

# Understanding and Implementing the Pediatric Disaster Preparedness Checklist

*Domain 3: Pediatric Surge Capacity*



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# Acknowledgement and Disclaimer

The Emergency Medical Services for Children Innovation and Improvement Center is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award (U07MC37471) totaling \$3M with 0 percent financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit [HRSA.gov](https://www.hrsa.gov).

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- The American Academy of Pediatrics (AAP) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.
- The AAP designates this live activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
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- This program is accredited for 1.0 NAPNAP CE contact hours of which 0 contain pharmacology (Rx) content, (0 related to psychopharmacology) (0 related to controlled substances), per the National Association of Pediatric Nurse Practitioners (NAPNAP) Continuing Education Guidelines.
- This program is also accredited for 1 CE Nursing Credit

# Session Participation Incentives: MOC

Successful completion of this CME activity, which includes participation in the evaluation component, enables the learner to earn up to 1.0 MOC points in the American Board of Pediatrics' (ABP) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit learner completion information to ACCME for the purpose of granting ABP MOC credit.

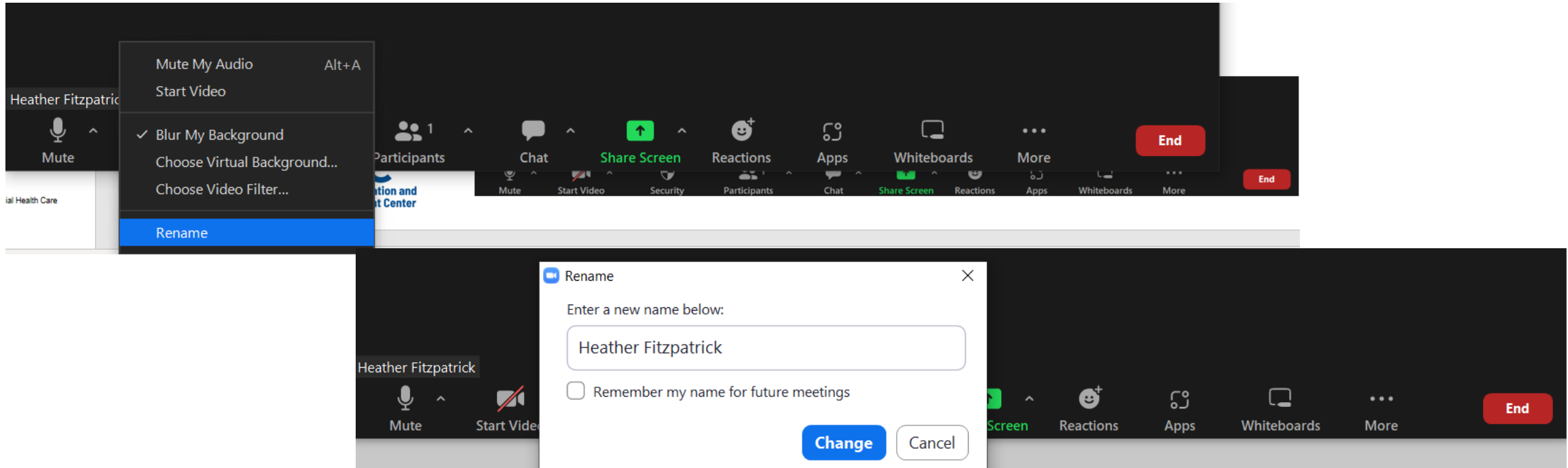
To be eligible to claim MOC Part 2, participants must:

- Attend the entire live session
- Complete the knowledge change survey available after the session

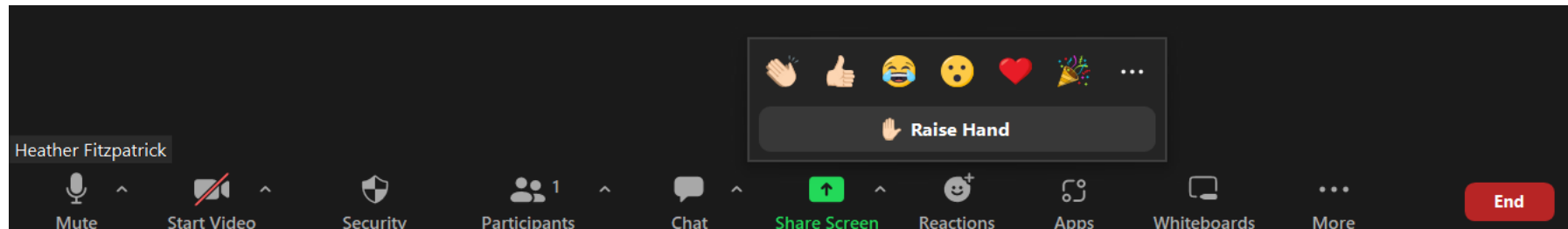
# Housekeeping

- Please consider changing your name as it appears in Zoom to include your role and your name
  - Right-click on name bar below picture or in participant list
  - Click on “rename”
  - Include role and name (eg, EMS-Jane Smith, PEM physician-Juanita Lopez)
- Feel free to enter questions in chat
- During Q &A, raise your hand (virtually or old-fashioned) and unmute when called on
  - To use “raise hand” feature in Zoom, click on “reactions” and select “raise hand”

