

# Emergency Readiness

Candace Dreier RRT

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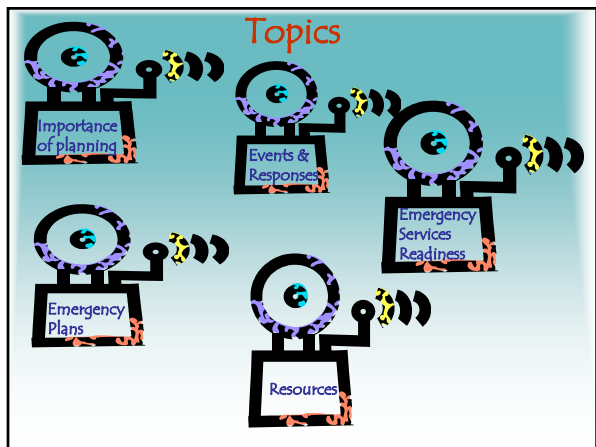
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### Planning for Emergencies

- ◇ Emergencies & disasters occur in a variety of forms
- ◇ Advance planning can improve outcomes
- ◇ Everyone needs to know the plan and their role in the plan

The diagram includes two illustrations: one of a person sitting at a desk with a computer, and another of a group of four people sitting around a table, looking at a document together.

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## Vulnerable Populations

- ◇ Poor
- ◇ Infirm
- ◇ Individuals with mental illness
- ◇ Elderly
- ◇ Children
- ◇ All those dependent on technology



Retrieved from: <http://www.ptdc.on.ca/main2.cfm?id=5F2D495C-80C6-EFE0-D7A23C8E856C71CC>

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## Vulnerable Populations

- ◇ Children
  - Children and Youth with Special Healthcare Needs (CYSHCN)
    - ◇ children birth to 21 years of age who have a long term, chronic physical, developmental, behavioral, or emotional illness or condition
- ◇ All those dependent on technology
  - ◇ one who needs both a medical device to compensate for the loss of a vital body function and substantial and ongoing nursing care to avert death or further disability



Retrieved from: <http://www.ptdc.on.ca/main2.cfm?id=5F2D495C-80C6-EFE0-D7A23C8E856C71CC>

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## Difficulty Responding

- ◇ What makes natural and manmade disasters difficult for families and communities to respond to?



Retrieved from: <http://www.deep.med.miami.edu/x101.xml>

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### Difficulty Responding

- ◇ Unpredictable time and place
- ◇ Varied in size and scope
- ◇ Location of family members may vary



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### Difficulty Responding

- ◇ Level of community's emergency readiness varies
  - hospital services
  - emergency response



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### Natural Disasters



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## Weather Safety Recommendations

- ◊ Weather Radio availability (non-electricity dependent)
  - runs on battery
  - alarms for weather issue in the area
- ◊ Alerts available via
  - TV
  - radio
  - email
  - cell phone

Retrieved from: <http://www.accessnoaa.noaa.gov/may3001/marktrail.html>

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## Weather Safety Recommendations

- ◊ Follow weather alerts
  - Watch
    - ◊ conditions conducive to a weather situation
  - Warning
    - ◊ weather situation is occurring or has been observed
- ◊ Develop an action plan & test the plan
- ◊ Designate a safe location





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## Tornado

- ◊ Tornado – violently rotating column of air
- ◊ Come in many sizes
- ◊ Have wind speeds of 110 mph
- ◊ Occur in every state in the US



Month	Number of Killer Tornadoes
January	~10
February	~20
March	~50
April	~1300
May	~850
June	~550
July	~100
August	~100
September	~100
October	~100
November	~100
December	~100

Retrieved from: <http://www.tornadoprospect.com/index.html>

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### Tornado Response

- ◊ Pre-designated shelter
  - such as a basement
  - under a sturdy table or the stairs
- ◊ If no basement
  - go to a small interior room or hallway on the lowest floor
- ◊ Get under a sturdy table
- ◊ Stay away from windows



