

Toolkits for Pediatric Vulnerabilities During Disasters

Deanna Dahl Grove, MD

Professor of Pediatrics
Pediatric Emergency Medicine
Rainbow Babies and Children's Hospital

Brandon Kappy, MD MPP

Fellow in Pediatric Emergency Medicine
Children's National Hospital



2023 ALL-GRANTEE MEETING

CULTIVATING COMMUNITY GROWING COLLABORATION

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How to assess children's vulnerability and better prepare communities and hospitals for disasters involving children?





Children under 18 years old comprise 25 % of the US population and are one of the country's most vulnerable groups.



The unique anatomic, physiologic, and developmental features of children cause them to be disproportionately affected by disasters.



Children must often contend with short and long-term psychological trauma.



Children with special healthcare needs are even more affected by disasters.

As a result of these vulnerabilities, studies have shown that children compose up to half of all disaster victims.



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Pediatric Disaster Scorecard

Deanna Dahl-Grove

Region V for Kids



Disaster Scorecard | Background

Region V for Kids is an ASPR funded Pediatric Center of Disaster Excellence (since 2019)

Regional Healthcare Coalitions, Emergency Medical Services, EMS for Children Innovation and Improvement Center and public health and emergency managers were brought together to provide a multi-system approach to identify deficiencies within the disaster cycle



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Disaster Scorecard | Objectives

The goal of the project was to increase situational awareness pertinent for children and families within the disaster cycle for regional stakeholders through readily available metrics specific to children.



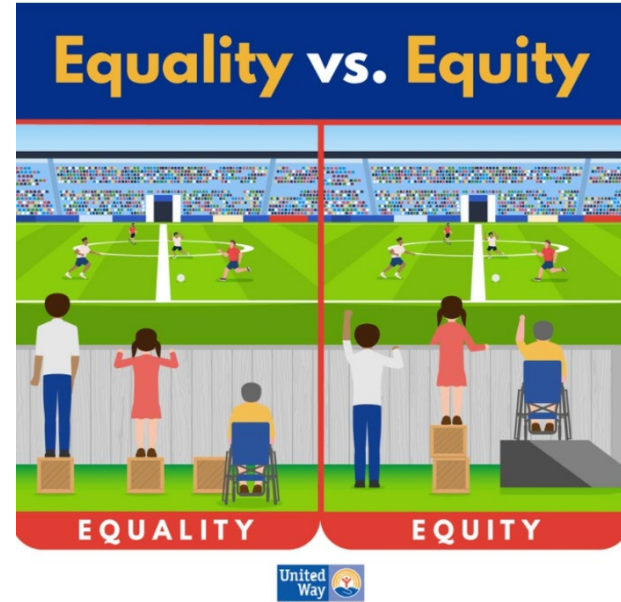
Disaster Scorecard | Methodology

Important Considerations for Scorecard:

- Social Determinants of Health
- Physical Determinants of Health
- Differences for Communities
- Creating a Generalizable Tool

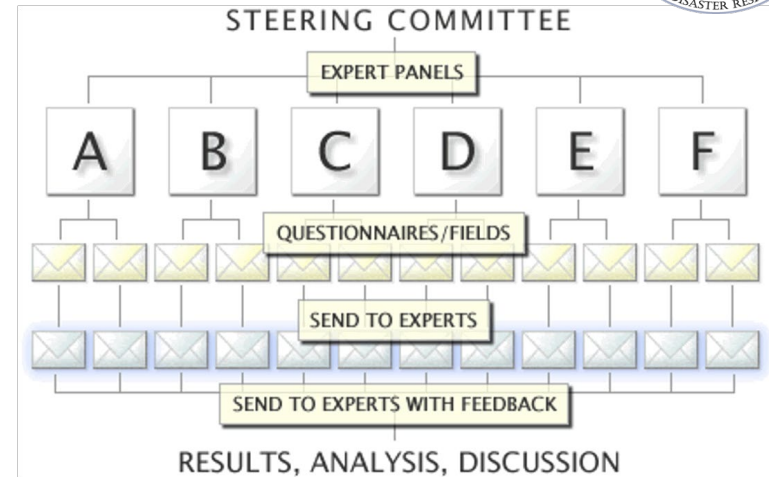
Equality is when each individual or group of people is given the same resources or opportunities.

