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The DMH Responder is a quarterly production of...

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Welcome

Welcome to the Fall 2017 issue of the **New York DMH Responder**, our quarterly newsletter for the Disaster Mental Health community. This issue focuses on the fifth anniversary of Superstorm Sandy and the disaster mental health response lessons that have been learned since that epic event – an all too timely topic given the intensity of the 2017 Atlantic hurricane season that is now wrapping up after impacting numerous communities in the U.S. and beyond. We summarize multiple research studies that were conducted in New York and New Jersey post-Sandy on various aspects of survivor reactions. We also include a round up of useful apps and tech tools that can help support your future response work in hurricanes and other disasters, and we describe our upcoming annual webcast which will focus on the mental health response to mass violence (sadly another all too relevant topic given recent attacks in New York City and elsewhere). And we want to hear from you about lessons you've learned from our regional hurricanes and other events, so please take our brief survey, described below. We always welcome your comments and suggestions, so please send feedback about this newsletter to Steve Moskowitz at OMH.



“The time to repair the roof is when the sun is shining.”

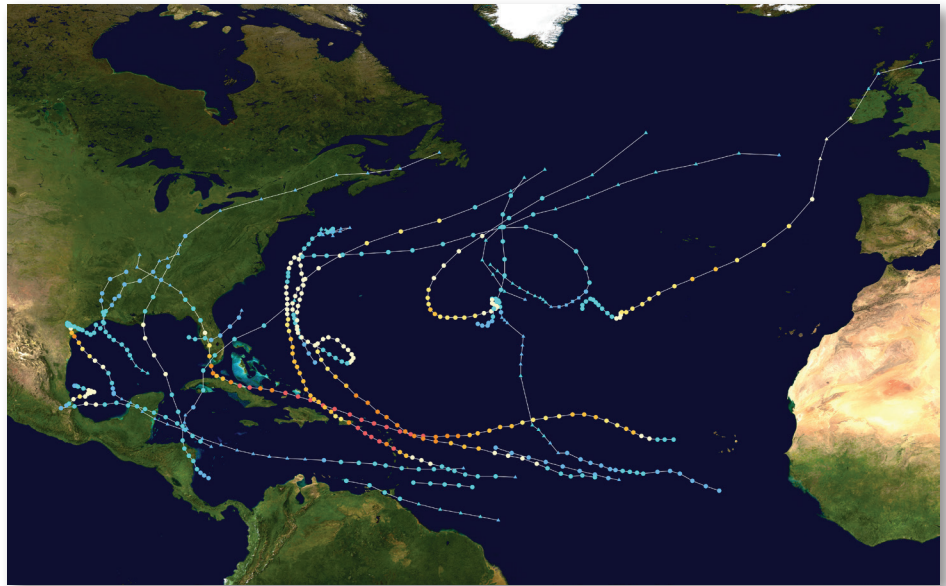
–John F. Kennedy

Superstorm Sandy and the Changing Scope of Weather Events: What Have We Learned?

The 2017 Atlantic hurricane season was notable in many ways. According to the National Hurricane Center, there were 17 named storms (including one in April, six weeks before the traditional beginning of the season) including 10 hurricanes, five of which reached Category 5 strength. Two of them, Irma and Maria, made landfall at full strength, causing epic destruction in the Caribbean and Dominica; sections of Puerto Rico still remain without power or resources more than two months later. Harvey was the first hurricane-strength storm to make landfall in the continental US since 2005 and while it was then downgraded, it set records for both the amount of rainfall dropped and the financial damage caused by a tropical cyclone as days of rain inundated Houston and surrounding areas.

The scope of the geographic impact across the season was remarkable, from the Leeward Islands southeast of Florida, crossing much of Florida, west to the Gulf Coast and into Texas, and even reaching all the way across the northern Atlantic Ocean to batter Ireland and Britain when Ophelia made landfall as a hurricane-strength extratropical cyclone.

Financially 2017 was the costliest season on record, causing over \$300 billion in damages across the impacted regions. And of course the human toll is beyond counting. Direct fatalities from all of the storms exceeded 400



people, but that does not include indirect deaths resulting from problems like inadequate access to healthcare in Puerto Rico and other regions that are still struggling to recover. The total number of people displaced from their homes, either temporarily or permanently, is impossible to measure accurately, but Hurricane Harvey alone displaced more than 30,000 people in and around Houston, and officials estimate that tens of thousands of residents of Puerto Rico have been relocating to the mainland US, often to the New York City area which already has a large Puerto Rican population. For many of them that move may be permanent, resulting in the kind of loss of community and relocation stressors that were widespread for former Gulf Coast residents after Hurricane Katrina.