# Change Name



# Raise Hand



# Agenda

- Overview of the Emergency Medical Services for Children Innovation and Improvement Center (EIIC) – *5 minutes*
- Introduction to the Checklist – *10 minutes*
- Understanding Domain 3: Pediatric Surge Capacity – *15 minutes*
- Q & A Discussion – *15 minutes*
- Wrap-up – *5 minutes*
  - Remaining sessions
  - Claiming continuing education credit and/or maintenance of certification  
2 credits

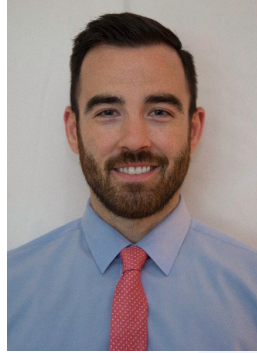
# Domain 3: Pediatric Surge Capacity



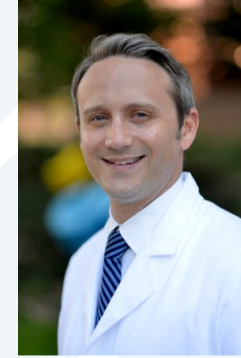
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# Today's Faculty



Jefferson Barrett, MD, MPH, FAAP



Brent Kaziny, MD, FAAP



David Greenky, MD, FAAP



Deanna Dahl Grove, MD, FAAP



# Disclosures

- Today's speakers have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity
- Today's speakers do not intend to discuss an unapproved/investigative use of a commercial product/device in our presentation
- Today's speakers considered 'Words Matter: AAP Guidance on Inclusive, Anti-Biased Language' in preparing this presentation

# Learning Objectives

- **Following this session, learners will be able to:**
  - Learners will identify 2 best practices related to pediatric surge preparedness.
  - Learners will understand surge considerations included in the 3 progressive categories of foundation, intermediate and advanced.
  - Learners will identify 1 activity that can be conducted in their own facility to improve surge planning.

# Emergency Medical Services for Children Innovation and Improvement Center (EIIC)

Deanna Dahl Grove, MD, FAAP



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# EIIC Mission

The mission of the EIIC is to optimize outcomes for children across the emergency care continuum by leveraging quality improvement science and multidisciplinary, multisystem collaboration.



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# EIIC Background

- Formed in 2016
- Led by 2 organizations with significant experience in the EMSC space
  - The University of Texas at Austin Dell Medical School
  - University Hospitals Rainbow Babies and Children's
- Part of the Emergency Medical Services for Children program

# EIIC Background, cont

- Key Partner Organizations
  - Yale University
  - Baylor College of Medicine
  - The Lundquist Institute
  - Multiple professional societies, including American Academy of Pediatrics
  - Multiple Federal Organizations

# EIIC Structure

- The EIIC is structured into key focus areas:
  - Hospital-Based Care
  - Prehospital-Based Care
  - **Disaster Preparedness**
  - Trauma
  - Quality Improvement Collaboratives
  - Advocacy
  - Knowledge Management
  - Research
  - Analytics
  - Value-Based Care



# EIIC Offerings – EMSC Program Support

- EMSC Partnership Grants
- Targeted Issues Grants
- EMSC Grants Database
- All Grantee Meeting
- Coordination with the EMSC Data Center

# EIIC Offerings - Education

- Pediatric Education and Advocacy Kits
- Toolkits
- Training Modules
- Webinars

# EIIC Offerings – Quality Improvement

- QI Collaboratives
- Communities of Practice
- Current/future Opportunities
  - PECC Workforce Development Collaborative
  - ED STOP Suicide Collaborative
- National Pediatric Readiness Project

# Introduction: Disaster Preparedness Checklist

Jefferson Barrett, MD, MPH, FAAP

David Greenky, MD, FAAP



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- Intro Video Here

# Domain 3: Pediatric Surge Capacity

Brent Kaziny, MD, FAAP

David Greenky, MD, FAAP



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- Surge video here

# Using the Checklist

## DOMAIN 3: PEDIATRIC SURGE CAPACITY

Evaluating an institution's current surge capacity to identify weaknesses and develop strategies to address all aspects of surge capacity allows institutions to effectively prepare for current capacity and be better prepared for an unexpected high number of pediatric patients.

