New York City
Pediatric Disaster Coalition
The PDC
Operational Pediatric Disaster Planning

George Foltin, MD, Co-Principal Investigator
Director, Center for Pediatric Emergency Medicine
NYU Langone Medical Center/Bellevue Hospital

Michael Frogel, MD,
Principal Investigator, MD, Project Officer

Funded by New York City Department of Health and Mental Hygiene
Hospital preparedness program ASPR
Advocacy, Planning and Clarity of Mission Matters

In order to solve a problem, one has to think about the problem.
Planning Principles

• Some are universal
• Some are based on setting and resources
• All planning ideally should include from outset but can be added
• infants, children, adolescents, special needs and women in labor
• public-private-public partnerships essential
Planning Principles

• Some are universal
• Some are based on setting and resources
• All planning ideally should include from outset but can be added
  • infants, children, adolescents, special needs and women in labor
• public-private-public partnerships essential
Planning Principles

• Some are universal
• Some are based on setting and resources
• All planning ideally should include from outset but can be added
  • infants, children, adolescents, special needs and women in labor
• public-private-public partnerships essential
Space, Staff, Stuff

Space:
- Rapid Patient Discharge from ED, PICU, Floor
- Expansion Plans (Additional/ Alternate area, doubling up)
- Equipment and supplies
  - known location, accessible, prepackaged
How We Respond Matters!
MAY 1, 2010
SATURDAY EVENING IN MANHATTAN
The Event
How many available PICU beds did NYC have?
<table>
<thead>
<tr>
<th>Hospital</th>
<th>Beds available on 5.1.10 6:00 pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYH - Columbia</td>
<td>11</td>
</tr>
<tr>
<td>NYH - Cornell</td>
<td>3</td>
</tr>
<tr>
<td>CCMC</td>
<td>3</td>
</tr>
<tr>
<td>Mount Sinai</td>
<td>0</td>
</tr>
<tr>
<td>NYH-Queens</td>
<td>1</td>
</tr>
<tr>
<td>Kings County</td>
<td>5</td>
</tr>
<tr>
<td>Montefiore</td>
<td>1</td>
</tr>
<tr>
<td>Bellevue</td>
<td>3</td>
</tr>
<tr>
<td>B.I.</td>
<td>2</td>
</tr>
<tr>
<td>Maimonides</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>
Conclusion

• During study period 21% of beds available

• 11% reported shortage of nursing staff when going to full capacity

• PCC surge plans to increase the number of available beds by surge is necessary

• Based on previous discussion on Times Square scenario and census study we determine there is a need for PCC surge capacity
What is the PDC?
Resources

Resources

Pediatric Disaster Preparedness:
A Resource for Planning, Management and Provision of Out-of-Hospital Emergency Care

George Foltin, MD • Michael Tunik, MD
Marsha Treiber, MPS • Arthur Cooper, MD
Pediatric Disaster Tabletop Exercise

Moderated by: George Foltin, MD
Facilitated by: Michael Tunik, MD
Bonnie Arquilla, DO
New York City Pediatric Disaster Coalition

• The NYC Department of Health and Mental Hygiene (DOHMH) directed federal funds for a Pediatric Disaster Coalition (PDC), charged with planning for an effective pediatric disaster response.
• Build a coalition of hospitals, public health, municipal services and community groups to:
  • Effectively match critical assets and resources to victims needs during and after a large scale disaster affecting children, neonates and women in labor.
  • Develop and expand ongoing pediatric disaster preparedness through advisory and coalition building activities.
PDC STAKEHOLDERS

- Public Health
- Emergency Management
- Pediatric Surgery
- Pediatric Nursing
- Neonatology
- OB/GYN
- Community groups
- Hospitals

- EMS
- Pediatric Emergency Medicine
- Pediatric Critical Care
Participating Hospitals & Organizations

Continuum Health Partners, Inc.

Lincoln Medical and Mental Health Center

Maimonides Infants & Children's Hospital of Brooklyn

Montefiore

Mount Sinai Hospital

St. Luke’s Roosevelt

Continuum Health Partners Inc.