Reawakening Memories of Sandy and Irene

Thankfully, New York State was spared any direct impact from this season's storms, though many New Yorkers have connections to those in the affected regions including and beyond Puerto Rico and the Caribbean Islands. However, the intensity of the season, coinciding with the fifth anniversary of Superstorm Sandy and the sixth anniversaries of Hurricanes Irene and Lee, no doubt reawakened memories for many of us of our own experiences responding to – and often experiencing personally – the flooding and protracted recovery these major weather events can cause. What have New York State emergency management, healthcare, and disaster mental health professionals learned from our experiences, and what do this

Research Roundup: Hurricane Sandy's Impact

The following are summaries of some of the research published recently on the storm's effects on various aspects of mental health. Unless otherwise noted, original articles can be found through the PsycInfo database, and many may be available through Google Scholar.

Biopsychosocial Effects on Children and Families

One of the most comprehensive studies of Sandy's impact was conducted by researchers from the National Center for Disaster Preparedness at Columbia, the New York University College of Global Public Health, and the Rutgers School of Social Work. With funding from the New Jersey State DOH, the partners in the Sandy Child & Family Health Study conducted lengthy in-person interviews with about 1,000 residents of the most impacted New Jersey counties, and they published four reports on their findings; follow-up research is in the works now.

Their interview questions addressed various levels of exposure and outcomes to try to understand how experiences correlated with specific health and mental health effects.

Exposure measures included whether a member of the household was in contact with floodwaters, debris, or mold, and whether the home was slightly or moderately damaged by the storm or sustained major structural damage. They also asked about the incidence of health conditions such as asthma; emergence of mental health symptoms including PTSD, depression, and anxiety; and economic stressors resulting from recovery efforts.

Many respondents had some kind of direct exposure to storm-related hazards including mold in the home (22% overall, with those in households earning less than \$20,000 per year reporting double the rates of mold exposure of higher income households), floodwaters (32%), or storm debris (56%), with the highest exposure rates among those whose homes suffered the worst damage. Household income also correlated with mental health outcomes in predictable ways: PTSD and severe distress decreased as income rose, while reports of social support and better family functioning both increased along with income. This is yet more evidence that people on the lower end of the socioeconomic

spectrum are prone to more severe outcomes post-disaster. Interestingly, participants who reported major structural damage and those in the deepest poverty levels reported similar struggles regarding having enough money to pay for rent or mortgage, utilities, transportation, or food. This highlights the powerful financial stressors associated with experiencing extensive property damage, whatever one's pre-disaster financial status had been.

Data was also collected on the functioning of one child (age 5 to 18) per household with children. Happily, 93% of all parents reported that their child's overall physical health was good, very good, or excellent.



However, 18% said their child had experienced some depression, sadness, nervousness, sleep issues, or social problems since the storm, with higher rates (35%) among children in low-income

continued on page 4

Superstorm Sandy and the Changing Scope of Weather Events, *continued*

year's storm responses reveal about ongoing challenges? And what can OMH and DOH do to keep supporting your readiness to respond? We want to hear from you!

Please take our brief survey on Lessons from New York State Hurricanes:

<https://tinyurl.com/NYSresponder>

It's anonymous (unless you would like to provide your contact

information for possible follow-up questions) and will only take a few minutes to complete. We'll summarize replies in a future issue of the DMH Responder. Thanks, and we look forward to learning from your experiences.

Research Roundup: Hurricane Sandy's Impact, *continued*

households. Surprisingly, rates of child distress were significantly higher among children living in homes with minor rather than major damage (42% vs. 28% respectively), perhaps because those with major damage had moved while those with minor damage were still in the home and faced regular reminders of the storm. Again, these findings reinforce our understanding that children should be considered vulnerable to negative mental health effects of disaster, particularly if caregivers aren't able to shield them from direct exposures.

This study and its companion reports contain many useful insights into the events impact and can be found here:

<http://ncdp.columbia.edu/microsite-page/sandy-child-and-family-health-study/scafh-publications-reports/>

Source: "The Hurricane Sandy Person Report: Disaster Exposure, Health Impacts, Economic Burden, and Social Well-Being." D. Abramson, D. Van Alst, A. Merdjanoff, R. Piltch-Loeb, J. Beedasy, P. Findley, L. Peek, M.n Mordy, S. Moroso, K. Ocasio, Y.S. Park, J. Sury, & J.Tobin-Gurley. *Sandy Child and Family Health Study*, Rutgers University School of Social Work, New York University College of Global Public Health, Columbia University National Center for Disaster Preparedness, Colorado State University Center for Disaster and Risk Analysis, Briefing Report 2015_2. (Release date 1 June 2015).