RECOMMENDED ACTIVITY	FOUNDATION	INTERMEDIATE	ADVANCED
<p><b>General Surge Planning</b></p>	<ul style="list-style-type: none"> <li>○ Identify and continue to augment baseline pediatric capabilities:               <ul style="list-style-type: none"> <li>• Emergency department capacity.</li> <li>• Surgical capacity.</li> <li>• Extended care for up to 48-72 hours when immediate transfer is not available.</li> </ul> </li> <li>○ Establish a protocol to triage pediatric patients and determine which require priority transfer.</li> <li>○ Establish a plan for accessing pediatric expertise at the community and regional level [telemedicine, phone consultation].</li> <li>○ Consider establishing a formal relationship with local primary care pediatricians to augment surge capabilities.</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish a plan for caring for sick/ more complex pediatric patients as part of a surge especially when immediate transfer is not available.</li> <li>○ Determine ability to augment capacity of pediatric services within the hospital:               <ul style="list-style-type: none"> <li>• Surge targets of 120%, 200%, 300% under conventional/contingency/crisis models.</li> <li>• Consider how to both expand pediatric capacity/capability and convert adult services to pediatric use.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Lead coordination efforts across the region regarding pediatric patient transfers to regional pediatric centers.               <ul style="list-style-type: none"> <li>• Special considerations: burn, pediatric critical care [advanced respiratory and blood pressure support].</li> </ul> </li> <li>○ Establish a plan for how to provide pediatric expertise within the community [telemedicine, phone consultation].</li> <li>○ Ensure pediatric considerations are included in regional crisis care guidelines and support regional transfer coordination for children with different/ complex needs [pediatric-specific transport].</li> </ul>



### DOMAIN 3: PEDIATRIC SURGE CAPACITY

Evaluating an institution's current surge capacity to identify weaknesses and develop strategies to address all aspects of surge capacity allows institutions to effectively prepare for current capacity and be better prepared for an unexpected high number of pediatric patients.

RECOMMENDED ACTIVITY	FOUNDATION	INTERMEDIATE	ADVANCED
<b>Surgical Capabilities</b>	<ul style="list-style-type: none"> <li>○ Identify surgeons within your institution who already care for pediatric patients or are prepared to provide care in a disaster situation.</li> <li>○ Identify surgical conditions in children for which the hospital could potentially provide care.</li> </ul>	<ul style="list-style-type: none"> <li>○ Identify immediate access to a pediatric surgeon.</li> <li>○ Identify capabilities in pediatric surgical subspecialties (orthopedics, neurosurgery, ORL).</li> </ul>	<ul style="list-style-type: none"> <li>○ Immediate access to pediatric surgical subspecialties regardless of trauma designation (orthopedics, neurosurgery, ORL).</li> </ul>
<b>Space</b>	<ul style="list-style-type: none"> <li>○ Identify the particular institutional capacity at which alternative care sites would be necessary.</li> <li>○ Identify alternative spaces within the institution (cafeteria, pre-op clinic) that can be used for pediatric care in a surge and establish a plan for when and how to utilize those spaces.               <ul style="list-style-type: none"> <li>• Older children may need to be kept at community facilities pending availability.</li> </ul> </li> <li>○ Ensure those spaces are private, child-proof, secure, and protected from the public.</li> </ul>	<ul style="list-style-type: none"> <li>○ Determine how existing pediatric spaces can be expanded and how adult care areas can be converted to meet pediatric surge needs.</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish a plan to identify and create immediate bed availability for pediatric surge.</li> <li>○ Prioritize ICU availability for transfers.</li> <li>○ Expand ICU services using existing space.</li> </ul>

