to be tremendously affected by the storm and the effects on their families and communities. The school recruited a therapist who is seeing many of the high schoolers. I treated some high school patients, especially those who were already on psychotropic

medications. I have also had many children with suspected or diagnosed communication disorders and learning disabilities. I have diagnosed a few children/teens with PTSD but the most common diagnoses have been depression, anxiety, or adjustment disorders. I have a few young children that have been diagnosed with ADHD and/or ODD.

5. What are some of the principles of a systems of care approach to natural disaster preparedness, response and recovery which are reflected in the above section of the story?
6. How does the CAP work collaboratively with existing healthcare systems?
7. What role do principles of culturally competent and trauma-informed care in disasters apply?
8. How does the CAP use and integrate evidence-based principles of care?

### **School Therapist at Ocracoke School**

About the time the OHC hired me to see children and families, the Ocracoke School received a state grant that allowed them to hire a therapist to see students with the recent addition of high-speed internet and videoconferencing capabilities. So, in just a few weeks Ocracoke Island had two professionals to help children and adolescents in need of mental health services. The school therapist would only see children 12 years and older due to her lack of training with younger children.

### **Collaboration between OHC and Ocracoke School**

One of the rewarding experiences has been the collaboration between the Ocracoke School and the OHC on behalf of the children and families. At the initial evaluation I asked every child and guardian for permission for the school counselor, the FP and myself to collaborate in order to obtain adequate information for diagnosis/treatment and also to help the school understand which children are receiving help. This has been a valuable collaboration and has helped with referring children/youth for questionable learning issues and other needs. It has also helped to design the most beneficial individual interventions and to help the school with manifestations of the mental health problems in the classroom. The three of us met once a week after work in the apartment above the clinic. We had snacks and libations while we discussed the students of the week. These meetings have helped me understand so much about the island, culture, as well as the issues and challenges the permanent residents were facing after Hurricane Dorian. This would take much longer to accomplish if I had been seeing patients on telehealth or in the office without this input. The staff of the OHC have also been enormously gracious to help me learn as much as possible about the area and have answered my endless questions with smiles.

### **Expanding the Behavioral Health Service in OHC to adults**

Many of the parents were struggling with stress after experiencing the storm; damage/loss of homes, vehicles, possessions; loss of jobs or lost business and living on a small island with constant reminders of the problem with debris everywhere. Many of the families who lost their homes were given the opportunity to live in loaned homes since the vacation homes are empty. However, as winter started to come to a close the realty companies must start their spring cleaning in anticipation of many tourists beginning to return by Easter. This is resulting in many families having to leave their loaned home before their permanent homes are ready for occupation. There is an emerging housing crisis.

We have been in the middle of an unemployment crisis since the storm because the businesses lost about three months of business in 2019 after the hurricane. So, many of the parents have been out of work since September 2019 and unemployment benefits ended soon after Christmas. And most will not have steady employment until May or June 2020. The money is getting very tight for most families and they have received help in many forms since the storm. It is interesting when these storms happen the outpouring of help and donations in general, but especially for children. The school has received donations from all over the US and foreign countries. The children and families received money donations at Christmas, as well as toys, educational items, clothes, etc. The school staff also received money donations and other supports.

During early 2020 I realized that many of the parents were suffering and some needed to see a psychiatrist. The adult psychiatrist had few hours and no openings. After a discussion, the CEO of the health center agreed for me to add adult patients to my schedule and increase my hours. I saw adults from 25 to 58 years with the main diagnoses being mood disorders, anxiety disorders, adjustment disorders and/or PTSD.

### **Supporting the OHC and Ocracoke School Staff**

Over time one of the most important functions I provided was support for the OHC and Ocracoke School staff. They had all been through a traumatic experience that changed their village and island forever. There were constant reminders everywhere you looked on this small island. And many of the staff had experienced multiple losses (homes, vehicles, possessions, businesses). Despite their personal situations they worked hard to perform their professional missions. I was amazed at their resilience and made sure they knew they could call me when they needed to talk. I was fortunate to have many of those conversations individually and in groups. One group, the middle school teachers, were especially open and willing to talk about their struggles and challenges as their students went through the aftermath of the disaster.

### **Supervision from a CAP Disaster Specialist**

As I would return home every week, I would board a ferry for a two and half hour ride. Then it would be another hour and half drive to my home. This time was valuable for many reasons. I would have time to catch up on medical records, decompress and most importantly receive supervision. I was fortunate to have a CAP colleague who is a disaster expert and very generous with his time. We had “talks on the boat” every week when I was on my way back home on Thursday or Friday. Those talks were my lifeline. I learned so much about disasters and how it affected children, teens and families. But I also reaffirmed my passion for practicing child psychiatry. In the past few years as there was more pressure to make more money, I was tired and questioning if I was making a difference. When I went to Ocracoke I fell in love with the children, teens, families, and community members. It was so refreshing to help people in need who wanted to get better and were so resilient. I am sure that I gained more from them than the reverse.