The Power of Community

2,205 New Jersey residents (ages 54-80) who self-reported exposure to Hurricane Sandy were surveyed 8-33 months later. This was part of an ongoing study, so pre-exposure individual characteristics were controlled for. The authors found that greater storm exposure was linked to higher levels of PTSD symptoms, but social cohesion was linked to lower reports of PTSD symptoms and moderated the association between exposure and PTSD. Their conclusion was that



building social connections in older adults' neighborhoods that promote cohesion can reduce the negative psychological impact of a disaster, but of course that assumes the individual lives in a community (rather than in an institutional setting) and that they are able to return to that community even if they have been temporarily displaced.

Source: Heid, A.R.; Pruchno, R.; Cartwright, F.P.; & Wilson-Genderson, M. (2007).

Exposure to Hurricane Sandy, neighborhood collective efficacy, and post-traumatic stress symptoms in older adults. Aging & Mental Health, 21, 742-750.

The Power of Losing Power

This study examined residents of eight New York counties (Bronx, Queens, Kings, Richmond, New York, Nassau, Suffolk, and Westchester) that experienced serious storm damage in order to evaluate changes in environmental factors, especially power outages, and their relationships to emergency department (ED) visits for mental health problems. Blackouts were common and extended, especially on Long Island where more than 90% of Nassau households lost power, most for up to two weeks after the storm. However, ED visits for mental health issues were significantly higher for Bronx residents than Nassau residents (daily average of 7.15 versus 2.45 per 100,000 respectively) or other communities, with about half of those visits being for substance abuse issues in all areas. The authors suggest this discrepancy is because Bronx County had the highest proportions of Hispanic, African American, and low-income households, as well as low educational levels, reinforcing the point that post-disaster distress is often correlated with pre-existing stressors and a lack of recovery resources. For all neighborhoods, average ED visits

Research Roundup: Hurricane Sandy's Impact, *continued*

spiked five days after the storm, perhaps reflecting the limits of vulnerable residents' ability to tolerate post-storm conditions. This suggests that DMH responders should focus efforts on regions with concentrated populations of vulnerable residents as well as on areas with more than brief power outages – lessons that should be applied now in Puerto Rico.

Source: Lin, S.; Lu, Y.; Justino, J.; Dong, G.; & Lauper, U. (2016). What happened to our environment and mental health as a result of Hurricane Sandy? Disaster Medicine and Public Health Preparedness, 10, 314-319.

Long Island during the storm. These children had originally been enrolled in the study at age 3 so the researchers had extensive baseline data on their pre-disaster temperaments to compare with post-storm emotional functioning. They found that children with a temperamental tendency towards negative emotionality, particularly anxiety or sadness, at age 3 displayed higher levels of depressive and anxiety symptoms respectively. This suggests that a child's temperament could be a valuable tool in recognizing what type of post-disaster symptoms might be expected and, hopefully, prevented. Part of DMH

and its facets moderate the effects of exposure to Hurricane Sandy on children's postdisaster depression and anxiety symptoms. Journal of Abnormal Psychology, 125(4), 471-481.

The Risks of Self-Medicating with Alcohol or Drugs

These researchers investigated the prevalence and correlates of alcohol use and nonmedical prescription drug use to cope with PTSD symptoms in two samples of adult residents of New York City neighborhoods affected by Hurricane Sandy.



Child Temperament as Clue to Post-Disaster Response

While all children should be viewed as vulnerable, some are at particularly high risk for negative outcomes. This longitudinal study looked at post-Sandy functioning among 332 children, mean age 10.25 years, who were living on

responders' support for parents might include psychoeducation about this connection to child temperament so parents are aware if their child is at a higher risk of negative consequences.

Source: Kopala-Sibley, D.C., Danzig, A.P., Kotov, R., Bromet, E.J., Carlson, G.A., Olin, T. M., Bhatia, V., Black, S.R., & Klein, D.N. (2016). Negative emotionality

914 participants completed structured interviews at either 13 to 16 or 25 to 28 months post-disaster. Those with PTSD symptoms indicated whether they coped with their symptoms through alcohol or drug use, and the authors explored correlates of substance use coping including demographic characteristics, lifetime and hurricane-related exposures, and psychiatric

Research Roundup: Hurricane Sandy's Impact, *continued*

symptoms. They found that over a third of participants reported PTSD symptoms. Of these, 12.8% used alcohol and 9.2% used drugs to cope. Older age and being a parent living with a child under 18 years old at the time of the hurricane were associated with a lower likelihood of alcohol use coping, while more severe depression symptoms were associated with a higher likelihood. This suggests that some disaster survivors may be at risk for substance misuse as a coping mechanism for their post-disaster PTSD symptoms, particularly for those with higher depression symptoms. This may help DMH responders focus substance misuse prevention efforts towards those at higher

risk of self-medicating in this manner.

Source: Lowe, S.R.; Sampson, L.; Young, M.N.; & Galea, S. (2017). Alcohol and nonmedical prescription drug use to cope with posttraumatic stress disorder symptoms: An analysis of Hurricane Sandy survivors. Substance Use & Misuse, 52(10), 1348-1356.

