

The Role of Pediatrics in Disaster Preparedness



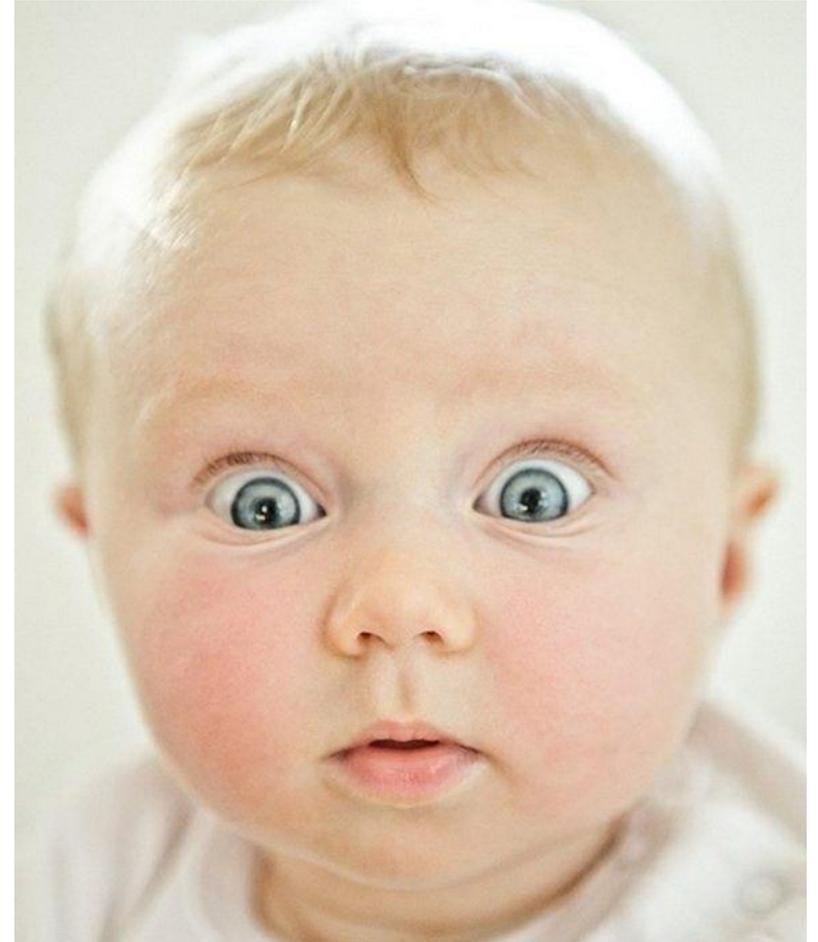
American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

New Jersey Chapter

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Financial Disclosure

Nothing to disclose



Objectives

Present a broad overview on disaster preparedness with a focus on the pediatric practitioner:

- Professional and community preparedness
- Training and resource materials
- AAP disaster preparedness activities



Know your enemy and know yourself and you can fight a hundred battles without disaster.

- Sun Tzu

Disaster



- “A sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community’s or society’s ability to cope using its own resources. Though often caused by nature, disasters can have human origins.”
(International Red Cross)

There’s no harm in hoping for the best as long as you’re prepared for the worst.
- Stephen King (Different Seasons)

What are we preparing for?

- Local
- State
- Multi-state
- Short/Long-term
- Natural vs. manmade
- Personal disasters – fire, broken pipes, theft



Roadblocks to Preparedness



- Normalcy bias
- Expense
- Time constraints
- Lack of knowledge/training
- Communication issues*

*<https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Pages/Pediatric-Preparedness-Resource-Kit.aspx>

A photograph of an office desk with a clock, a stapler, a stapler tray, a stapler, and a stapler tray. The image is overlaid with a semi-transparent teal filter. The text "Preparing in the Office" is centered in a bold, dark blue font.