Equity acknowledges that each person has different circumstances and gives the exact resources and opportunities needed to reach an equal outcome.



Disaster Scorecard | Methodology

- Modified Delphi process
- Determined Audience
- Consensus around Domains to include on Scorecard
- Literature review for quality measures around the domains
- Assessment of feasibility to collect quality measures around the domains
- Identified national databases with data points to support domains
- Creation of the scorecard





Disaster Scorecard | Domains

Domain 1: Expertise Available in Region

Healthcare professionals with pediatric training that are involved in the care of general pediatric population or children and youth with special health care needs. This domain includes infrastructures available to support development of pediatric expertise.

Domain 2: Community Resiliency

A community's ability to use its assets to strengthen public health and healthcare systems and to improve the community's physical, behavioral, and social health to withstand, adapt to, and recover from adversity.

Domain 3: Mental Health Considerations

Mental health professionals and resources available for pediatric needs within the specified region.

Domain 4: Early Education & Schools

The domain targets any instructional or supervised facility opened daily outside of the child's home.

Domain 5: Public Health by Jurisdiction

The domain identifies all public health programs with pediatric involvement in a specific region.

Domain 6: Transportation Services

Transportation services which entail the following: Pre-hospital and specialized transport assets in the region, medical and non-medical transportation resources serving children, and public transportation.

Domain 7: Shelters & Sheltering-in-Place

Plans established for educational and child-care settings.

Domain 8: Supply Chain

Health care coalition supply chains available to serve children and their specific needs.

Domain 9: Patient Tracking, Reunification, and Evacuation

Plans and processes to address children and unaccompanied minors in the event of separation from family or within a school setting.



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Disaster Scorecard

Questions



Expertise Available in Region:

1. Number of children per healthcare professional by county.
2. Number of Advanced Practice Registered Nurses with a National Provider Identifier.
3. Number of health-diagnosing and treating practitioners per 1,000 population
4. Number of hospitals within region with any of the following designations:
 - American College of Surgeons
 - American College of Obstetricians and Gynecologists – Levels of Maternal Care
 - American Academy of Pediatrics NICU Verification – Level of Neonatal Care

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Mental Health Considerations:

1. Percentage of mental health professionals with valid certifications and licenses practicing in a region.
2. Estimated percentage of children with a mental, emotional, developmental or behavioral problems.
3. Percentage of children, age 3-17 years, with difficulties obtaining mental health care among those who received or needed care during the past 12 months.

Community Resiliency:

1. Percentage of owner-occupied housing units.
2. Percentage of single-parent households.
3. Number of hospitals per 10,000 people.
4. Number of public schools per 5,000 population.
5. Rental vacancy rate of total housing units.
6. Number of children living in “working poor” families.
7. Family Resilience.
8. Percentage of families with food insufficiency.
9. Number of families that have received food or cash assistance.

Disaster Scorecard

Example Results

Scorecard Version 2.0 Using Link Look up your County

Regional Metrics Scorecard (v.20H)

dld7@case.edu [Switch account](#)



Educational Resources

Expertise available in the region
EMSC – IIC Telehealth Toolkit

<https://emscimprovement.center/collaboratives/telehealth/telehealth-toolkit/>

Community resiliency

Columbia Climate School – National Center for Disaster Preparedness.

<https://ncdp.columbia.edu/research/recovery-resiliency/>

Cox, R., Scannell, L., Heykoop, C., Tobin-Gurley, J., Peek, L. Understanding youth disaster recovery: The vital role of people places and activities. International Journal of Disaster Risk Education.

https://hazards.colorado.edu/uploads/publications/11_2017_Cox_Scannell_Heykoop_Tobin_Peek.pdf

Early education and schools

ChildCare Aware – Child Care Emergency Preparedness

<https://www.childcareaware.org/our-issues/crisis-and-disaster-resources/child-care-emergency-preparedness/>

FEMA Multihazard Emergency Planning for School Site Index

<https://training.fema.gov/programs/emischool/ei361toolkit/siteindex.htm>



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Evaluation Metrics

NOTE: A metric number corresponds to item number it's referenced in the evaluation survey

Select your state:

OH

Select counties in your region:

[Pull County Data](#)

Expertise Available

Why are these indicators important?