Gender Differences in Post-Storm Reactions (or Not!)

Past research on disasters has often found higher rates of distress among women than men, though some of that difference may reflect women's

higher willingness to express their emotions. To explore differences between male and female Sandy survivors, the authors of this study conducted an online survey of 1,000 people from the New York metropolitan area four weeks after the storm. Participants' mean age was 45.2 and two-thirds were female. They were asked about a variety of factors including level of exposure to the Sandy and their fears about future hurricanes and other disasters. Women had significantly higher fears of some future events compared to men including terror attacks and personal accidents or illness, but there were no differences between genders regarding fears of future hurricanes.

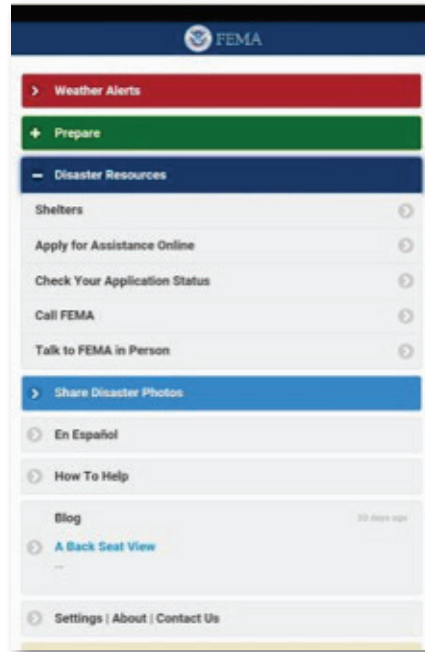
Women were more likely to seek information through Facebook than men, but no gender differences emerged when examining sources of psychological support. The relevance of the findings is limited by the facts that all responses were self-reported and only 28% of the sample had much direct exposure to the storm, but in general the study suggests that men and women's reactions are shared more than they differ, so while DMH helpers should be attentive to individual differences in responses, they should not make assumptions about gender-based patterns.

Source: Hamama-Raz, Y.; Palgi, Y.; Shrira, A.; Goodwin, R.; Kaniasty, K.; & Ben-Ezra, M. (2015). Gender differences in psychological reactions to Hurricane Sandy among New York Metropolitan Area residents. Psychiatric Quarterly, 86(2), 285-296.

Hurricane Readiness: Building Your Tech Go-Bag

During Harvey's landfall in Texas, social media was abound with pleas for help. With 911 centers overwhelmed, desperate families and individuals began posting their addresses on social media in hopes of attracting rescuers and in many cases, these attempts were successful. As we saw from Harvey and many other recent disasters, the ability to harness technology to aid us in disaster planning, response or recovery can be incredibly useful. We've compiled a list of potential aids, mostly in the form of phone and tablet apps, which will serve you well during the next hurricane or other disaster. A note of caution: Don't be too reliant on these technologies, as cell phone batteries die and wireless networks and communication towers often experience outages just when we need them most. Still, it may be valuable to share these tools with colleagues as well as survivors.

Preparing and Responding to a Hurricane



FEMA

Federal Emergency Management Agency

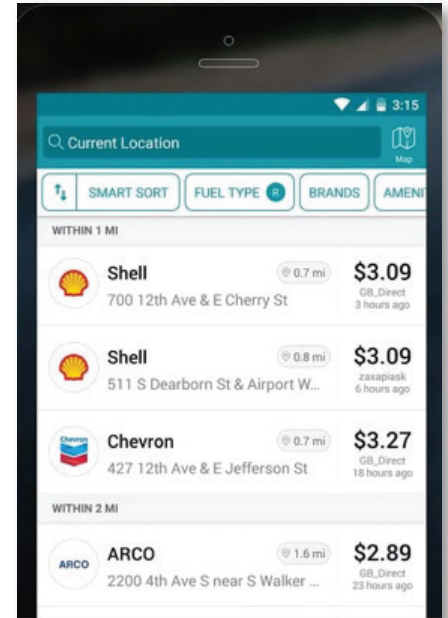
Platforms:

[iOS](#)

[Blackberry](#)

[Mobile Web](#)

FEMA's disaster app has a tool for building an emergency kit, general tips on how to prepare for disasters, and information for affected individuals on how and where to apply for assistance. This app can be useful to you in the field and for survivors.



