Access the recording here:
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Access speaker bios here:
https://files.asprtracie.hhs.gov/documents/healthcare-preparedness-speaker-series-bio--spotlighting-childrens-health.pdf

Access the entire webinar series here:
https://files.asprtracie.hhs.gov/documents/aspr-tracie-healthcare-system-preparedness-considerations-speaker-series-summary.pdf

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HEALTHCARE EMERGENCY PREPAREDNESS INFORMATION GATEWAY

Healthcare System Preparedness Considerations Speaker Series

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Spotlighting Children's Health After a Disaster

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INFORMATION GATEWAY

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ASPR Administration for Strategic Preparedness & Response

The Children's Environmental Health Post-Disaster Assessment Toolkit

LCDR Christine M. Nappa, LCSW
Community Resilience Coordinator
Office of Community Mitigation and Recovery

ASPR TRACIE Speaker Series: Spotlighting Children's Health After a Disaster

October 6, 2026

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Understanding Children's Environmental Health



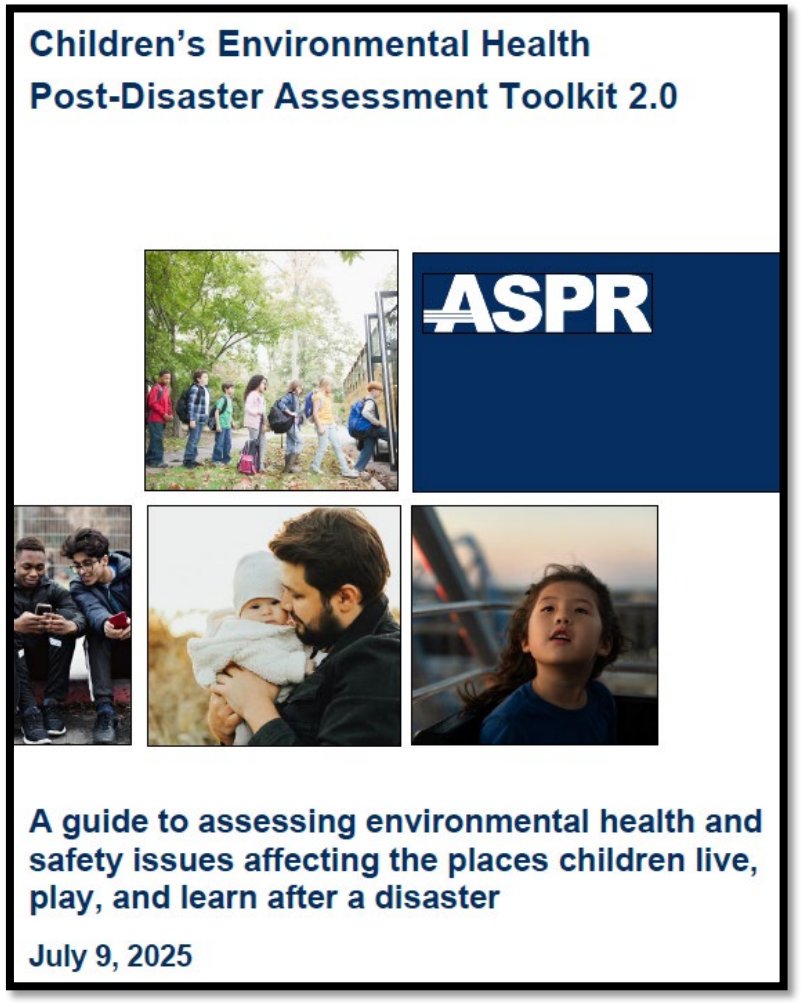
Children face greater risks from wildfires, hurricanes, flooding, and other disasters because of how their bodies develop, how they behave, and their dependence on adults for protection.