Understanding the landscape of healthcare professionals and facilities will allow a planning team to understand resources or lack thereof that may be available during an emergency. Additionally, measuring these indicators over time will allow for an analysis provider trends in a region over time.

9a. Family Medicine - MD

mean	min	max
82.40	12.00	303.00

9b. Pediatrics - MD

mean	min	max
95.40	3.00	404.00

9c. Family Medicine - DO

mean	min	max
23.20	1.00	94.00

9d. Pediatrics - DO

mean	min	max
5.60	0.00	23.00

Mental and Behavioral Health Considerations

Why are these indicators important?

Disasters and public health emergencies take a toll on a populations' mental health. These indicators allow planning teams to understand the landscape of mental health service availability and the prevalence of mental, developmental, behavioral, and emotional problems throughout a region, thus determining supports that may be needed during a time of crisis.

12. Number mental health professionals with valid certifications and licenses practicing per 10,000 population: **34.89**

*13. Percentage of children, age 3-17 years, with difficulties obtaining mental health care among those who received or needed care during the past 12 months: **37.8%**

Community Resilience

Why are these indicators important?

Understanding family resiliency will assist preparedness planning in identifying high risk and vulnerable populations as well as allow a planning team to determine the potential consequences and social determinants that may contribute to an emergency or crisis

14. Percentage of owner-occupied housing units: **71.19%**

15. Percentage of single-parent households: **32.41%**

16. Number of hospitals per 10,000 people: **0.28**

17. Rental vacancy rate of total housing units (%): **5.28**

*18. Family Resilience (# of all or most items selected): **0-1: 4.8%**

*19. Percentage of families with food insufficiency: **31.1%**

*20. Percentage of families that have received food or cash assistance **42.9%**



Disaster Scorecard | Next Steps

- Promote use in conjunction with pediatric HVA
- Scorecard includes detailed explanations and API to assist with filling data points - on line
- Work with federal entities to encourage collection of data related to pediatrics/families in disasters to inform mitigation strategies



Is your Community & Region
Pediatric Disaster Ready?



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Pediatric Hazard Vulnerability Analysis (HVA)

Brandon Kappy

Region V for Kids





Chance that hazard occurs in future based on history.

Likelihood



Magnitude and types of effects due to hazard occurrence.

Impact



Measures taken to negate hazard impact.

Preparedness



Vulnerability



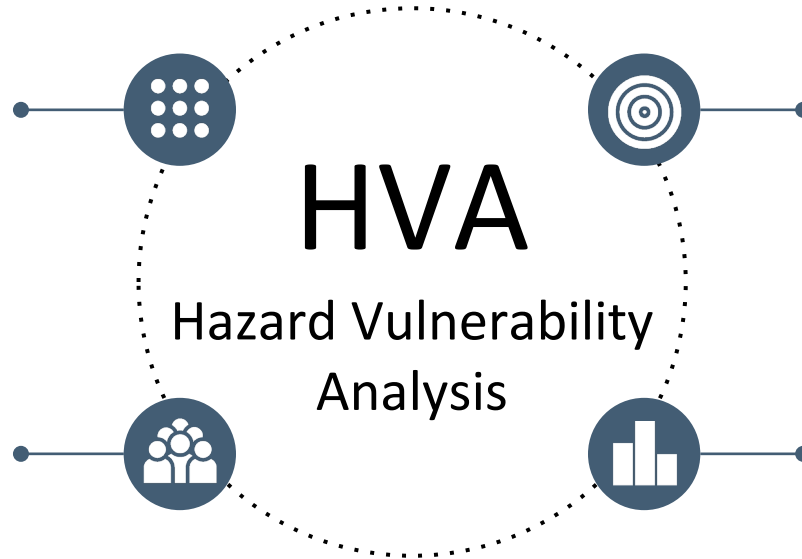


Commonly Used

HVAs are utilized by many types of regions and organizations.

Population-Based

HVAs may account for population-specific characteristics.



Impact-Focused

HVAs show vulnerability through unique definitions of impact and preparedness.

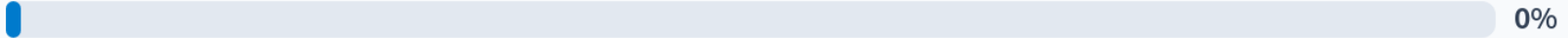
Allows For Rankings

By using the same framework for each hazard, HVAs allow for rankings and visualization.

