PEDIATRIC MCE

• Children have special needs due to differences in Anatomy, Physiology, Immune System, Psycho-social issues
• Children are frequent victims of disasters and terror related events
• Best Outcomes relate to matching resources to needs
• Pediatric Disaster planning is necessary from scene triage through primary and secondary transport hospital surge and evacuation

Children Are Different!

Therefore, the pediatric plan and response to disasters must be tailored to the special needs of children.
Example children have special needs
Pediatric Generic Decon Issues

- Avoid Separation of Families
- Cannot assume parents can decon child plus self
- Older children may resist due to fear, peer pressure, modesty issues
- Risk of Hypothermia if temp <98°
- Large volume low pressure hand held hoses
- Beware airway management throughout
- Soap and water only

Children As Primary Targets
(Partial Listing)

- 1838 Blaukaans River, South Africa - Zulus kill 185 children
- 1974 Maalot School occupation after bus attack - 26 dead, 70 injured
- 1995 Murrah Building, Oklahoma City - 19 dead, 66 injured, nursery
- 1998 Elementary school, Jonesboro, Arkansas
- 1999 Columbine High School, Colorado
- 2000-2005 Intifada, Israel
- 2003 Jerusalem Children's Bus (9 killed, wounded)
- 2004 Baghdad US troops giving out candy (35 dead)
- 2004 Beslan, Russia (186 dead, school)
- 2006 Platte Canyon High School, Colorado
- 2011 Norway (69/77 dead, summer camp)
- 2012 France Ozar Hatorah Toulouse (3 dead, day school)
- 2012 Sandy Hook Elementary School Shootings, Newtown - 28 dead (20 children), 2 injured
- 2014 Iraq, Syria: Sarin, Killings, Slavery (1000s)

And the list goes on...
Chemical MCI Children more likely to be victims
(closer to ground, higher respiratory rate
Considerations for Children in MCE Plan:

- Children comprise 25% of the total population
- Serious Civilian MCEs are characterized by damage to Children, Women and the Elderly
- These Complex events require the health system (1st responders and hospitals) to care for large numbers of children suffering from varied injuries characteristic of this age group
- Children are frequently injured in MCEs involving adults, however the pre-hospital and hospital system must focus on the unique challenges and characteristics of injured children in regard to personnel, equipment and preparation of each component of the system.

Emergency Department

- Remove all ED patients: to hospital beds, discharge or non-urgent area
- Map of scene filled with trained staff
- Trauma surgeons/Peds ED,nurse for urgent casualties
- Triage by Senior Staff
- One way flow
- Gatekeeper for imaging/OR
- OR should plan sequence of surgeries based on adult and pediatric priorities
- Baby Sitters for children in ED and to imaging and to final destination
Pediatric Specific Issues

- Need Hospital Pediatric annex plans
- PDC plans www.pediatricdisastercoalition.org
- EMSC plans http://www.emscnrc.org/
- Pediatric Triage issues (Jumpstart rescue breaths)
- Pediatric NYC Disaster Plan for transport
- Pediatric staff
- Pediatric equipment
- Pediatric Sedation Protocol
- Family Reunification
- “Baby Sitters” to follow patients
- Pediatric ICU collaboration with Adult ICU for resources and patient distribution re: age limits and available resources

Pediatric MCE Needs

- Age 0-12 (Looks like a child). Expand to adolescence if resources available
- Special pediatric training needed for 1st Responders
- Specialized triage (Jumpstart) for children
- Primary transport to Pediatric Capable Hospital unless too critical to survive
- Secondary transport to pediatric capable hospital based on patient severity and pediatric subspecialty resources
- Prior hospital notification for Peds MCE
- Triage to include PEM trained physician/Peds trauma surgeon if available
- Treatment in usual ED unless specialized Peds ED available
- Trauma surgeon plus Peds trained physician, nurse to care for patients
- Special equipped Pediatric carts and other equipment
Pediatric MCE continued

- Immediate and awaiting care sites in ED and designated area
- Take digital photographs to identify Pediatric Patients
- Family re-unification as soon as possible
- Bring adult family members to critical patient site, ED, and info center as necessary
- Mobilize Child Psych, psycho-social support and medical triage at ED and info-center
- Secondary transfer to hospital with PICU, Peds Trauma
- Drills should include Pediatric MCE preparation
- Activate NYC Pediatric Disaster Plan for Primary and Secondary Transport through FDNY

Pediatric Drills Lessons Learned 1

- The drill confirmed the need for combining trauma surgery and pediatric ER specialists functioning in one location

- There is a need for "baby sitters" assigned to the pediatric patients to assist in caring for/transport throughout the hospital process

- Digital pictures and any demographic data capture should be part of the initial triage registration process with an ongoing tracking system to identify patients.

- Need to match/reunify children with their family
Pediatric Drill Lessons Learned 2

• A pediatric sedation protocol for CT procedures etc. needs to be simple and readily available along with implementation of proper monitoring techniques

• Need medical and social escort for CT

• Communication between adult and pediatric clinicians is essential

• Need pain management for children

Pediatric Drill Lessons Learned 3

• Need for suitable pre-positioned pediatric, medical, transport and nutrition equipment/supplies in treatment areas

• Disrobe children fully and supply age appropriate gowns, blankets

• Need solution for consent when non critical pediatric patients need procedures and parents are not available.

• Need for planning and just-in-time training on pediatric issues re: dosages/procedures
Pediatric Specific Issues

- Need Hospital Pediatric annex plans
- PDC plans www.pediatricdisastercoalition.org
  EMSC plans http://www.emscnrc.org/
- Pediatric Triage issues (Jumpstart rescue breaths)
- Pediatric NYC Disaster Plan for transport
- Pediatric staff
- Pediatric equipment
- Pediatric Sedation Protocol
- Family Reunification
- “Baby Sitters” to follow patients
- Pediatric ICU collaboration with Adult ICU for resources and patient distribution re: age limits and available resources