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Disclosures

- I have no relevant financial relationships with the manufacturers of any commercial products and/or providers of commercial services discussed in this presentation.

- I do not intend to discuss an unapproved or investigative use of a commercial product or device in this presentation.
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Pediatric Data

• 26% of the U.S. population
• 20% of hospital ED visits
• 90% seen in local hospitals*
• 69% in facilities that see less than 15 children per day*

2011 Tuscaloosa Tornado

• More than 100 children received care in local general hospital
• 17.4% of population less than 18 years old
• 17% of all deaths occurred in children less than 18 years old

Are Hospitals Prepared?
IOM Reports

• 2006: Institute of Medicine’s (IOM) Future of Emergency Care Report
  – Pediatric Care continues to be uneven
  – Deficiencies exacerbated in disaster
  – Emergency care system poorly prepared

2008 National Hospital Ambulatory Medical Care Survey

- Tracking system for children (43%)
- Reunification of children and families (34%)
- Increasing pediatric surge capacity (32%)
- Plan for supplies/sheltering of children (29%)
- Pediatric victims included in drills (45%)

  - Median # of ‘victims’ in the drill: 1 of 16

Niska RW, Shimizu IM. National Health Statistics Report Number 37, 2011
Moving Forward…

• 2010: “Deficiencies in every functional area of pediatric disaster preparedness”
• 2013: “State and local disaster plans don’t include children and families”


What About Children’s Hospitals?

• Most have a structure in place for disaster
• Less confident with large-scale regional, national, or international events
• Few interact with schools or daycares

Peds Ready

http://www.pediatricreadiness.org/
2013: “Less than half of all U.S. hospitals have written disaster plans addressing issues specific to the care of children”

The Response

- Response to Peds Ready
- Multi-disciplinary workgroup convened
- Focused on developing a tool to assist hospitals to incorporate children into disaster plans
Project Goals

• Build on existing resources
• Focus on best practice guidelines and checklists from local regions
• Develop consensus on essential pediatric domains and considerations
The Checklist

www.emscnrc.org
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CFO
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Focus on Rapid-Onset Surge Planning

- All-hazard approach to pediatric hospital preparedness
- Rapid onset surge planning and response
## Intuitive and User-Friendly

### Pediatric Readiness Project

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### Pediatric Specifics to Consider/Discuss

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<td>Pediatric patient</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Pediatric disaster response</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Pediatric patient's family</td>
<td>Yes</td>
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### Pediatric Readiness Program

**Domain 1: Staff coordinator to champion pediatric disaster coordination and response - roles and responsibilities**

- **Pediatric Specifics to Consider/Decide:**
  - Professionals with pediatric training in medical content and disaster response, or willing to learn about disaster response (e.g., incident Command System courses).
  - Non-pediatric professionals who could advocate for and integrate the needs of children in planning and impact pediatric disaster response (e.g., neurosurgeon, trauma surgeon, other surgical subspecialists, infectious disease, adult emergency medicine physicians, etc.).

### References and Resources By Domain

**Domain 1: Staff coordinator to champion pediatric disaster coordination and response - roles and responsibilities**


- **King County Health Care Coalition Pediatric Triage Task Force, Public Health – Seattle and King County. Hospital Guidelines for Management of Pediatric Patients in Disasters. March 17, 2010. Available at http://www.hcchh.org/hospital_guidelines-management_pediatric_patients_disasters.**

- **Montero S, Shannon M, Sandora TJ, and Chung S. Pediatric Aspects of Hospital Preparedness. Clinical Pediatric Emergency Medicine 10(3); 2009.**

- **The Joint Commission. New and Revised Requirements Address Emergency Management Oversight. The Joint Commission Perspective 33(7); July 2013. Available at http://www.jointcommission.org/assets/1/19/JCPCF015_Emergency_Mgmt_Oversight.pdf.**

- **University of Massachusetts Medical School, Interprofessional Center for Experiential Learning and Simulation. Pediatric Disaster Life Support from http://www.umaassmed.edu/cels/certification-courses.**

Smaller Volume EDs Less Likely to Have Plan

Graph 1: Percent of EDs by Pediatric Volume
- 14% >25 children/day
- 39% 5-14 children/day
- 30% 15-25 children/day
- 17% <5 children/day

Graph 2: Disaster Plan Availability by Pediatric Volume
- High Volume Hospitals: 67%
- Medium-High Volume Hospitals: 52%
- Medium Volume Hospitals: 46%
- Low Volume Hospitals: 38%
Adaptable to Local Needs

• Unique needs of each facility/community
• Part of a broader framework
• Can supplement HPP capabilities
• Collaboration with local and regional coalitions and partners highly encouraged
Pilot Testing