Preparing in the Office

Key Areas of Office Preparation

- Food & Water
- Power
- Facilities
- Vaccines
- Transportation
- Communication
- Medical Supplies



<https://www.aap.org/disasters/checklist>

Food and Water

Keep enough non-perishable foods for a minimum of 72 hours for staff and others:



- Minimum 1 gal water/day/person
- Granola bars
- Dry cereal
- Nuts (consider allergy precautions)
- Dried fruits
- Beef jerky
- Trail mix
- Crackers
- Peanut butter
- Canned goods
- Can opener

Power

- Alternate power sources for the home and office – natural gas and gasoline generators, small scale solar setup
- Have battery powered alternatives (e.g., otoscope, nebulizer)
- Turn off or disconnect appliances and other equipment in case of a momentary power “surge” that can damage computers and other devices. Add surge protectors.
- Routine backup of EMR and other computer systems
- Keep phones and external chargers fully charged
- Have an ample supply of batteries of all sizes



Because you never know when the day before ... Is the day before.

- Bobby Akart

Facilities



- Is your office safe to get to and to work in for you, your employees and your patients?
- Are there alternate practice sites available in the case of damage or inaccessibility?
- Determine who will be notified in different crises or disaster situations (open, closed, alternate site, etc.)
- **Develop plans to communicate practice changes and updates with staff, families, and community members**

Vaccine Security

- Designate an alternate site with 24-hour access where vaccines and diluents can be safely stored
- Have adequate cold packs and insulated boxes/cooler for transport.
- Record vaccine manufacturers' and local representatives' contact information.
- Do not open freezers and refrigerators except to transport vaccines to an alternate storage location when power is out
- Record and update vaccine inventories regularly.
- Have written procedures for managing potentially compromised vaccines.



Transportation

- Keep your fuel tank full
- Keep an emergency bag in your car
- Plan for alternate transportation
- Be familiar with safety and emergency evacuation procedures
- Let someone know your destination, route, and arrival time
- Have access to sturdy shoes/boots and bad weather clothes



A sage traveling all day is never far from the supplies in his cart, and however spectacular the views he remains calm and composed.

- Lao Tzu, Tao Te Ching

Communications

- Have a printed copy of emergency information for all employees with addresses and home and cellular contact numbers.
- Identify an out of town (or state) contact person and phone number that is out of town for when local lines are jammed.
- Consider alternate communications systems
 - Internet/Facebook
 - Satellite phone
 - Landlines
 - Two-way radio (“walkie-talkies”)
 - Ham radio
 - Police scanners
 - Shortwave/Weather radio



Medical Supplies and Equipment

Keep on hand additional medical items designated for emergency disaster use that are able to be mobilized quickly.

- PPE: Gloves and masks
- Portable scale
- Alcohol wipes
- Bandages
- Antibiotic ointment
- Topical steroid cream
- Albuterol MDI/nebulizer solution
- Ibuprofen and acetaminophen
- Diphenhydramine
- Ceftriaxone
- 1% lidocaine
- Saline solution
- Oral or injectable steroids
- Syringes and needles
- Sharps container
- Thermometer
- Rx pad



Other Items to have on Hand

- Copies of credentials and license
- Essential documents on flash drive
- Computer backups
- Spare clothes and shoes
- Emergency toiletries
- Contact lens solution/eyeglasses
- Rain gear
- Hand sanitizer
- Sunscreen and insect repellent
- Duct tape
- Pocket knife/multi-tool
- Diapers, baby wipes, baby food, and formula
- Toilet paper
- Paper towels
- Plastic bags
- Sheets and towels
- Spare batteries
- Extension cords
- Radio
- Cash
- Toys



Additional Considerations

- Identify and log essential and costly equipment
- Review insurance policies – does it cover vaccine spoilage, business interruption, civil unrest or specific hazards (e.g., flood, earthquake)?
- Identify backup and protection systems for key documentation and patient health records
- Make staff aware of disaster plans and materials
- Review essential infection control for disasters
- Ensure a home disaster plan is also in place
- Consider staff emotional issues, family care responsibilities and supplemental staffing alternatives