New York Hospital Queens

New York-Presbyterian / The University Hospital of Columbia and Cornell

NYU Langone Medical Center

SUNY Downstate Medical Center

North Shore LIJ Steven & Alexandra Cohen Children's Medical Center of NY

NYC Health

CPEM

the center for pediatric emergency medicine

Maimonides

Infants & Children's Hospital of Brooklyn

NYC PDC
Chain Of Events
Planning

Triage
Tiering
Transport
Surge
Years 1 to 3

- Created new guidelines for first responders.
- Recommended transport of pediatric patients to pediatric receiving hospitals (PDRH).
- Formed a MOU for inter-hospital secondary transport of patients to PDRH by FDNY-EMS.
- Developed pediatric intensive care surge plans and increased pediatric surge bed capacity by an additional 128 beds above the baseline of 238.
<table>
<thead>
<tr>
<th>Hospital</th>
<th>PCC beds</th>
<th>Add by Surge</th>
<th>New Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYH - Columbia</td>
<td>41</td>
<td>42</td>
<td>83</td>
</tr>
<tr>
<td>NYH- Cornell</td>
<td>20</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>CCMC</td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Mount Sinai</td>
<td>22</td>
<td>10</td>
<td>32</td>
</tr>
<tr>
<td>NYH-Queens</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Kings County</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Montefiore</td>
<td>16</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Bellevue</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>B.I.</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Maimonides</td>
<td>11</td>
<td>**</td>
<td>11</td>
</tr>
<tr>
<td>S.I.</td>
<td>4</td>
<td>**</td>
<td>4</td>
</tr>
<tr>
<td>** Total</td>
<td>156</td>
<td>114</td>
<td>270</td>
</tr>
</tbody>
</table>

** Planning in progress—numbers to be determined

\[
\frac{114}{156} = 0.73
\]
Proposed hospital triage tiers for pediatric disaster victims mapped against pediatric population density

Proposed Hospital Triage Tiers for Pediatric Disaster Victims
- Tier 1*: Pediatric Hospital with PICU - Pediatric Trauma Center (n=12)
- Tier 1: Pediatric Hospital with PICU - Non-Trauma Center (n=13)
- Tier 2*: Pediatric Hospital without PICU - Adult Trauma Center (n=5)
- Tier 2: Pediatric Hospital without PICU - Non-Trauma Center (n=5)

Pediatric Population per 100,000 Children
- 0 - 236 Children
- 237 - 510 Children
- 511 - 782 Children
- 784 - 1157 Children
- 1158 - 1506 Children

Source: Dana Meranus, NYCDOHMH, April 2009.
The hospital should sponsor the training of Pediatric Critical Care faculty to become certified Instructor.

The following categories of care providers should be encouraged to take the course under PFCCS instructors:

- Non-Critical Care MD’s
- ED fellows
- Chief residents
- Nurses
- NPs
- PA’s

Developed by Society of Critical Care Medicine
Year 4 Overview

• Five Pediatric Tabletop and Full Scale Exercises of PICU surge plans

• Pediatric Intensivist Response Team (PIRT)

• Pediatric Resource Directory

• Neonatal and Maternal Care Committee
Year 5 Overview

• Neonatal and Maternal Health
  • NICU Resource Directory Completed
  • NICU guidance documents
  • NICU evacuation and surge plans
• PICU Surge Planning
• Community Outreach
• PDC Conference
• Hurricane Sandy Response
Hurricane Sandy Response

• Created a working group for pediatric response to Hurricane Sandy.
• The working group is studying successes and gaps in planning and response.
• Crafted a report concerning lessons identified for managing children during coastal storm evacuations.
Pediatric Disaster Coalition
Citywide Organization of Pediatric Critical Care Resources

• There must be a plan, there must be communication
• Major pediatric centers must surge
  • Critically ill and injured children are better served at specialty centers even if they must surge
• Primary transport to the best destination
  • Centralized triage
  • Secondary transport must be vigorous
  • All players must buy in
  • Care providers must be trained
• Resources and drills are essential
Community Preparedness for Children
Soup to Nuts

- Children and Acute Traumatic Stress, PTSD and Chronic morbidity
- Decontaminating Children
- Specialized Pediatric Field Triage Considerations
- Overcoming Legal Obstacles Involving the Voluntary Care of Children Who Are Separated from their Legal Guardians During a Disaster
Promote PDC Concept to a National and International Level

- All cities should have a plan for disasters involving children
- PDC replicable model can be used in other cities
Utilizing NYC Pediatric Disaster Coalition Site Visits to Create Hospital Pediatric Critical Care Surge Plans
Miles to Go...

- Lack of evidence base
- Lack of funding for research and infrastructure
- Public not engaged
- Other large system needs
- Women in labor, newborns, NICUs
- Mental health, mental health, mental health
Don't you feel so all alone
Everybody must do
DRILLS
Barriers to Response for Kids

“We have come a long way but…we have a long way to go.”