Considerations

- Children’s developing bodies are more vulnerable to pollution, which can lead to serious health risks and hinder cognitive development.
- Children are more vulnerable to chemicals such as pesticides and herbicides, which can harm children’s developing brains and hormone systems, leading to learning problems, hormonal imbalances, and higher risks of cancer and reproductive issues later in life.
- Extreme heat can cause dehydration, heat exhaustion, and heatstroke in children, whose bodies are less able to regulate temperature.
- Safe drinking water is essential for children's health because it prevents waterborne diseases, supports proper growth and development, and ensures adequate hydration for their physical and cognitive functions.

Children's Environmental Health Post-Disaster Assessment Toolkit

- The Toolkit helps your jurisdiction assess disaster-related risks to children's health so you can take action to reduce risk, eliminate the hazard, and educate the community.
- It can be used any time after a disaster or emergency, and team members do not need to be environmental health scientists.
- The assessment process is scalable, flexible, and described in plain language.



Options for Implementation

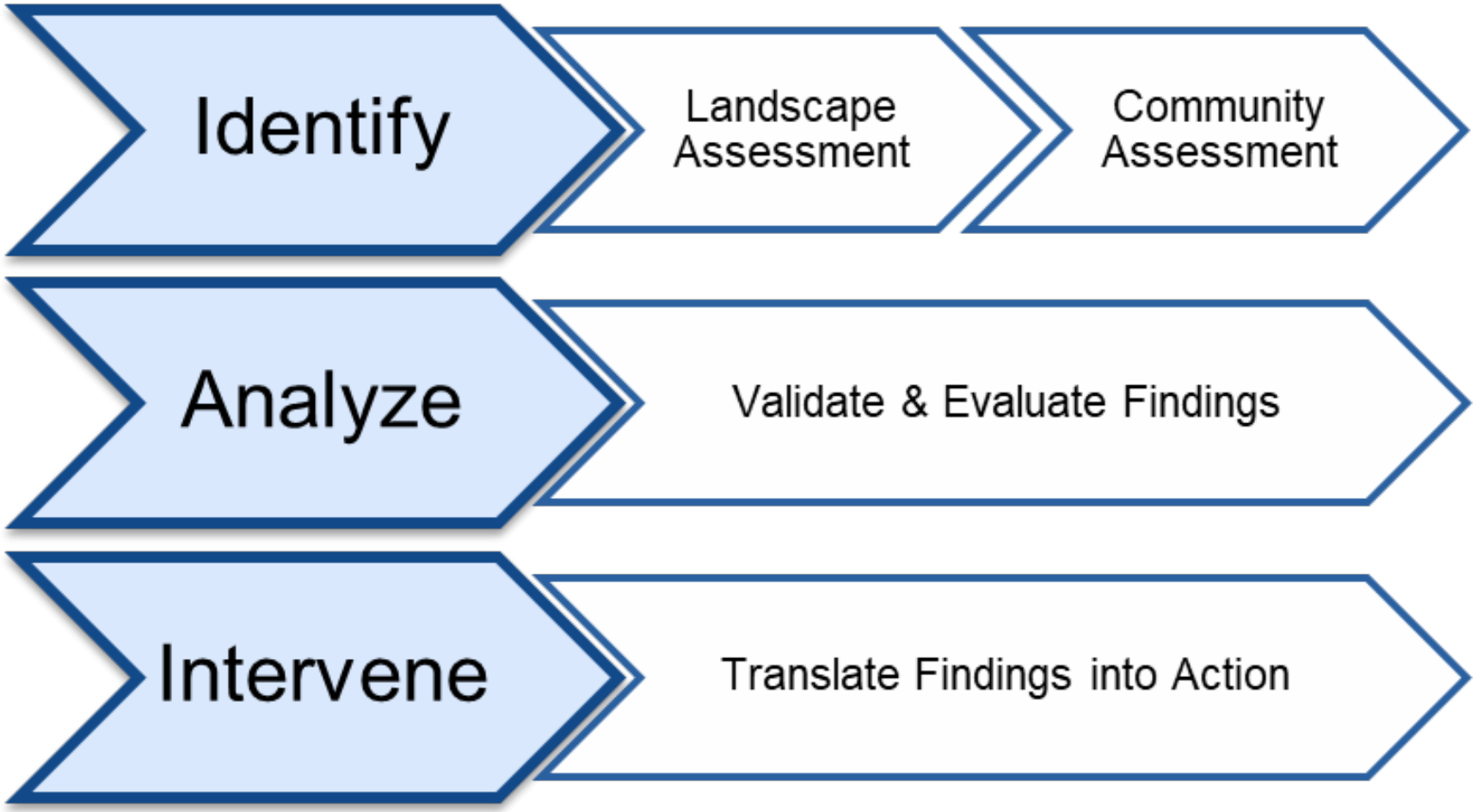
Locally Executed:

Led, managed, and executed by your local emergency management or public health.

Federally Supported:

A team of federal public health experts deploy, complete the Assessment, and deliver the results to you at the end. This most often happens as part of a Health, Education, and Human Services recovery mission.

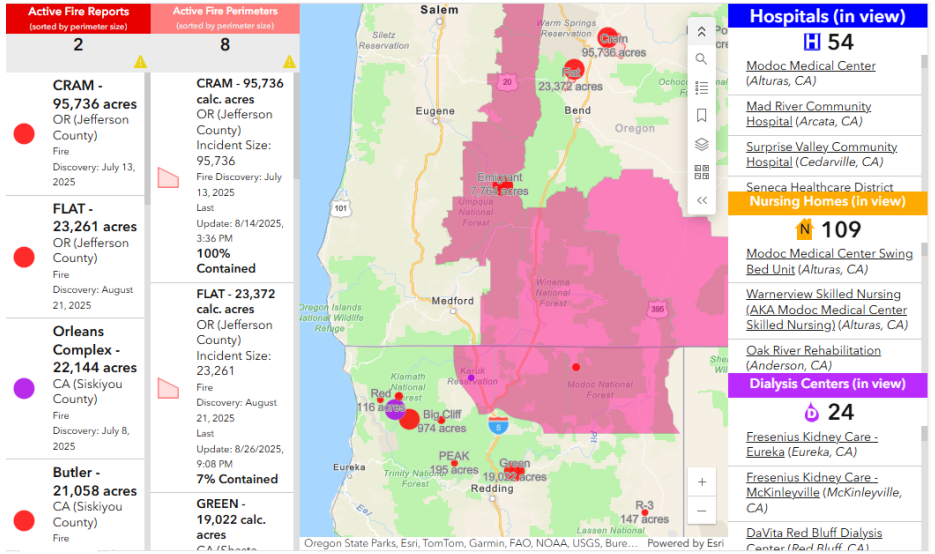
The Assessment Process



Identify



The Landscape Assessment uses existing data sources to build an initial understanding of children's services, programs, and community demographics before the disaster occurred.





The Community Assessment involves meeting in-person with child-serving organizations to identify actual needs, concerns, and gaps in the community caused by the disaster.

Landscape Assessment



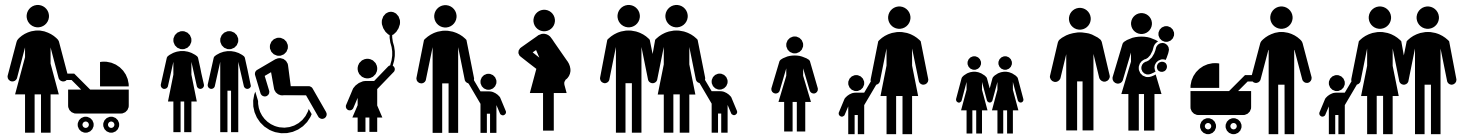
- The Landscape Assessment gives recovery teams a solid understanding of the affected community's demographics, children's programs, and environmental health context.
- This report has two main goals:
  - To help recovery personnel prepare for effective, focused engagement with local stakeholders, and
  - To assist the recovery leadership team identify priority children's programs and prioritize interviews about the most relevant environmental health concerns.