Retrieved from: [http://www.kgs.ku.edu/Publications/OFR/2006/OFR06\\_11/index.html](http://www.kgs.ku.edu/Publications/OFR/2006/OFR06_11/index.html)

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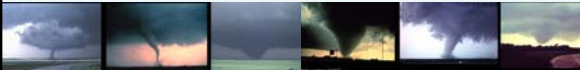
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### Tornado Response

- ◊ Run critical equipment on battery power during electrical storms
  - prevents the risk of a damaging power surge
- ◊ Test the action plan
  - are you able to get the child downstairs without assistance?
  - What is the alternate plan?
- ◊ Prepare the child and equipment during the storm watch
  - enables you to respond to sudden changes in the weather



Retrieved from: <http://biblia.com/tornados.htm>

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### Hurricanes

Katrina

- ◊ Hurricane or tropical cyclone is
  - A storm system with a low pressure center and thunderstorms
  - Produces strong wind and flooding rain
- ◊ North Atlantic season
  - June 1 - November 30
  - Peak late August - September
- ◊ Often advance warning is given, which includes recommendations for evacuation



Retrieved from: <http://www.cgd.ucar.edu/cas/catalog/topical/hurricanes.htm>

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## Hurricane Response

- ◇ Potential need for early evacuation
- ◇ Prepare for needed equipment & supplies
- ◇ Ensure the transport plan and designated safe shelter location is appropriate for the child



Retrieved from <http://www.nationalgeographic.com/forcesofnature/interactive/index.html?section=h>

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## Flooding



Presidential disaster declarations related to flooding in the United States, shown by county: Green areas represent one declaration; yellow areas represent two declarations; orange areas represent three declarations; red areas represent four or more declarations between June 1, 1965, and June 1, 2003. Map not to scale. Sources: FEMA, Michael Baker Jr., Inc., the National Atlas, and the USGS

- ◇ Flood - a high flow or overflow of water from a river or similar body of water
- ◇ Threatens lives and property in every US state

Retrieved from: <http://www.usgs.gov/hazards/floods/>

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## Flooding

- ◇ Variety of causes
  - Winter or spring rains & melting snows that fill river basins too quickly
  - Torrential rains from hurricanes or other tropical systems
  - Repeated heavy rain from thunderstorms over a period of weeks
  - Failure of levees or dams
  - Inadequate drainage in urban areas



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### Flood Response

- ◊ Plan a safe evacuation prior to flooding
- ◊ Follow weather alerts for the risk of flooding or flash floods
- ◊ Move equipment and supplies to higher ground,
  - within the home
  - or to a designated safe site



Retrieved from: <http://www6.indygov.org/dmdplan/flood/Floodsafety.htm>

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### Flood Response

- ◊ Anyone with respiratory health problems, such as asthma or a tracheostomy, should not be allowed in the flooded areas before or during cleanup.
- ◊ Clean & dry household furnishings as soon as possible
  - prevents the growth of mold

Retrieved from: [http://www.ngb.army.mil/resources/photo\\_gallery/states/flood.html](http://www.ngb.army.mil/resources/photo_gallery/states/flood.html)

Retrieved from: [http://www.fema.gov/kidsp\\_kidhlp18.htm](http://www.fema.gov/kidsp_kidhlp18.htm)

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### Flood Response

- ◊ Drink only bottled water
  - or water from a known safe source
- ◊ Do NOT drink the water
  - if the water is cloudy,
  - odorous or colored



Retrieved from: <http://usinfo.state.gov/xarchives/display.html?pw=washfile-english&y=2006&m=December&x=20061229123149hmnietua0.7205469>

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### Flood Response

- ◊ Clean floors with detergent
- ◊ Disinfect with chlorine bleach solution
  - recipe 4-6 oz of bleach per gallon of water
  - keep on floor several minutes before rinsing
- ◊ Keep windows open for ventilation
- ◊ Wear dust mask, eye protection, boots, gloves




