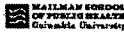


Pediatric Preparedness Hospital Considerations

David Markenson, MD
Director, The Program for Pediatric Preparedness
Deputy Director, National Center for Disaster
Preparedness
Mailman School of Public Health, Columbia University

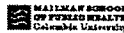
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Preparation Are your Hospitals ready?

- Surge capacity?
- Surveillance Systems?
- Appropriate Medication dosing?
- Appropriate Equipment?
- Appropriate staff skill set?
- Transfer network in place?
- Drills and exercises

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Current State of Preparedness

- Data from 30 hospitals FEMA Region III
- 100% of sites not fully prepared for biologic incident
- 73% not prepared for chemical incident
- 73% not prepared for nuclear incident

Treat K.N. Hospital preparedness for weapons
of mass destruction incidents: An initial
assessment.
Annals of Emergency Medicine Nov. 2001

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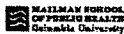
Current State of Preparedness

- 73% would set up a "single room" decontamination process.
- 13% had no decontamination process.
- 3% (1 hospital) had chemical antidote stockpile
- 0% had prepared media statements
- 25% had "some" training in WMD incidents

Treat K.N. Hospital preparedness for weapons of mass destruction incidents: An initial assessment.

Annals of Emergency Medicine Nov. 2001

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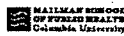
Current State of Preparedness

- 77% had facility security plan in place
- 50% able to "lock down" the facility
- 4% aware of "secondary device" threat

- **Conclusion:** "Hospitals in this sample do not appear to be prepared to handle WMD events"

Treat K.N. Hospital preparedness for weapons of mass destruction incidents: An initial assessment.
Annals of Emergency Medicine Nov. 2001

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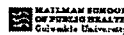


Preparation

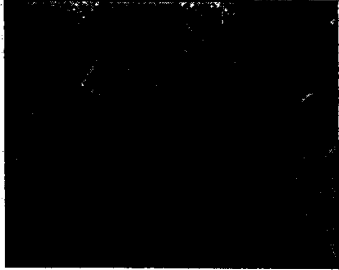
Are your Hospitals PEDIATRIC ready?

- Disaster plan address children?
- Pediatricians involved in planning?
- Pediatric-specific pharmaceuticals, equipment, supplies (e.g., decontamination units, Mark I kits, etc.)
- Pediatric drills and exercises?

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**Example:
The Chemical Contaminated Casualty**



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Columbia University

**Contaminated Casualty Victims
Current Status**

- Most Hospitals Have Minimal Decontamination Capability
- HazMat Teams Are Supposed to Decontaminate Patients at the Incident Site
- Decontaminated Patients Then Transported to Health Care Facilities for Treatment
- No Contaminated Patients Are Expected to Arrive at the Hospital



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Tokyo March 20, 1995

- 5,500 People Exposed
- 3,227 Went to Hospital
- 550 Transported Via EMS
- Essentially no Decontamination of Patients



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Sarin Secondary Contamination

- 11 ED physicians were affected by Sarin carried into the ED by victims
- Once the victims were forced to remove their clothing before entering the ED, no further ED staff affected

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What about pediatric decontamination?

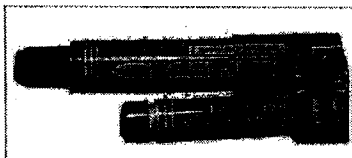


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Mark-2 Auto-Injector

- What about kids?
 - Manufacture makes pediatric model for Israel
 - Not FDA approved



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What about a uniquely pediatric event?

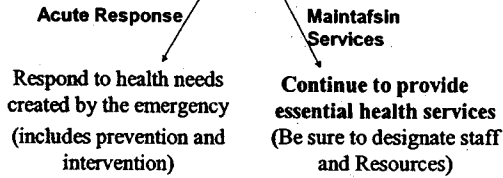
- Surge Plan
 - Address pediatrics out of proportion to normal numbers
 - Pediatric equipment and providers
 - Plans for care of children
 - Adult Providers
 - Adult Units
 - Adult Equipment

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Goals of any health system during emergency response

Two Roles



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“All Hazards Policy”

- Simple
- Adaptable
- Internal
- External

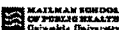
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Assess Hazards

- **Conventional**
 - secondary device threats
- **Chemical**
 - decontamination/antidote stockpiles
- **Biologic**
 - quarantine/isolation, Immunization and prophylaxis (staff and patients), distribution sites
- **Nuclear/Radiological**
 - decontamination, chelation

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But what about pediatric preparedness????

- Must be integrated with general all-hazards preparedness
- Must be prepared to address the whole family
- Rely on your own supplies
 - Federal and local resources may not address children
- Rely on your own staff
 - Surge capabilities in community may not address children

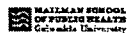
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But what about pediatric preparedness????

- **Role of Children's Hospital**
 - Setting the standard and providing the resource
 - Referral center
 - Source staff
 - Source of protocols
 - Telemedicine
 - What if you have to close?
 - Providing leadership to others

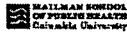
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Hospital Pediatric Preparedness Recommendations

- Ensure preparedness in all hospitals, with children's hospitals playing a crucial role in educating the community, training health care providers, and directing the care of children in general hospitals when the numbers of children or logistics prevent transport to a children's hospital.
- Keep a 48-hour supply of pediatric equipment and pharmaceuticals on hand for the average daily number of patients plus an additional 100 patients.
- Include a detailed pediatric component in Web-based hospital resource availability networks.

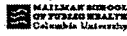
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Hospital Pediatric Preparedness Recommendations

- Engage in a pediatric-specific disaster risk assessment with the community, including school districts, the Office of Emergency Services, EMS, the police department, the fire department, private practitioners, child welfare organizations, child care establishments, public health organizations, and mental health facilities.
- Develop informational resources and training for pediatric-specific responses to biological, chemical, and radiological terrorism.
- Ensure that all hospital emergency operations and preparedness policies include pediatric care and treatment guidelines and account for the unique aspects and needs of children.
- Ensure that all agents and equipment that are stocked for disaster and terrorism preparedness are either specifically for pediatric use or can be appropriately substituted for pediatric use.

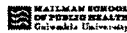
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Specialty Resource Centers Recommendations

- Designate a pediatric specialty resource center and system in every regional and state disaster plan to include—at a minimum—pediatric critical care, pediatric trauma, and pediatric burn capabilities.
- Develop multiple systems capable of transporting pediatric patients to link patient care resources.

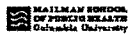
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**MMRS, Community Response Teams,
and Physician Volunteers
Recommendations**

- Form disaster medical and psychological incident response teams capable of managing pediatric patients in every region.
- The Metropolitan Medical Response System (MMRS) and Community Response Teams must plan for and receive training in the care of pediatric patients. The MMRS must include appropriately trained providers and provision for pediatric equipment.
- Promote communication and consultation between facilities by availability of multiple horizontal communication systems that include patient records and medical information.
- Involve pediatric-trained providers in physician volunteer programs. Such programs must have plans to provide pediatric-trained providers to facilities that need additional support in disaster events.

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