Community Assessment



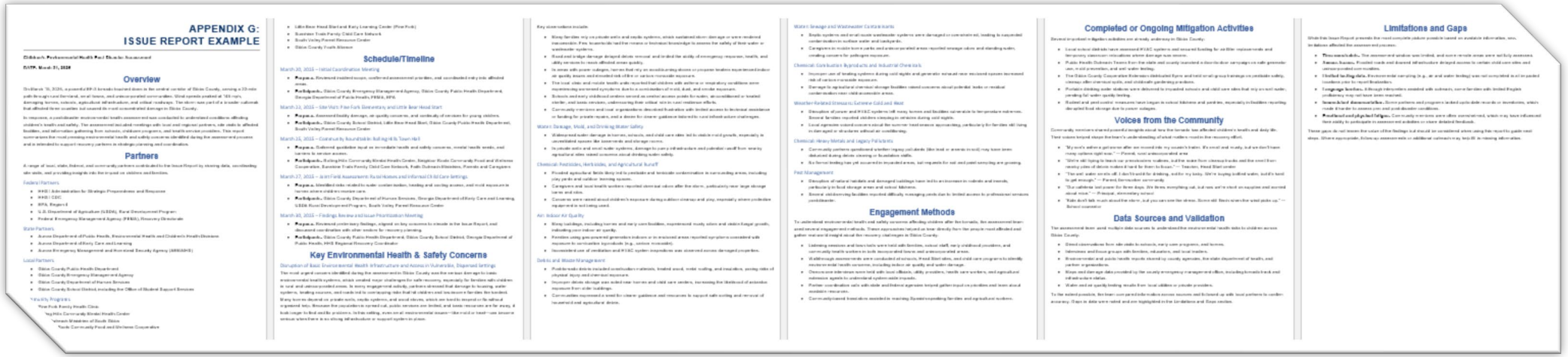
- The Community Assessment builds on the information collected during the Landscape Assessment.
- It involves meeting with local partners who provide services to children and having structured conversations to better understand their real concerns.
- These discussions help recovery teams plan actions and interventions that can reduce long-term harm to children after a disaster.
- Detailed appendices provide information about educational information, planning considerations, discussion prompts, and links to expert resources.



Analyze: Validate & Evaluate



- The Analyze phase focuses on reviewing and making sense of the information gathered during the Identify phase.
- The team validates reported concerns using available data and evaluates their potential impact on children's health and recovery.
- Key findings are summarized in an Issue Report, highlighting concerns that matter most to the community and pose the greatest risk for long-term recovery.


APPENDIX G:
ISSUE REPORT EXAMPLE

Overview

Partners

Schedule/Timeline

Key Environmental Health & Safety Concerns

Completed or Ongoing Mitigation Activities

Voices from the Community

Engagement Methods

Data Sources and Validation

Limitations and Gaps

Intervene: Findings into Action



- This is where findings are translated into planning, coordination, and action.
- Based on the results of the assessments, recovery partners work together to address the most pressing environmental health concerns affecting children.
- This phase supports the integration of children's environmental health into broader recovery strategies, ensuring that community-identified priorities are considered as decisions are made.
- It also provides an opportunity to reinforce collaboration between local, state, tribal, territorial, and federal recovery partners.



Appendix A & Appendix B: Landscape Assessment

- Appendix A: *Landscape Assessment Instructions*
  - Describes each section of the Landscape Assessment report.
  - Includes links to data sources and suggestions of how to identify local children's programs.
- Appendix B: *Landscape Assessment Example*
  - The Landscape Assessment Example illustrates the type of content within each section, using a fictional rural county and disaster as a case study.
  - The content and formatting of your Landscape Assessment may change based on your leadership's needs.