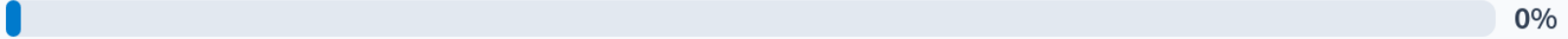


When filling out your institutional or regional HVA, how are children typically considered?

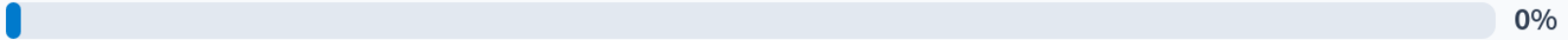
(A) As a part of the general population.



(B) As a separate sub-group, along with other ages.



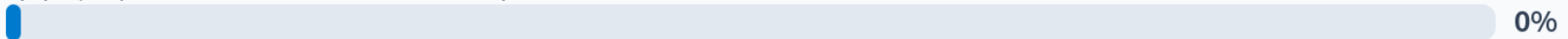
(C) As a separate sub-group, along with other vulnerable populations (e.g., populations with disabilities)



(D) N/A (I only fill out Children's Hospital HVAs)



(E) N/A (I have never filled out a HVA)





Children and pediatric considerations are often omitted from disaster preparedness.

Equipment and Injuries

- Size-specific equipment (e.g. laryngoscope blades, venous catheters)
- Weight-based meds
- Infant-specific needs (diapers, formula)
- Injuries present differently due to pediatric physiology

Policies and Procedures

- Family Reunification, Psychosocial support
- Temporary housing needs for displaced children
- Policies for school closures, daycares
- Procedures for overflow to adult units

Pre-Hospital Transport

- Pediatric-specific triaging
- Children require different transport equipment; considerations for accompanying parents
- Locations of disasters (schools, daycares)
- Transport between pediatric and adult hospitals





HVA *design* has a large influence on how emergency managers think about disasters.





Impact Categories

Assessing Hazard Damage

01

Kaiser Permanente

Emergency Management

Alert Type	PROBABILITY Likelihood this will occur	ALERTS	ACTIVATIONS	SEVERITY = (MAGNITUDE - MITIGATION)						RISK * Relative threat
				HUMAN IMPACT Possibility of death or injury	PROPERTY IMPACT Physical losses and damages	BUSINESS IMPACT Interruption of services	PREPAREDNESS Preplanning	INTERNAL RESPONSE Time, effectiveness, resources	EXTERNAL RESPONSE Community/Mutual Aid staff and supplies	
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High	Number of Alerts	Number of Activations	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 - 100%
Active Shooter										
Act of Terrorism										
Air Quality Issue										
Bomb Threat										
Building Move										



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Active Shooter										
Act of Terrorism										
Air Quality Issue										
Bomb Threat										
Building Move										



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Impact Categories

Assessing Hazard Damage

01

HAZARD	PROBABILITY	HEALTH SEVERITY	IMPACT				RESOURCE ASSETS	
			COMMUNITY	PUBLIC HEALTH	HEALTHCARE	MENTAL HEALTH	RESPONDER AGENCIES	COMMUNITY AGENCIES
	Improbable: 0 Remote: 1 Occasional: 2 Probable: 3 Frequent: 4	Negligible: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	None: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4
Aerosolized Anthrax								
Agroterrorism								
Botulism								
Communicable Disease Outbreak								
Emergent Disease								