GasBuddy

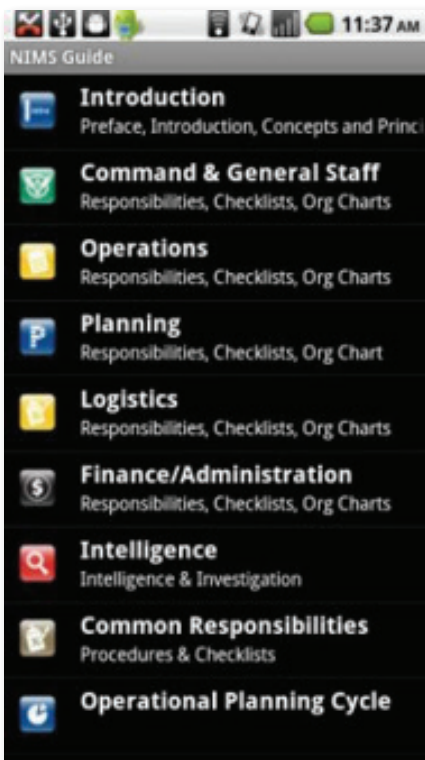
Platforms:

[Android](#)

[iOS 9.0 or later](#)

Free

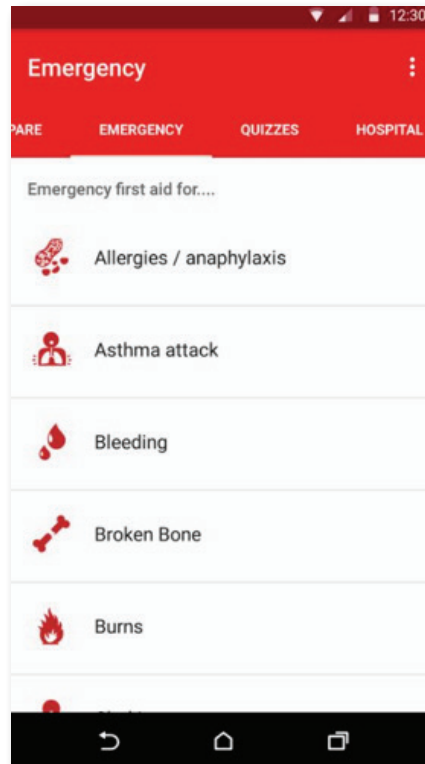
Originally just a tool to help drivers find the cheapest gas stations in their area, GasBuddy quickly morphed in the aftermath of Hurricane Harvey to begin tracking gas station outages. After many Florida gas stations ran out of fuel after Hurricane Irma, leaving evacuees stranded, Florida Gov. Scott praised the app for its utility in helping Floridians evacuate.

Hurricane Readiness: Building Your Tech Go-Bag, *continued*Preparing and Responding to a Hurricane, *continued***NIMS ICS Guide**

[Android](#) \$6.99

[iOS](#) \$14.99

Though it has a much higher price tag than the other apps the NIMS ICS Guide is recommended for responders working in Emergency Operation and Incident Command Centers. It's especially useful for DMH personnel who may not have a strong background or familiarity with the Incident Command System.

**First Aid**

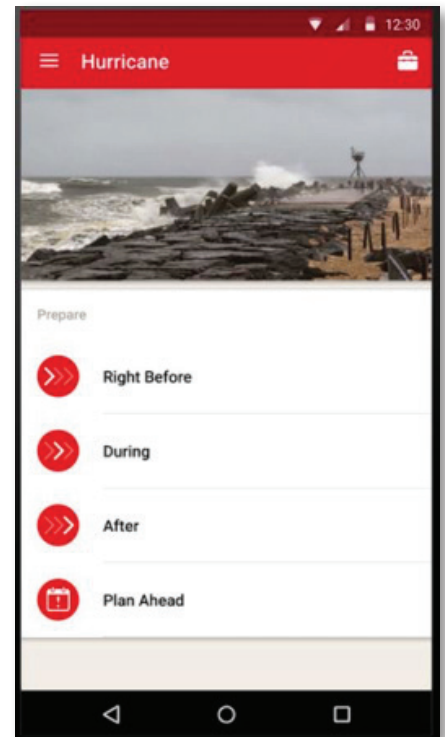
American Red Cross

Free

Platforms:

[Android](#)
[iOS](#)

First Aid by American Red Cross provides free lifesaving first aid instruction and disaster preparedness information, including videos, interactive quizzes and simple step-by-step advice.

**Hurricane**

American Red Cross

Free

Platforms:

[Android](#)
[iOS](#)

The Hurricane by American Red Cross app provides access to local and real time information on what to do before, during, and after hurricanes, including an "I'm safe" messaging alert.