### **Value of a CAP during the middle phase post-disaster**

It was helpful to have a child psychiatrist at the beginning of this effort because of my experience with the health care system, managed care experience and the many child serving systems. I was able to evaluate children and teens, offer my recommendations, treat as needed

and triage to other professionals and systems as needed. After the psychiatric evaluations I could perform any of the needed mental health work such as individual therapy, dual therapy with younger children and mothers, family work, medication management, case management and consultation with the school and others.

After working on the island for three months, by February I noticed a decrease in number of referrals. I was busy with follow-ups. I began to complete my work with many children and teens, and some of them were referred for other evaluations regarding developmental and academic needs. I continued to have more middle school student referrals and enjoyed getting to know this group. The family work was advancing by this time too.

### **Helping recruit therapist and transitioning patients**

By the end of January 2020, it was becoming clear that the OHC could benefit more from a therapist going forward who could treat children, teens and adults. It would help if that person was trained in child therapy because those therapists also usually have experience with adults. At the beginning of my stay in Ocracoke I had suggested recruiting a larger health system to contract for services once I left.

However, with more experience I suggested they look for a therapist to contract with the OHC directly. I admitted to them it would be more realistic to recruit someone in Eastern NC who could serve the patients through telehealth. The OHC staff agreed and they looked for a therapist. They have found a seasoned therapist who is a LMFT and has worked as a child, adolescent and adult therapist, a care coordinator for the regional Medicaid managed care company, and with non-profit agencies. She will work for them one day a week via telehealth and see individuals of all ages as needed.

My time at the OHC was winding down. We wrote a memo on March 2, 2020 for the patient portal to notify patients and families of my upcoming departure and the arrival of the new therapist. We had a meet and greet clinic visit planned for the new therapist but the COVID -19 virus resulted in cancellation of that event. Fortunately, I was able to go through the process of finishing services with my patients and families. My last week was different with telephone visits, writing treatment summaries and packing up my stuff in the apartment. I was so thankful the FP would take over the medication management for my patients and a trusted, competent therapist and friend will become their new therapist.

### **Becoming a Hyde County School Volunteer**

I miss Ocracoke, the patients and their families, and the OHC and school staff. Before leaving, I met with the school administrators and requested that I continue to have a long-term relationship with the school, students and staff. I suggested that I pursue becoming a volunteer and come to Ocracoke periodically to work with the school counselor and students. They were excited and agreed. Since returning from the island I have completed the volunteer application and am a certified Hyde County School Volunteer. So far, I have not been able to go to the island with the COVID 19 virus stay-at-home- orders. I hope to have a long-term relationship with the school.

### **I am not an “O’Cocker” but I love Ocracoke**

Since leaving I have sent goodie boxes of candy to the OHC and goodie boxes of Easter toys for the OHC students. I will be returning to Ocracoke when I am able and will keep in touch with the friends I made. This is what I call disaster response.

In reflecting on the CAP’s story where did you see the following principles illustrated:

9. Recognizing the psychological impact of disasters on adults, children and families and the important role of child psychiatrists in supporting communities
10. Engaging in clinical practice which includes cultural humility and trauma-informed care in the context of disasters
11. Using resources and protocols that exist within the system to provide patient disaster readiness and promote patient care
12. Recognizing the role that communication and collaboration between child and adolescent psychiatrists and other providers can serve in offering care in disasters
13. Appreciating the importance of community partnerships to address medical and mental health concerns and supporting community resilience and recovery
14. Considering the differential impact that disasters can have in medically, psychologically and socioeconomically vulnerable populations within the framework of social justice and equity
15. Practicing self-care
16. Attending to ethical issues in responding to crises

**Conclusions:** Child psychiatrists and other child serving providers provide valuable medical experience and expertise for preparing and responding to disasters and mass traumas. It is important to integrate developmentally and culturally appropriate care into disaster response and to effectively provide assessment, treatment and consultation for children, adolescents and families as part of a team-based and coordinated systems of care response to natural disasters.

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## RESOURCES

1. Resources on phases of disasters at SAMHSA online:  
<https://www.samhsa.gov/dtac/recovering-disasters/phases-disaster>
2. AACAP Practice Parameters on Disaster Preparedness  
<https://www.google.com/search?q=AACAP+Practice+Parameters+for+Natural+Disasters&aq=chrome..69i57j0l7.15108j1j4&sourceid=chrome&ie=UTF-8>
3. National Child Traumatic Stress Network: About Psychological First Aid:  
<https://www.nctsn.org/treatments-and-practices/psychological-first-aid-and-skills-for-psychological-recovery/about-pfa>  
Available in multiple languages.
4. The National Academy of Medicine’s Action Collaborative on Clinician Well-Being and Resilience offers a wealth of actionable resources to support the development of well-being–focused programs and policies across sectors. Available at:  
<https://nam.edu/initiatives/clinician-resilience-and-well-being/>
5. The Veterans Administration’s National Center for PTSD maintains resources section on self-care strategies (e.g., mobile apps that front line health care workers who have limited time for self-care may find useful). Available at:  
[https://www.ptsd.va.gov/professional/treat/cooccurring/moral\\_injury\\_hcw.asp](https://www.ptsd.va.gov/professional/treat/cooccurring/moral_injury_hcw.asp)