Psychological Issues: Advice to Caregivers

- Provide very young children with concrete explanations of what happened and how it will affect them. Share with them all of the steps being taken to keep them safe. They will often worry that a disaster will occur again.
- Older children often want additional information. Watch media with them. Talk it over.
- Let your child know that it is all right to be upset about something bad that happened
- If you feel overwhelmed and/or hopeless, look for some support from other adults before reaching out to your child
- Don't feel obligated to give a reason for what happened
- Allow children to express their regrets over their losses, material and situational, and help them figure out ways to minimize the impact or find alternatives

All things are ready, if our mind be so - William Shakespeare, Henry V

*American Academy of Pediatrics, Healthy Children.org: *Talking to Children about Disasters*

<https://www.healthychildren.org/English/healthy-living/emotional-wellness/Pages/Talking-to-Children-about-Disasters.aspx>

Promoting Adjustment & Helping Children Cope

- **1st step in providing psychological support is ensuring basic needs are met. For children, this means a safe physical environment, food, and drinking water.**
- Inquire not only about symptoms, but also ask families about what children were exposed to, their understanding about what happened, and ongoing stressors.
- Ensure timely referral to supportive services for children with marked or persistent symptoms and those with significant risk factors.
- Exposure to media or being interviewed by the media can traumatize children further. Efforts should be made to protect children from media violence and to promote resiliency whenever possible.
- We can serve as a useful resource for children who have experienced the death of a family member or friend by guiding caregivers to invite and answer children's questions, providing information, and identifying coping strategies

* AAP Health Initiatives - Children and Disasters: Promoting Adjustment and Helping Children Cope

<https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Pages/Promoting-Adjustment-and-Helping-Children-Cope.aspx>

Preparing in the Hospital Setting



General Guidelines

Each hospital should have a plan that addresses:

- Availability of medications, vaccines, equipment, and appropriately trained providers for children in disasters.
- Pediatric surge capacity for both injured & non-injured children.
- Decontamination, isolation, and quarantine of families & children of all ages.
- Minimizing parent-child separation and includes tracking of patients, allowing for the timely reunification of separated children with their families.
- Access to specific medical and mental health therapies, as well as social services, for children in the event of a disaster.
- Disaster drills with a pediatric mass-casualty incident at least every 2 years.
- A plan that includes evacuation of pediatric units and pediatric specialty units.

NICU

- Needs to participate in the larger plan of emergency prep within hospitals, communities, states, and regions.
- Insure protection of technologically sensitive equipment and procedures and provide for adequate staffing (may require cross-training of other units)
- Consider discharge of healthier infants with close PCP follow-up or transfer less critical ones to lower-level facilities
- Evacuation plans/drills are critical in the NICU setting. Decisions need to be as early as possible.
- Receiving hospitals must plan for surge capacity needs
- Safety and security measures key as standard modes of patient visitation may be compromised.
- Means of keeping mother and baby together should be stressed
- Hospitals that provide maternity services should implement a standing perinatal subcommittee (including OB, pediatrics, and anesthesia) in charge of disaster preparedness. (ACOG)



- *Disaster Preparedness in Neonatal Intensive Care Units*, WD Barfield, SE Krug, Committee on Fetus and Newborn, Disaster Preparedness Advisory Council, Pediatrics, May 2017, Vol 139:5
- *Hospital Disaster Preparedness for Obstetricians and Facilities Providing Maternity Care*. Committee Opinion No. 726. American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e291–7.