• General Hospital
  – 304 beds / population 36,303 (Georgia)
  – 12 bed CAH / pop 3,950 (Texas)
  – 120 beds / pop 42,898 (Utah)

• Pediatric Facility
  – Stand alone peds: 176 beds / pop 842,592 (Texas)
    (over 46 counties)
  – Peds Center within peds/adult facility: 53 bed peds/84 bed NICU/20 bed PICU / pop 634,265 (Colorado)
Pilot Feedback

• Overwhelmingly positive
• CAH hadn’t considered pediatrics in disaster planning
• Everyone learned something new
Perceived Implementation Barriers

- Large systems slow to change
- Smaller hospitals may not see need
- Getting in the right hands
- Costs
- Resistance to focusing on special populations
The Domains

- Physician/Staff Coordinator
- Partnership Building
- Essential Resources
- Family Tracking and Reunification
- Triage, Infection Control, and Decontamination
- Legal/Ethical Issues
- Behavioral Health
- Children with Special Health Care Needs
- Staffing, Exercises, Drills, and Training
- Recovery and Resiliency
Domain 1: Physician/Staff Coordinator

• Professionals with pediatric and disaster training
• Non-peds professionals
• Defined roles and responsibilities
Domain 2: Partnership Building

• Focused on coalition building and relationships to facilitate surge capacity
• Key intra- and inter-facility process for surge capacity
• Integration with community and regional disaster plans and prehospital systems of care
Domain 3: Essential Resources

• “Stuff” to consider for pediatric surge:
  – Surge space/alternative care sites
  – Decontamination equipment/supplies
  – Special pediatric equipment (i.e., vents)
  – Pharmaceutical needs
  – Dietary supplies
  – Special accommodations/supplies
  – Needs for prolonged stays
Domain 4: Triage, Infection Control, and Decontamination

- Triage involving infection control/exposure
- Water temp/pressure controls for decon
- Keeping families together
- Pediatric face-masks/isolation
- Disinfection of community toys
- Shelter in-place and evacuation
Domain 5: Family Tracking, Security, Support & Reunification

• Transfer tracking tool w/photo; support center; ID forms and bands
• Family togetherness/reunification; non-verbal
• Unattended well-child care/security/space
• Maintain security for existing patients
• OB/Gyn and newborn care
Domain 6: Legal/Ethical Issues

- Assents/consents, w/ or w/o parent
- Vaccination, testing, and treatment
- Credentialing, scope of practice, reciprocity
- Unattended child care (staff/volunteer)
- Adverse events/maltreatment reporting
- Scarce resource allocation for children
- EMTALA/SCHIP waivers
- Legal requirements to prepare for kids
- Implementing crisis standards of care
Domain 7: Behavioral Health

- Psychological first-aid training/protocols; screening
- Information sheets; access to MH care
- MH professional in pediatric care review
- MH resources in facility and community
- Policies/procedures to reduce exposure
Domain 8: Children with Special Health Care Needs

- Care for neonates
- Considerations for developmental, physical, and behavioral issues
- Specialized equipment needs; MOUs
- Medications and special dietary needs
- Process to estimate surge demand
Domain 9: Staffing, Exercises, Drills and Training

- Pediatric victims in drills
- Staffing for pediatric surge
- Training and protocols for transfer triage and safe transfer with scarce resources
- Care-review process driving QI and training
Domain 10: Recovery and Resiliency

- Discharge disposition of children
- Behavior and mental health referrals
- Culturally tailored, user-friendly information
- Primary care and medical homes
- Bereavement support
- Professional self-care
- Partner with child-care, schools, etc
References and Resources By Domain

Domain 1: Staff coordinator to champion pediatric disaster coordination and response - roles and responsibilities


University of Massachusetts Medical School, Interprofessional Center for Experiential Learning and Simulation. Pediatric Disaster Life Support from http://www.umassmed.edu/icels/certification-courses/.

Interactive or PDF

http://www.emscnrc.org
Next Steps

• Identify physician and nurse champions
  – Facility PECCs
  – Regional/healthcare coalition leaders
Ways to Use Checklist

• Review current facility disaster plan and address gaps
• Establish QI performance indicators
• Develop regional benchmarks
• Use regionally or within coalition to identify needs and resources to increase pediatric surge capacity
Get the Conversation Started

• Start a Dialogue
• Identify priorities and set benchmarks
• Will be a stepwise process
EMSC Program Resources

• EMSC Program
  – EMSC State Partnership
  – Targeted Issue Grant
    • Mark Cicero, MD 2010-2013
    • Sarita Chung, MD 2008-2011
    • Flaura Winston, MD, PhD 2005-2008

More Resources

• Health Resources on Children in Disasters and Emergencies

• State and national professional organizations
  – AAP
  – ACEP
  – ENA

• Hospital Preparedness Program
For More Information

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