Appendix C: Disaster Reference Guide

- Disaster Reference Guides outline some of the ways children may be more vulnerable to environmental hazards after different types of disasters. Each disaster presents distinct risks to children's physical safety, emotional well-being, and ability to access care or remain with trusted adults.
- You can use these Guides to identify how different disasters might affect children's health based on various environmental health hazards.
- Disaster types included are:
  - Earthquake
  - Fire
  - Flood
  - Hurricane
  - Landslide
  - Tornado
  - Tsunami
  - Volcano
  - Wind Storms
  - Winter Storms



Appendix D: Children's Programs At-A-Glance

- The Children's Programs At-A-Glance section provides a brief overview of different types of children's programs, along with possible partners and engagement strategies.
- You can use these pages to confirm your Community Assessment plan includes children's program partners across the many types of child care, education, health care, protection & juvenile justice, and youth & community services.
- Follow links to national non-governmental partner websites to learn more about their work and identify local contacts.



Appendix E: Environmental Hazards Summary Sheets

- The Environmental Health Summary Sheets are intended to help you prepare for engagements with children's programs.
- Discussion prompts can guide a conversation and highlight critical information to collect. Ask open-ended follow up questions for detail.
- Key words are terms you might hear during meetings and engagements and are especially helpful to review if you're not an environmental health scientist.
- Each sheet includes a few examples of free or low-cost activities that children's programs or local emergency management and public health can do that may mitigate some effects from the hazard.
- Links to educational resources can increase your understanding of the environmental hazard and can also be shared with children's programs.

Appendix F & Appendix G: Issue Report

- Appendix F: *Issue Report Instructions*
  - Describes each section of the Issue Report.
  - Includes tips to consider as you analyze the collected information and develop the report.
- Appendix G: *Issue Report Example*
  - The Issue Report Example illustrates the type of content within each section, using the same fictional rural county and disaster as the Example Landscape Assessment.
  - The content and formatting of your Issue Report may change based on your leadership's needs.

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Children's Environmental Health Post-Disaster Assessment Toolkit 2.0

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The Pediatric After-Action Report: A Tool for Pediatric Inclusion in Disaster Recovery

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Division of Emergency Medicine
Cincinnati Children's Hospital Medical Center
Pediatric Disaster Center of Excellence - *Region V for Kids*

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Financial Disclaimer

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Three Pediatric Disaster Centers of Excellence

- Funded by the Administration for Strategic Preparedness and Response (ASPR)
- Bring together children's hospitals, private and public entities, and national organizations.
- Designed to share best practices in pediatric disaster preparedness, response, and recovery on a regional level.

Gulf-7 Pediatric Disaster Network	Region V for Kids	Western Regional Alliance for Pediatric Emergency Management (WRAP-EM)
Awarded in 2022	Awarded in 2019	Awarded in 2019
Anchored at Texas Children's Hospital (Houston, TX)	Anchored at UH Rainbow Babies & Children's Hospital (Cleveland, OH)	Anchored at UCSF Benioff Children's Hospital (Oakland, CA)
7 U.S. states/territories: AL, FL, GA, LA, MS, TX, Puerto Rico	6 U.S. states: IL, IN, MI, MN, OH, WI	6 U.S. states: AZ, CA, NV, OR, UT, WA

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Scenario

- Styrene* leak from railcar
- Local fire/EPA on scene
- 1 mile radius evacuation initiated
- 48 hours later evacuation order lifted
- Railcar secured and removed 96 hours after initial leak



*Highly volatile and flammable. Used for making rubber and plastics. Exposure to high levels associated with increased risk of certain cancers.

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Impacts

- Public Health activation emergency health alert bulletins through media
- 911 activations to homes for transport
- Local EDs see uptick in technologically dependent home care patients and “worried well”
- 3 schools initiate evacuation procedures (E/M/H)
- Red Cross opens emergency shelters in neighboring town

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Reflection Questions

- If this scenario happened in your area, who would be responsible for recovery efforts regarding the after-action report for a community-wide event?