### DOMAIN 3: PEDIATRIC SURGE CAPACITY (Continued)

RECOMMENDED ACTIVITY	FOUNDATION	INTERMEDIATE	ADVANCED
<p><b>Equipment &amp; Supplies</b></p>	<ul style="list-style-type: none"> <li>○ Ensure institution has adequate pediatric-sized equipment, dietary supplies, diapers, and medications to manage pediatric patients.</li> <li>○ Investigate ability to utilize non-pediatric equipment, supplies, and medications for pediatric use and develop institutional guidelines to do so.</li> <li>○ Engage with supply chain management and sterile processing staff to ensure enough supply to meet needs for prolonged patient stays in your facility when transfer is not immediately possible (shelter in place).</li> </ul>	<ul style="list-style-type: none"> <li>○ Engage with supply chain management staff to track usage of pediatric supplies and medications.</li> </ul>	<ul style="list-style-type: none"> <li>○ Create pediatric supply carts and/or kits that can easily be deployed to areas in need.</li> <li>○ Establish plans to secure sufficient quantities of key equipment to meet surge targets (pediatric-capable ventilators) through vendor agreements, MOUs with adjacent pediatric centers as well as local and federal government agencies.</li> </ul>
<p><b>Staff</b></p>	<ul style="list-style-type: none"> <li>○ Develop a process to bring in additional staff including emergency credentialing, verification, and background checking.</li> <li>○ Ensure current staff is trained in pediatric disaster response, including surge capabilities.</li> <li>○ Develop plans to most efficiently utilize new staff, including staff to secure expanded care areas, oversight of unattended minors, and family reunification.</li> <li>○ Consider utilizing adult care takers and locations especially for older children.</li> </ul>	<ul style="list-style-type: none"> <li>○ Develop an institution-wide emergency notification system to mobilize current staff during a surge.</li> <li>○ Identify and create formal relationships with additional staff that can help meet pediatric needs:               <ul style="list-style-type: none"> <li>• Within the hospital (nursing, physician, respiratory therapy, pharmacy).</li> <li>• Within the community (family medicine, school nurses, local EMS, medical reserve corps).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Leverage staff expertise to increase to surge targets (tiered staffing models).</li> <li>○ Consider Memorandum of Understanding (MOU) or other agreements to support adjacent regional pediatric centers (telemedicine, phone consultation, Disaster Medical Assistance Teams).</li> <li>○ Establish a mission control center to coordinate response and provide leadership to regional healthcare centers.</li> <li>○ Consider how critical care transport teams and other key hospital functional areas can provide mutual support.</li> </ul>



## DOMAIN 3 RESOURCES

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2. Christian, M. D., Devereaux, A. V., Dichter, J. R., Rubinson, L., & Kissoon, N. (2014). Introduction and executive summary: care of the critically ill and injured during pandemics and disasters: CHEST consensus statement. *Chest*, 146(4), 8S-34S.  
Retrieved from [https://journal.chestnet.org/article/S0012-3692\(15\)51985-5/fulltext?\\_ga=2.117542219.358956001.1641934098-1184698619.1641934094](https://journal.chestnet.org/article/S0012-3692(15)51985-5/fulltext?_ga=2.117542219.358956001.1641934098-1184698619.1641934094)
3. Contra Costa Health Services. (2015). Pediatric/Neonatal Disaster and Medical Surge Preparedness Toolkit. Retrieved from <https://cchealth.org/ems/emsc-disaster-prepare.php>
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Retrieved from <https://www.health.state.mn.us/communities/ep/surge/pediatric/primer.pdf>
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## DOMAIN 3 RESOURCES

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8. NYC Department of Health and Mental Hygiene, & Office of Emergency Preparedness and Response. (2013). Patient Surge in Disasters: A Hospital Toolkit for Expanding Resources in Emergencies. Retrieved from <https://www1.nyc.gov/site/doh/providers/emergency-prep/hospitals.page>
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10. U. S. Department of Health and Human Services, & Centers for Disease Control and Prevention. (2021). Strategic National Stockpile (SNS). Retrieved from <https://www.phe.gov/about/sns/Pages/default.aspx>
11. U. S. Department of Health Human Services, & Office of the Assistant Secretary for Preparedness and Response. (2021). Healthcare Coalition Pediatric Surge Annex. Retrieved from <https://files.asprtracie.hhs.gov/documents/aspr-tracie-hcc-pediatric-surge-annex-template-final-508.pdf>
12. U. S. Department of Health Human Services, & Health, Maternal-Child. (2021). HHS Maternal-Child Emergency Planning Toolkit. Retrieved from <https://www.phe.gov/Preparedness/planning/abc/mch-planning-toolkit/Documents/MCH-Emergency-Plng-Toolkit-508.pdf>



# Additional Resources

- AAP Interim Guidance Developed during COVID-19 Pandemic: [Caring for Patients in Inpatient and Outpatient Settings During Episodes of Surge \(aap.org\)](#)

# Q & A Discussion

Please feel free to raise your hand to be called on to unmute or type your question in the chat box.



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# Wrap-up

Post-session Items



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# Next Steps

- All participants will receive the evaluation survey – please provide your honest feedback!
- Those who indicate an interest in receiving MOC 2 points will receive the post-session knowledge change survey
- Please contact the EIC Disaster Domain project managers with any questions
  - Dina Dornack, MSN, RN - [Dina.Dornack@UHhospitals.org](mailto:Dina.Dornack@UHhospitals.org)
  - Heather Fitzpatrick, MPH – [hfitzpatrick@aap.org](mailto:hfitzpatrick@aap.org)



# Closing Information

Recordings are available on the EIIC website:

<https://emscimprovement.center/education-and-resources/toolkits/pediatric-disaster-preparedness-toolbox/>



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# Thank you!

Thank you for all you do to improve the health and well-being of infants, children, and adolescents!



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