EXTREME HEAT AND MENTAL ILLNESS:
TOOL KIT FOR MENTAL HEALTH CARE PROVIDERS

Heatwaves are now more frequent, extreme and result in increased risks of morbidity and mortality, particularly for those with mental illness. Extreme heat also contributes to heat related disasters thereby amplifying mental health effects of wildfires, extreme storms and flooding. It is essential to have an informed health care workforce that can respond to the impacts of acute and recurring periods of extreme heat. All mental health providers, including, including psychiatrists, have a unique role in providing care to those with pre-existing mental illnesses and to those at risk of developing new mental health symptoms due to extreme heat.

SPECIFIC MENTAL HEALTH RISKS OF EXTREME HEAT:
Mood: Increases dysphoria, depression and irritability;
Behavior: Increases in aggression, violence; suicide and substance use;
Cognition: Impairments in working memory, attention, reaction time;
Sleep: Insomnia

Unique Risks to Psychiatric Patients:

- The psychiatric and substance abuse population, are vulnerable groups with increased morbidity and mortality during heat waves; Core symptoms of psychotic illnesses with disorganized thought patterns, impaired reality perception and testing can potentially contribute to impaired judgment, executive functioning and planning for adverse circumstances. Patients with significant depression with symptoms of apathy, listlessness, impaired motivation and drive and limited self care are especially vulnerable to not taking adequate precautions to protect themselves during extreme heat. Patients with pre-existing psychiatric symptoms have documented increased rates of Emergency Department visits and increased mortality due to heat stoke during extreme heat.
- Schizophrenic patients may have an underlying impairment in thermo-regulation intrinsic to the disease interfering with their ability to detect increases in core body temperature.
- **Homeless mentally ill** have the combined burden of psychiatric vulnerabilities as well as inability to secure safe shelter resulting in greater risks of exposure to extreme weather conditions.
- People with substance use behaviors including young users, are at higher risk because of poor self care, inattention to risk and reduced awareness of external circumstances. They have higher mortality rates during extreme heat compared to a none substance use population.
- **Specific risks of psychiatric medications on heat regulation,** Many psychiatric medications have potential to interfere with heat regulation.

Vulnerable Populations:

- In addition to patients with pre-existing psychiatric disorders and substance abuse disorders other populations with particular risks of heat related risks include:
  - Elderly, especially frail and chronically ill,
  - Infants, toddlers and young children (smaller body mass and fluid volume make them particularly vulnerable to dehydration. Infants and young children less capable of communicating distress)
  - Women, especially pregnant women,
  - Low income communities,
  - Communities of color
  - Outdoor workers
  - Homeless population.

RESPONSE / INTERVENTIONS

- Clinical and Patient Management
  - Psycho-education with patients and families about health risks, signs of heat stress and protective behaviors for management during heat waves, medication use.
    Information for patients and families, see Coping with Extreme Heat, provide guidelines
    - Repeated reminders to stay hydrated, drink lots of water (especially important for elderly and very young). Provide guidelines
    - Plan for referral to urgent drop in centers for vital signs and core body temperature checks with signs of heat stress. with signs of heat stress
  - Daily contact and check ins with high risk patients, especially patients with psychosis, depression, cognitive impairments and those with history of violence and suicide.
  - Identify safe shelter conditions and provide list of respite places and cooling centers, discuss plans for transport for mobility challenged patients before extreme heat events
  - Adjust medications that are exacerbating heat-related problems especially if other mitigation strategies are ineffective or not feasible for particular patients.

- Agency and Clinic Preparedness

  ALL OF THESE MUST BE DONE AHEAD/BEFORE HEAT WAVES:
  - Develop management plans with patient, families, staff at residential institutes and day centers including plans for reminders for frequent hydration and availability of respite shelters.
    Who will be responsible for what? Organizational chart; Identify staff and clinic leaders for these tasks;
  - Plan for closer monitoring of vulnerable populations; Engage family member, caregivers, case managers, visiting nurses, outreach workers,, pharmacies, especially for severely mentally ill, elderly, and homeless; Utilize alerting systems with text alerts, emails with messaging for clinic patients;
    Plan how you will communicate and stay involved with patients who do not use technology!
  - Collaborate with parents, schools, child centers, youth sports and activity centers with special advise for infants, children, teens (especially teen athletes), senior centers or day treatment/recreation centers, homeless services and shelters . Pharmacies as source of education when meds dispensed; posting messages
  - Create culture of attention to climate related health issues, conduct regular staff training prior to periods of greatest vulnerability and identify roles for staff members.
    EVERYONE IN CLINIC TAKES OWNERSHIP

Systems of Care: Interface with Public Health and other Public Agencies:

- Coordinate with public health agencies regarding local and regional heat wave preparedness and response plans, Mental health response needs to be imbedded IN Disaster Preparedness plans mental health leadership must be a part of the Chain of Command in Disaster Preparedness systems. THIS MUST BE DONE AHEAD OF DISASTER EVENTS, This is complex political task, Mental Health Leaders in local and state agencies and communities should to be identified as the point person to be part of the leadership for planning and implementation.
  - Contribute appropriate messaging and information for mentally ill, messaging thru mass text alerts, social media and email, local alerting systems
  - Build collaborative relationships between general health and mental health agencies and public and community groups, including public health departments, first responders, schools, churches and synagogues, recreational centers, libraries, homeless services,
  - Disaster Psychiatry Model or FEMA training can be useful as guides for learning about systems response.
- Build collaborative relationships with specialty providers for vulnerable populations (emergency room departments, OB-GYN, Geriatricians, Pediatricians, and other Subspecialty providers.
- Specific planning for homeless mentally ill population and homebound elderly,
- Utilize public health educators in developing and implementing community education strategies,
  - Develop talking points for media (esp weather reporters) with guidelines to protect from extreme hea. Develop relationship with local media before events so you are known as "go to experts",
  - Use PHARMACIES as education partners.

ADDITIONAL RESOURCES

- Strategies for interventions with mental health and substance abuse patients with focus on extreme heat; includes list of medications that increase risk. Prepared by NY State Office of Addition Services and Support
- General review signs and symptoms of extreme heat; fact sheet from CDC with references.
- Excellent CDC overview with additional links to Tips for Preventing Heat –Related Illness
- CDC Infographic for Public Education on Extreme Heat
- Excellent, more extensive document covering extreme heat, causes, prevention and management produced by Environmental Protection Agency and Center for Disease Control
- Climate change and Extreme Heat; What You Can Do to Prepare, EPA & CDC
- Keep your cool in hot weather
- Tips for Preventing Heat-Related Illness
- Emergency preparedness and response – frequently asked questions (FAQ) about extreme heat
- Coping With Extreme Heat - Toolkit for Patients
- Coping With Extreme Heat - Toolkit for Caregivers

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