Hurricane Readiness: Building Your Tech Go-Bag, *continued*Preparing and Responding to a Hurricane, *continued***National Hurricane Center**

Platform:

[Mobile Web](#)

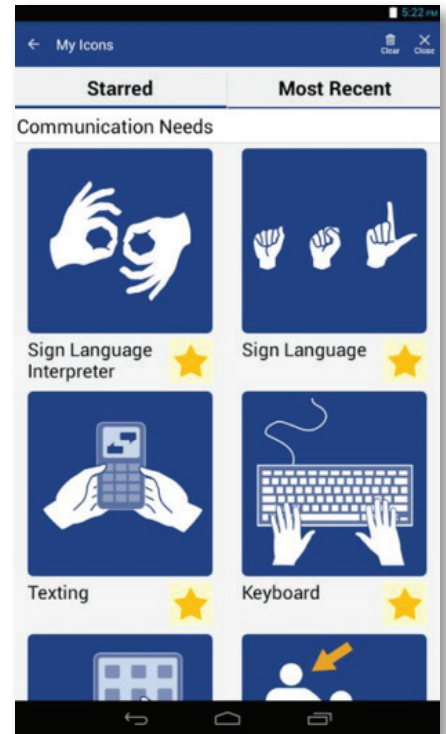
Free

The National Hurricane Center has mobile enhanced Web page that provides access to critical hurricane advisories and marine forecasts.

**Portable Battery Charger**

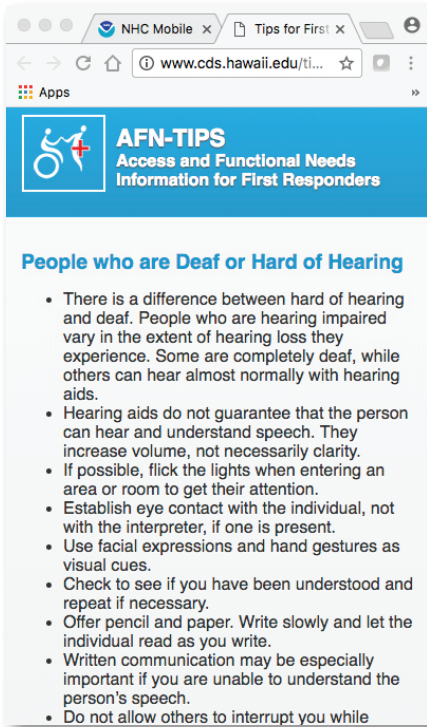
Cost: Range

You'll want to have one or two of these in your go-bag. We recommend doing some comparison shopping online to find the best options for your needs and budget. Don't wait until the last minute, you'll have mixed success picking one up at a grocery store.

Helping You Help Vulnerable Populations**Show Me for Emergencies**Massachusetts Department of Public Health
Platforms:[Android](#)
[iOS 8.0 or later](#)

Free

This app offers a selection of disaster and related icons that can help emergency workers communicate more effectively with people with language barriers, hearing impairments, and other communication barriers. Open the app to and point to icons to relay emergency information and directions (sign-in, wait in line) and pass it back to the client to relay their needs and emotions.

Hurricane Readiness: Building Your Tech Go-Bag, *continued*Helping You Help Vulnerable Populations, *continued*

Access and Functional Needs Information for First Responders (AFN-TIPS)

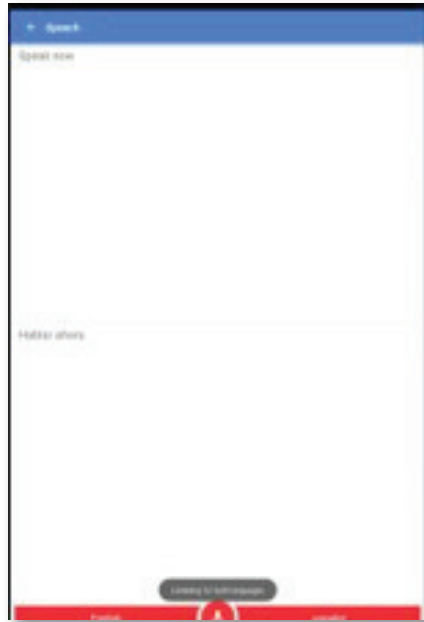
Hawaii Emergency Preparedness System of Support Project at the Center on Disability Studies at the University of Hawaii

Platforms:

[Mobile Web](#)

Free

This resource includes tips and information about people with access and functional needs, and covers topics such as autism, visual impairment, chemical sensitivities and mental illness. While it appears that the app is no longer available, the information is available in mobile format, but you'll need to be connected to the internet to use it.



Google Translate

Google

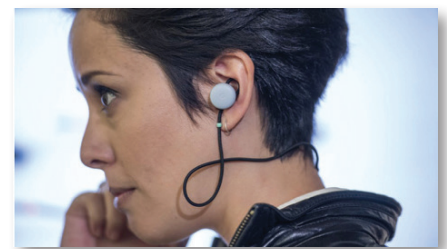
Platforms:

[Android](#)

[iOS](#)

Free

Google's translator app offers the ability to communicate in more than 70 different languages. For disaster responders, the ability to break through language barriers to give timely, accurate information and support to survivors is invaluable. Android users can download languages ahead of time to access translations without 3G and can even take photos of signs and documents for easy translations.