Impact Categories

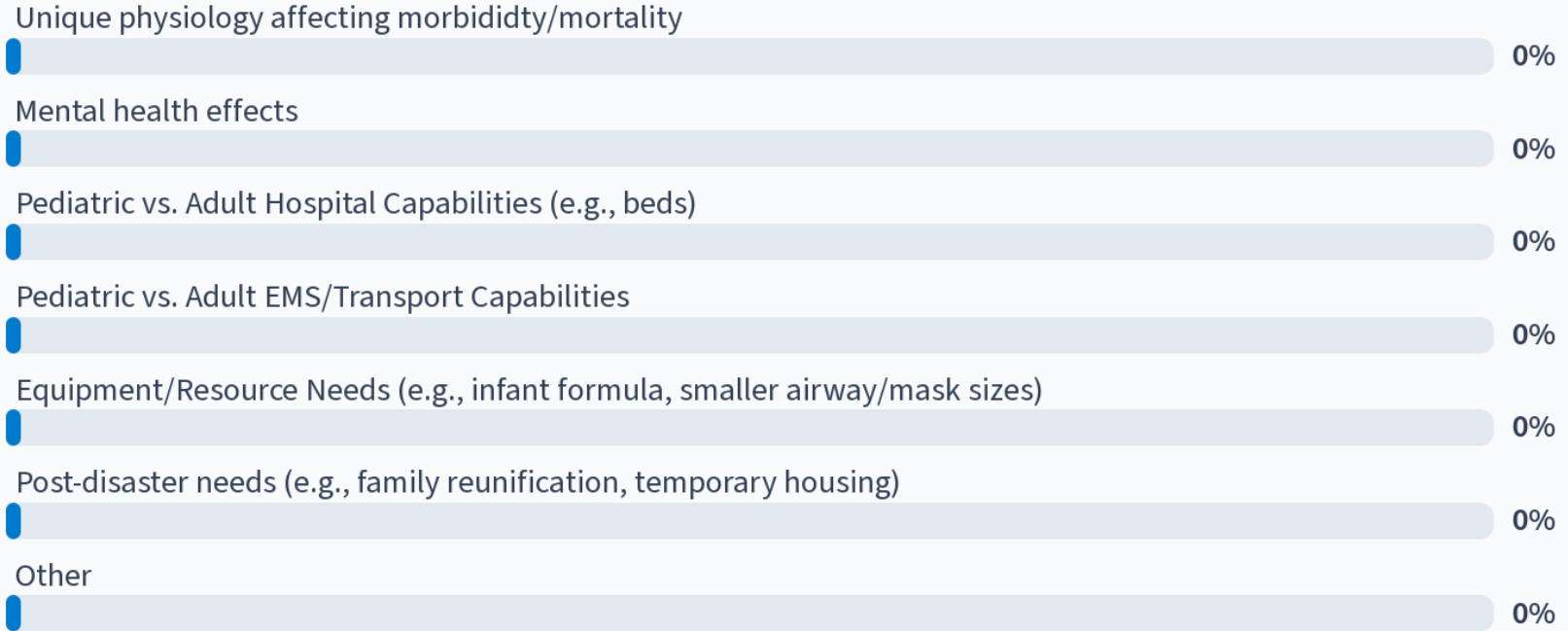
Assessing Hazard Damage

01

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	Improbable: 0 Remote: 1 Occasional: 2 Probable: 3 Frequent: 4	Negligible: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4	None: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	None: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4
Aerosolized Anthrax								
Agroterrorism								
Botulism								
Communicable Disease Outbreak								
Emergent Disease								



Which pediatric-specific vulnerabilities do you feel are most important to highlight in a HVA?





Population-Specific Features

How Hazards Impact Different Sub-Groups

02

Vision Disability

Percent of Population with a Vision Disability:

Population Size Score:

0

Data Source:

Ambulatory Disability

Percent of Population with na Ambulatory Disability:

Population Size Score:

0

Data Source:

Cognitive Disability

Percent of Population with a Cognitive Disability:

Population Size Score:

0

Data Source:

Limited English Proficiency

Percent of Population with Limited English Proficiency:

Population Size Score:

0

Data Source:

Poverty

Percent of Population in Poverty:

Population Size Score:

0

Data Source:

Chronic Diseases (Diabetes)

Percent of Population with Diabetes:

Population Size Score:

0

Data Source:

Children Under 18

Percent of Population Under Age 18:

Population Size Score:

0

Data Source:

Elderly 65 and Older

Percent of Population Age 65 and Older:

Population Size Score:

0

Data Source:





Descriptive Inputs

Data-Driven Components and User Instructions

03

COMMUNITY	P	E
<p>None: 0 Marginal: 1 Limited: 2 Critical: 3 Catastrophic: 4</p>	<p>No Ma Lir Cri Ca</p>	

Rate how each hazard could impact the surrounding community: Disrupt routine community activities (school, employment, religious services, etc.) and critical social services? Disable supporting communication and infrastructure resources?