Emergency Department



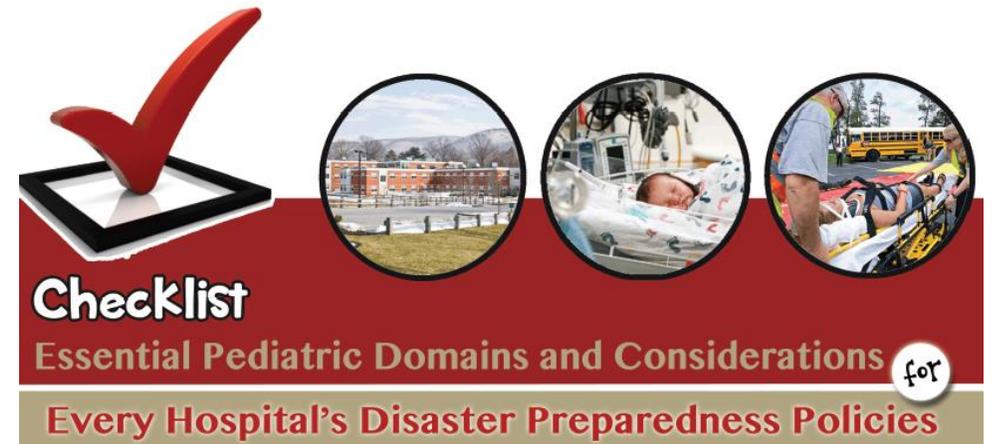
- Availability of age appropriate medications, equipment, and providers including for care of children with special health care needs
 - Surge capacity for injured & non-injured children
 - Decontamination, isolation, and quarantine of families and children
 - Procedures for minimization of parent-child separation
- Procedures in place for diversion to alternate care facilities and for the calling in of additional providers
 - Disaster drills including a pediatric mass casualty incident \leq Q2 years
 - In 2014, fewer than half of hospitals with EDs had a disaster plan for children*

*Gausche-Hill M, Ely M, Schmuhl P, et al. A national assessment of pediatric readiness of emergency departments. JAMA Pediatr. 2015;169(6):527–534

Comprehensive Hospital Review

*Essential Pediatric Domains and Considerations for Every Hospital's Disaster Preparedness Policies** was designed to complement and augment existing disaster resources, both pediatric and general:

- Pediatric disaster coordination and response - roles and responsibilities
- Partnership building to facilitate surge capacity
- Essential resources for building pediatric surge capacity
- Triage, infection control, & decontamination
- Family tracking, security, support, & reunification
- Legal/ethical issues
- Behavioral health
- Children with special health care needs
- Staffing, exercises, drills, & training
- Recovery and resiliency



*<https://emscimprovement.center/resources/publications/checklist-essential-for-every-hospitals-disaster-preparedness-policies/>

The background is a teal-tinted photograph of a park. It shows a path leading through trees, with a large tree on the right and a smaller one on the left. The sky is bright and hazy. The overall mood is serene and natural.

Going Further

Special Circumstances

Disasters will often bring unique challenges, medical problems and injuries that are uncommon to our usual practices and we should aim to be prepared with some knowledge and skills to deal with these areas:



- Chemical weapons/hazardous material incidents
- Biological weapons
- Nuclear and/or radiological
- Explosives or other mass trauma events
- Emerging infections/Pandemics
- Active shooter

Beyond Your Day-to-Day Role

- Physicians and other medical personnel may be called upon to do much more in a serious disaster situation beyond the scope of their everyday practice or opt to volunteer in a greater capacity.
- Pre-Credentialing
- Special Teams
 - e.g. Medical Reserve Corps
Disaster Medical Assistance Teams
- Disaster Medicine Concepts
 - The Incident Command System
 - Scene Security and Safety
 - Triage and Prehospital Treatment
 - Decontamination
 - Evacuation
 - Sheltering and public hygiene



Pediatrician Training Opportunities

- American Academy of Pediatrics: *Children & Disasters* webpage
- National Disaster Life Support Foundation: *Disaster Life Support*
 - Core, Basic and Advanced modules
- FEMA Independent Study
 - IS-366.a Planning for the Needs of Children in Disasters
- Radiation Emergency Assistance Center/Training Site (REAC/TS)
 - Radiation Emergency Medicine
- CDC: *Emergency Preparedness and Response* webpage
- AAP Webinars on Disaster

It is not often that a man can make opportunities for himself. But he can put himself in such shape that when or if the opportunities come he is ready.