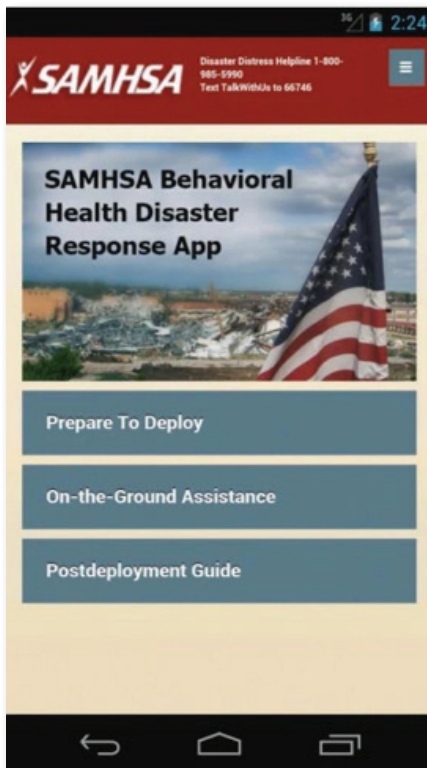
Keep an eye on: Google Pixel Buds & Google Pixel 2

Cost: A pretty penny

When Google showcased this new product, they made headlines for the Pixel's ability to interpret real-time conversations between people with different language fluency. If you often find yourself trying to communicate with others speaking a different language, this may be a technology you want to consider investing in.

Hurricane Readiness: Building Your Tech Go-Bag, *continued*

Responding to Disaster Mental Health Needs

**SAMHSA Disaster App**

SAMHSA

Platforms:

[iOS](#)[Android](#)[Blackberry](#)

Free

This is a great app for disaster mental health responders. This technology allows the ability to search for evidence based tools and materials, send information to colleagues and survivors quickly, and it can help you locate mental health resources, including national hotlines and nearby clinics.

**PFA Mobile**

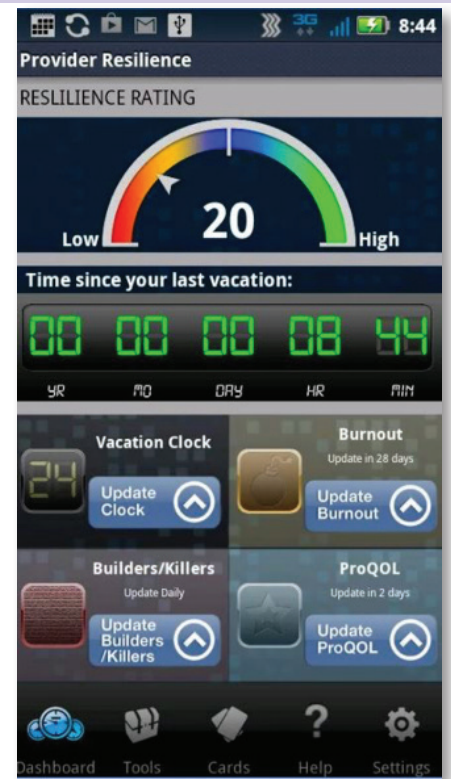
National Child Traumatic Stress Network

Platforms:

[iOS](#)[Android](#)

Free

Useful for those using Psychological First Aid in the field, PFA Mobile offers interventions, tips, and other resources to support responders. Developed by the VA's National Center for PTSD, National Child Traumatic Stress Network, and DoD's National Center for Telehealth and Technology, this app has an incredible breadth of information

**Provider Resilience**

National Center for Telehealth & Technology

Platforms:

[Android](#)[iOS](#)

Free

Offered by the National Center for Telehealth and Technology Provider Resilience allows you to assess your burnout, secondary traumatic stress and compassion fatigue in a quick and easy app. Provider Resilience also allows you to keep track of how long it's been since you've had a day off and can give you tips on coping and maintaining compassion satisfaction.

Hurricane Readiness: Building Your Tech Go-Bag, *continued*

Practicing Good Self-Care

**Tactical Breather**

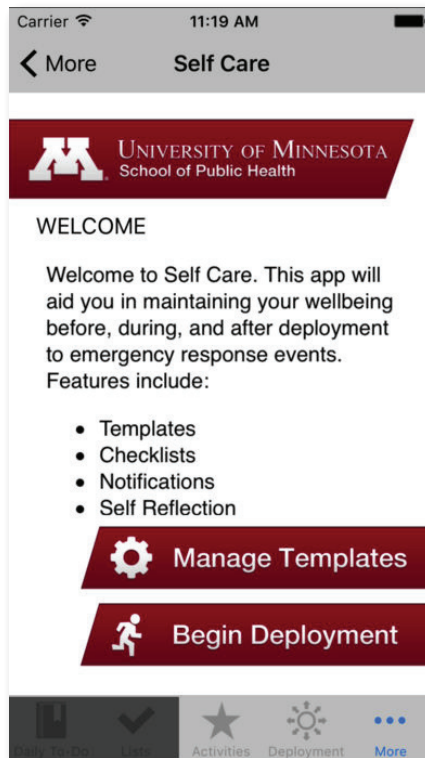
National Center for Telehealth and Technology

Free

Platforms:

[Android](#)
[iOS](#)

Another app created by the National Center for Telehealth and Technology, Tactical Breather is an app that allows the user to practice breathing in a way that lowers their arousal levels. Useful in both disaster and other clinical settings to help an individual maintain calm.