- How are the impacts on children incorporated into this after-action process?

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The PAAR (Pediatric After-Action Report)

- Established toolkit within Region V for Kids
- Audience is EM leaders within community
  - Health Care Coalitions
  - Emergency Management Agencies
  - Healthcare Systems
- Highlight pediatric-centric categories
- Standardized yet flexible format
  - Free standing or incorporated into broader AAR
- Provides outline of action items/improvement plan

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Categories/Subcategories within the PAAR

Human Impact	Acute Pediatric Morbidity and *Mortality *(e.g., numbers and types of pediatric injuries and deaths caused by the disaster)*	Long-Term Pediatric Morbidity *(e.g., long-term physical and mental health effects and needs as a result of the disaster)*	Special Populations* *(e.g., how special populations were responded to during the disaster [disabilities, disadvantages, cultural or religious considerations, etc.])*
Healthcare System Impact	Hospital *(e.g., the impact on hospital system[s] due to surges and equipment needs)*	Public Health/Emergency Management *(e.g., the community health ramifications a disaster presents and how local/regional departments and agencies respond)*	Emergency Medical Services *(e.g., the extent of involvement and capability of EMS to transport and treat patients*
Community Safety Infrastructure	Family Reunification *(e.g., how displaced children will be brought back to their families)*	School/Childcare *(e.g., how school and day care closures will affect children's safety and hospitals'/community's workforce)*	Shelter/Nutrition *(e.g., how a disaster threatens the shelter and food needs of children in the community)*

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Community Safety Infrastructure		
Family Reunification Point(s) of Contact:	**Description of Outcome**	**Opportunities for Improvement to Existing Systems** (if applicable)
How many children were known to be separated from parents/guardians?		
Where did the reunification with parents/guardians occur? (e.g., hospital, home, family assistance centers, other facility)		
What agencies supported reunification? (e.g. Red Cross, Law Enforcement, Social Services, National Center for Missing and Exploited Pediatric population, other)		
Were there any barriers/challenges in interagency coordination or prompt notification of parents?		
Other considerations?		
School/Childcare Point(s) of Contact:	**Description of Outcome**	**Opportunities for Improvement to Existing Systems** (if applicable)
How many schools/childcare centers were closed due to the incident?		
If closure occurred, how long were the schools/childcare centers closed?		
How many children were impacted by school/childcare closures?		
Other considerations?		

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Applying the PAAR: Back to our scenario…

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Schools & Child Care Questions

- How many schools/childcare centers were closed due to the incident?
- If closure occurred, how long were the schools/childcare centers closed?
- How many children were impacted by school/childcare closures?

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Schools & Child Care

- Three schools activated evacuation procedures (350)
- Alternative location outside zone created and parental notification done for pick up
  - 75% of the kids were picked up within 2 hours
  - 10 kids were still waiting for parents 4 hours after notification
- Anxiety among children and neurodiverse children was challenge for staff
  - Additional resources from other schools deployed for assistance
- School closure for 2 days – attempted pivot to virtual learning for high school

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Schools & Child Care

- Proposed Actions:
  - Incorporate virtual learning process review for families each year –just in time activation
  - Create systems by which driving age students can identify who they have in their cars and location for drop off
  - Review schools/childcare sites within specific distances from train/chemical plants
  - Ensure Emergency Contacts are accurate and tested

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Conclusions

- Children are uniquely impacted by disasters in communities
- PAAR provides standardized framework for incorporating children into recovery efforts identified within an After-Action Report
- Data from AARs can be used to help frame mitigation strategies for the inclusion of children throughout the disaster cycle

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Thank you!

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- Schloemer MS and Timm N (2026). Completing the disaster cycle for children: introducing the pediatric after-action report. Disaster Med Public Health Prep. 20(e8), 1–5. doi: https://doi.org/10.1017/dmp.2025.10291

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Panel Question & Answers

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