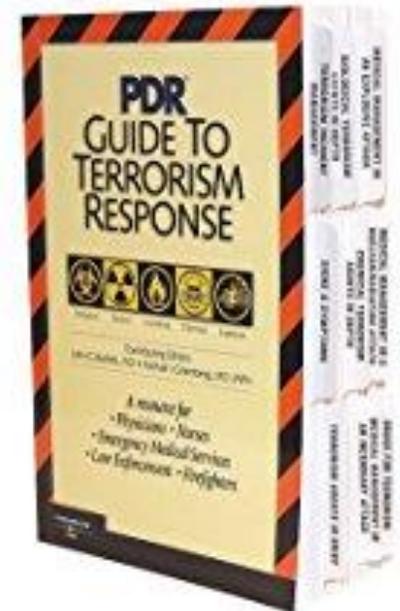
- Theodore Roosevelt

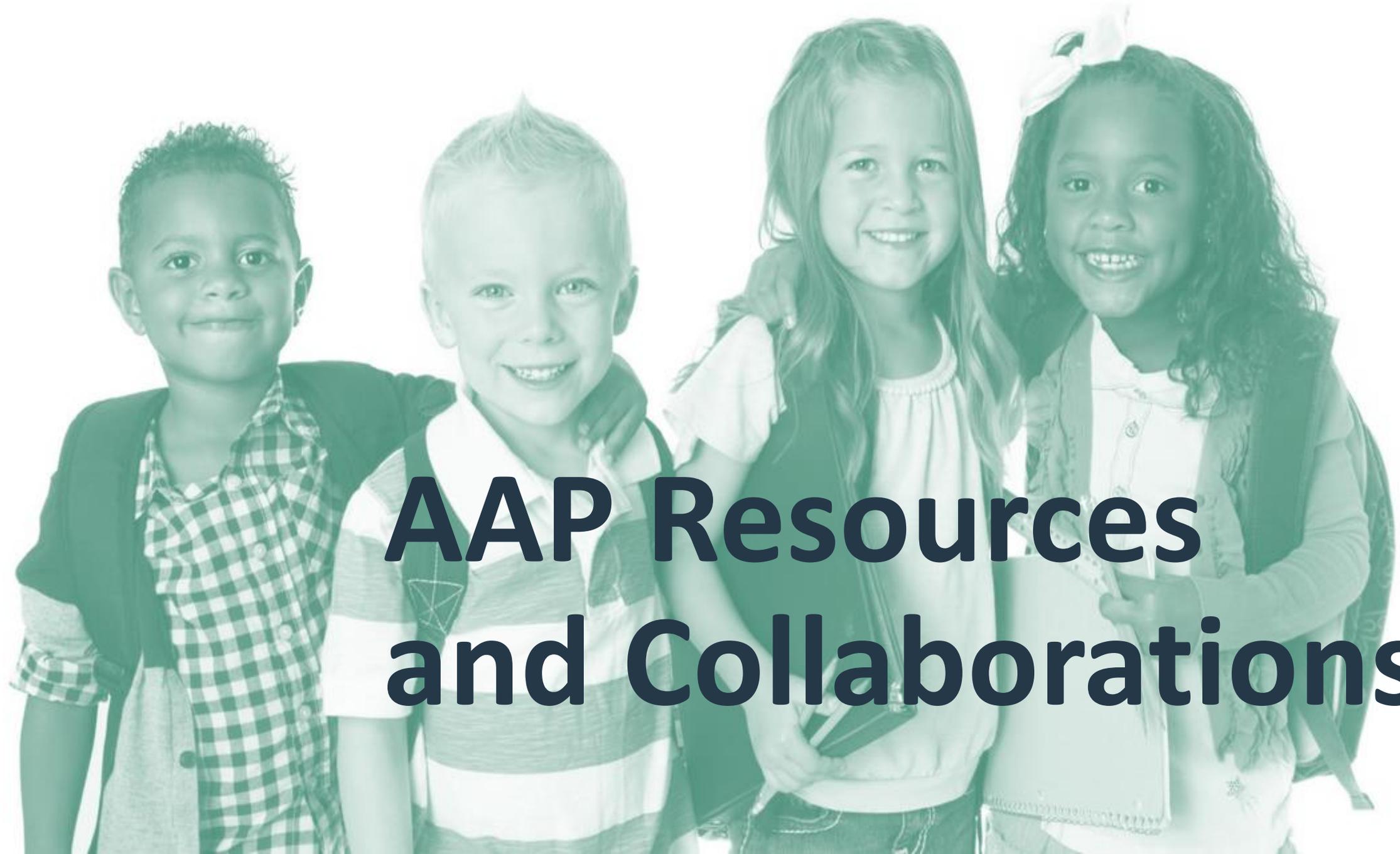
Reading Resources

- *Pediatric Terrorism and Disaster Preparedness (2005)* – AAP (PDF)
- *Pediatric Education in Disasters Manual (2012)* - AAP (PDF)
- *Disaster Medicine*, Ciottrone, GR (2015)
- *Public Health Management of Disasters*, Landesman, LY (2011)
- *PDR Guide to Terrorism Response*, Bartlett, JG (2005)
- *Medical Response to Terrorism*, Keyes, DC (2004)
- *Wilderness Medicine 6th ed.*, Auerbach, PS (2012)

Books are the quietest and most constant of friends; they are the most accessible and wisest of counselors, and the most patient of teachers.

- Charles William Eliot





AAP Resources and Collaborations

AAP Disaster Partnerships

- Centers for Disease Control and Prevention (CDC)
 - Pediatric Desk at the Emergency Operations Center
- HHS Office of Assistant Secretary for Preparedness & Response (ASPR)
 - Pediatrician led advisory panels
- Federal Emergency Management Agency (FEMA)
 - National Children's Advisor Position
- Health Resources and Services Administration Emergency Medical Services for Children (HRSA EMSC)
 - Longstanding partnership including with their Innovation and Improvement Center (IIC)

Emergency Medical Services for Children (EMSC)

“EMSC seeks to reduce child and youth mortality and morbidity resulting from severe illness or trauma by funding and supporting improvements in pediatric emergency care in every state and territory through competitive demonstration grants or cooperative agreements to state governments and accredited schools of medicine.”

- Key Programs:

- ✓ **State Partnership** grants that ensure that pediatric emergency care is integrated into the larger EMS system.
- ✓ **Targeted Issues** grants that support innovative cross-cutting pediatric emergency care projects of national significance.