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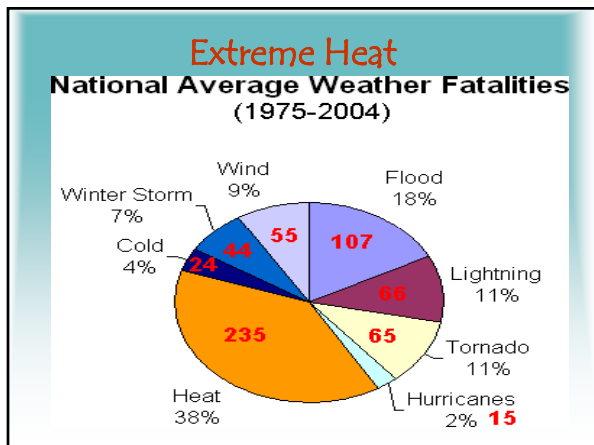
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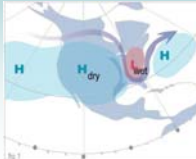
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### What is Extreme Heat?

- ◊ As defined by the CDC
  - Temperatures 10 degrees or more above the average high temperature
  - Last for several weeks
  - Humid or muggy conditions
  - "Dome" of high atmospheric pressure traps hazy, damp air near the ground



Retrieved from: <http://climatrends.com/site/drought/drought-patterns-in-the-midwest-1988-and-2007/>

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### Extreme Heat Response



- ◇ Provide adequate fluids to maintain hydration
- ◇ Learn the signs of dehydration
  - Mild – drink more fluids
    - ◇ increased thirst
    - ◇ dry mouth & sticky saliva
    - ◇ decreased dark yellow urine
  - Moderate – seek medical attention
    - ◇ extreme thirst
    - ◇ dry mouth, no tears
    - ◇ decreased dark amber or brown urine
    - ◇ light headedness
    - ◇ irritability
- ◇ Assess the child frequently for these signs

Retrieved from: <http://www.health-benefit-of-water.com/child-health.html>



Retrieved from: <http://www.integrative-nutrition-specialist.com/water.html>

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### Extreme Heat Response

Use air conditioning if available

- If unavailable, the child may need to be moved to where "AC" is available.



Retrieved from: <http://www.trane.com/Residential/SelectSystem/ACandFurn.aspx>

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### Power Outages/Blackouts

- ◇ Power outage – loss of electricity to an area
- ◇ Blackout – complete loss of electricity
- ◇ Rolling blackout – controlled rotation of available electricity
- ◇ Most power outages are caused by weather-related events
- ◇ Heat is the major public health problem related to blackouts



Retrieved from: <http://www.fpl-fraud.com/>

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### Power Outage Response

- ◊ If a generator is used
  - follow all related safety recommendations
- ◊ Never run a generator
  - indoors or in any partially closed area
- ◊ If you start to feel
  - sick, dizzy or weak
  - get to fresh air immediately



Retrieved from: <http://www.stratonelectric.com/Florida-Guardian-Generator.html>

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### Power Outage Response



- ◊ Medical equipment Batteries
- ◊ Know length of battery use
- ◊ Don't recharge battery
  - near oxygen
  - in room with child
  - in enclosed area
  - with jewelry on
- ◊ Have extra charged batteries available




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### Power Outage Response

- ◊ Preassemble supply kits
- ◊ Keep refrigerator & freezer closed
- ◊ Turn off all electrical appliances
- ◊ Leave one light on
- ◊ Use a portable radio



Retrieved from: <http://kids.niehs.nih.gov/katrina.htm>




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### Winter storm/Blizzards



A winter storm is an event in which snow, sleet, or freezing rain occur in large amounts

Retrieved from: [http://www.rngb.army.mil/resources/photo\\_gallery/states/blizzard.html](http://www.rngb.army.mil/resources/photo_gallery/states/blizzard.html)

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### Winter Storm Response

- ◊ Often advance warning is available
- ◊ Have extra blankets on hand
- ◊ Ensure that each person has warm clothing



Retrieved from: <http://www.unbf.ca/isao/handbook/clothing.html>

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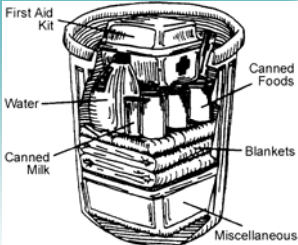
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### Winter Storm Response

- ◊ Assemble a supply kit
- ◊ Follow watches and warnings



Retrieved from: <http://www.cityofdearborn.org/departments/fire/firedocs/72hourkit.htm>

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### Fire

- ◊ A house fire can reach temperatures of over 1100° F in 3 ½ minutes.
- ◊ Fire produces gases and fumes
- ◊ Smoke causes complete darkness in 4 minutes.