**Responder Self Care**

University of Minnesota School of Public Health

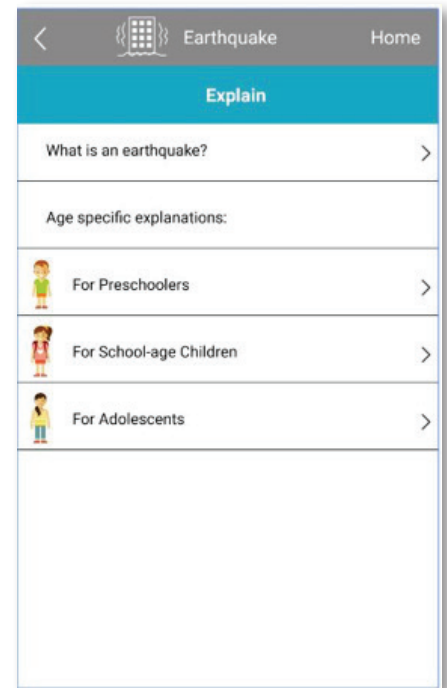
Platforms:

[Android](#)
[iOS](#)

Free

Released by University of Minnesota School of Public Health, Responder Self Care helps you keep track of your wellness as you respond to a disaster. From the app's description: "This mobile app aids those deployed to emergency response events in maintaining their own physical, emotional, and social well-being. It provides checklists for before, during, and after deployment that help responders pack for deployment, take care of daily needs, maintain important relationships, reflect on experiences, and more."

Helping Kids

**Help Kids Cope**

National Child Traumatic Stress Network

Platforms:

[Android](#)
[iOS](#)

Free

Help Kids Cope is designed to help parents better support their children. It includes ways for parents to communicate and support children in age appropriate ways, as well as support themselves.

Hurricane Readiness,
continued

Helping Kids, *continued*



MonsterGuard
American Red Cross
[Android](#)
[iOS](#)

This is an educational game targets children from the ages 7 to 11 but children (or adults) of all ages can enjoy. By training as a “Monster Guard”, kids will learn how to build an emergency preparedness kit, a pillowcase kit and learn about to stay safe in different emergencies. With cute characters and a fun concept, it’s a good way to introduce kids to these topics.

Save the Date: Annual DOH & OMH Webcast Training

Mental Health Consequences of Mass Violence

Friday, February 9, 2018 1:00-4:00 pm

This web streamed training will focus on the mental health consequences of incidents that cause mass violence, resulting in multiple casualties and widespread adverse psychological effects for diverse impacted groups. These events include mass shootings in schools, nightclubs, businesses and other settings, as well as terrorist attacks using bombs or other powerful conventional weapons. They could also result from the use of non-traditional weapons like the wave of recent attacks in Europe and New York City where individual perpetrators have intentionally driven trucks into crowds. Extensive research on trauma reactions makes it evident that these events share two particularly challenging characteristics: 1) They are large in scope, impacting many individuals and destabilizing their recovery environment; and 2) they involve intentional interpersonal violence which typically correlates with more extreme and long-lasting psychological distress than natural disasters or accidents and also are likely to result in a highly complex and protracted response requiring cooperation among emergency management, law enforcement, healthcare, and mental health professionals to support the needs of survivors. This webcast will address not only how to treat survivors’ mental health consequences but how to do so within the broader context of the disaster response – including considerations for the psychosocial reactions of the responders themselves.

The webcast will be organized by the SUNY New Paltz Institute for Disaster Mental Health and delivered by Steve Crimando, an expert on violence prevention with the New Jersey Division of Mental Health Disaster & Terrorism Branch. It will be webcast to hospitals, psychiatric facilities, and other sites statewide so viewers can network and participate in interactive sessions, so please watch for announcements of viewing sites in your area.



Save the Date for the 15th Annual Institute for Disaster Mental Health Conference Psychosocial Response to Mass Violence April 27, 2018

Registration fees for qualified DOH and OMH personnel will be covered by generous sponsorship by the New York State Division of Homeland Security and Emergency Services. Please check <http://www.newpaltz.edu/idmh> for programming updates.