- ✓ **State Partnership Regionalization of Care** grants that develop systems of care models to improve pediatric emergency care capacity in rural and tribal communities.
- ✓ The **Pediatric Emergency Care Applied Research Network (PECARN)** supports the infrastructure to conduct multi-institutional studies in the management of acute illness and injury in children across the continuum of emergency medicine.

Helping Patients & Families Prepare

- Include in your office visit discussions
- AAP Family Readiness Kit encourages families to:
 1. Build a kit
 2. Make a plan
 3. Be informed
 4. Get involved



AAP EFFORTS IN DISASTER PREPAREDNESS

- Disaster Preparedness Advisory Council
- More than 80 Chapter Contacts in all AAP chapters
- Strategic plan to guide its work
- Policy, education, and advocacy
- Funded initiatives
 - Children's hospitals and preparedness, influenza prevention/control, pediatric tabletop exercises, state preparedness projects, Zika response, resource materials



DISASTER PREPAREDNESS ADVISORY COUNCIL (DPAC)



National Institute of
Child Health and Human
Development (NICHD)



- Formed in 2007.
- Establish a focused effort within the AAP.
 - 6 pediatrician members.
 - Liaisons to 5 federal agencies.



Children & Disasters

Disaster preparedness to meet children's needs

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN®

- Available on AAP Website
- Primary portal for pediatric disaster information
- Educational tools
- AAP member activities
- External resources
- Comprehensive list of disaster related topics
- AAP Children & Disasters Newsletter

NJ AAP Chapter Contacts for Disaster Preparedness

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*A prudent person foresees the danger ahead and takes precautions.
The simpleton goes blindly on and suffers the consequences.*

- Proverbs 27:12

Questions?



Before anything else, preparation is the key to success.
- Alexander Graham Bell