Retrieved from: [http://www.masoncounty.com/YIR06\\_pg24.html](http://www.masoncounty.com/YIR06_pg24.html)

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### Fire Response

- ◊ Smoke Detectors & Alarms
  - on every level of the home
  - check monthly
  - change batteries twice a year
  - replace every 10 years
  - fire drill twice a year



Retrieved from: <http://www.firesafetycouncil.com/english/pubsafet/afasa.htm>

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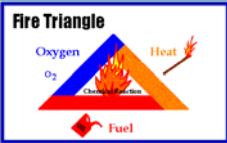
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### Fire Response

- ◊ Oxygen, a spark and something to burn are required for a fire
- ◊ Oxygen increases the risk of fire
- ◊ Inform local emergency services of oxygen in the home



Retrieved from: [http://health.byu.edu/employees/osha\\_fs.html](http://health.byu.edu/employees/osha_fs.html)

Retrieved from: <http://www.cloudcitymedical.com/HomeOxygen.htm>

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### Manmade Disasters

- ◊ Bombings
- ◊ Shootings
- ◊ Fires



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### Emergency Readiness Home Care Plans

- ◊ Specific to child and family
- ◊ Evacuation plan



Retrieved from: <http://www.ggfire.com/images/eplan.gif>

Retrieved from: <http://www.opfd.com/PublicEducation/PEkids.html>

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### Medical Emergency Readiness Plans

- ◊ Backup medical records & care plan
  - with child
  - in alternate location
- ◊ Alternative pharmacy
- ◊ Use a medical ID



Retrieved from: [http://www.goldcoast.qld.gov.au/t\\_print.aspx?pid=5761&print=true](http://www.goldcoast.qld.gov.au/t_print.aspx?pid=5761&print=true)

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- ◊ Emergency Medical Services for Children
- ◊ EMSC provides information and resources to families and care providers of CYSHCN
- ◊ Website <http://bolivia.hrsa.gov/emsc/>

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### Emergency Readiness Websites

- ◊ Public Service Announcement & publication "Your Home Fire Safety Checklist" <http://www.cpsc.gov>
- ◊ CDC website <http://www.bt.cdc.gov/disasters/extremeheat/index.asp>
- ◊ American Red Cross <http://www.redcross.org>
- ◊ FEMA for Kids <http://www.fema.gov/kids>
- ◊ Public Health Emergency Preparedness <http://www.ahrq.gov/prep/>
- ◊ Flood Safety <http://www.srh.noaa.gov/tadd>

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### Emergency Readiness Websites

- ◊ READY School Safety Training <http://media2.wi.gov/dpi/catalog> (select student services from menu on the left).
- ◊ Lightning Safety <http://www.lightningsafety.noaa.gov>
- ◊ Tornado Preparedness Plan for Schools [http://www.crh.noaa.gov/ark/prepare\\_school.php](http://www.crh.noaa.gov/ark/prepare_school.php)
- ◊ StormReady- Community Preparedness <http://www.stormready.noaa.gov>
- ◊ NOAA National Weather Service-Forecasts and Warnings <http://www.weather.gov> (click on your part of the state for local weather information)
- ◊ Family preparedness for emergencies and disasters <http://www.ready.gov>

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### Key Points

- ◇ understand emergency readiness issues as they affect the child you are caring for,
- ◇ prepare and document a workable plan,
- ◇ Share & practice the plan with the child, family & other care providers
- ◇ Advocate for CYSHCN



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