Healthcare Service Impact

Outpatient Services

Baseline PCPs:

0

Hazard-Related Loss of PCPs:

0

Hazard-Related Increase in Demand for PCPs per Day:

1,095

(PCP Demand = Increase in Office Visits / 20)

Magnitude Score:

Not Calculated

- 0: No change from baseline
- 1: (Baseline + ↑ demand) / (Baseline - ↓ supply) ≤ 1.05
- 2: (Baseline + ↑ demand) / (Baseline - ↓ supply) ≤ 1.5
- 3: (Baseline + ↑ demand) / (Baseline - ↓ supply) ≤ 2
- 4: (Baseline + ↑ demand) / (Baseline - ↓ supply) > 2

OR, Estimate the Magnitude Qualitatively:

Qualitative Magnitude Score:

Use Quantitative Value

N/A

Duration of Impact:

> 2 weeks (Score = 4)

Duration Score:

4

Data Source / Explanation (Optional):

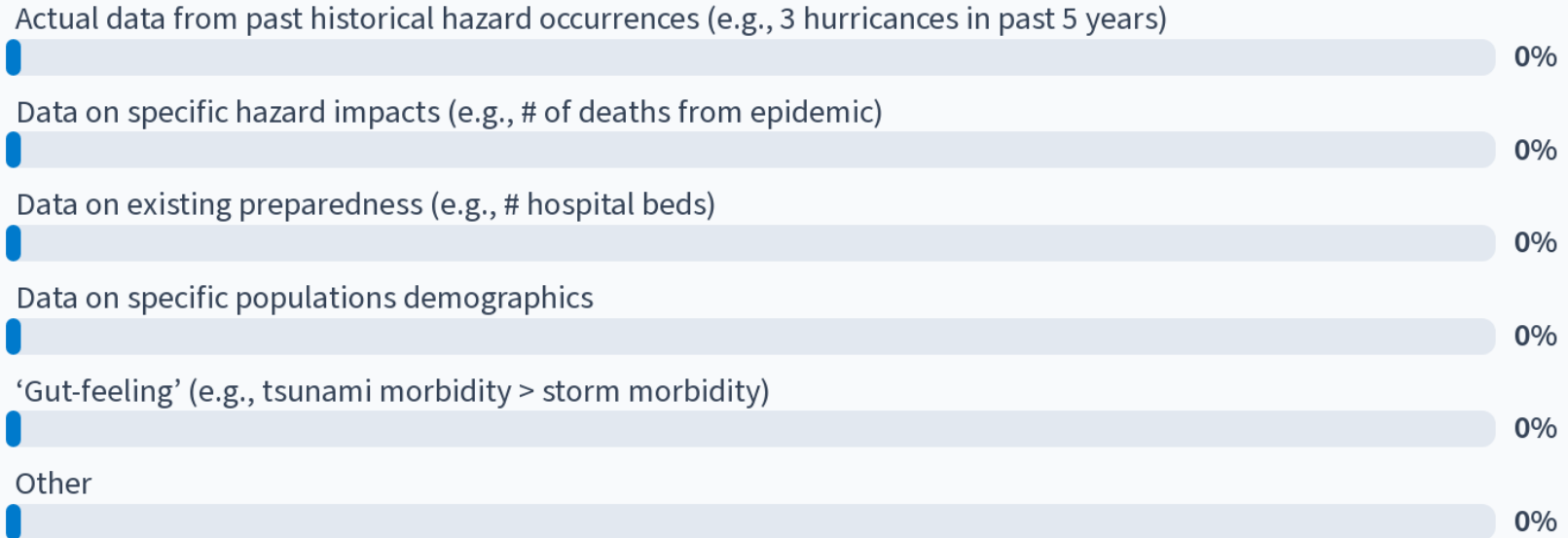
It is assumed that 2% of providers are unable to report to work due to illness, based upon the attack rate in Sverdlovsk after an accidental weaponized anthrax release (Meselson et al., 1994).

Outpatient Services Score:

Not Calculated



What process/information do you use to complete your current HVA?





Objectives

Create a pediatric-specific HVA to help regions consider children in their disaster planning.



Regional

Not targeted at hospitals or individual institutions



Complementary

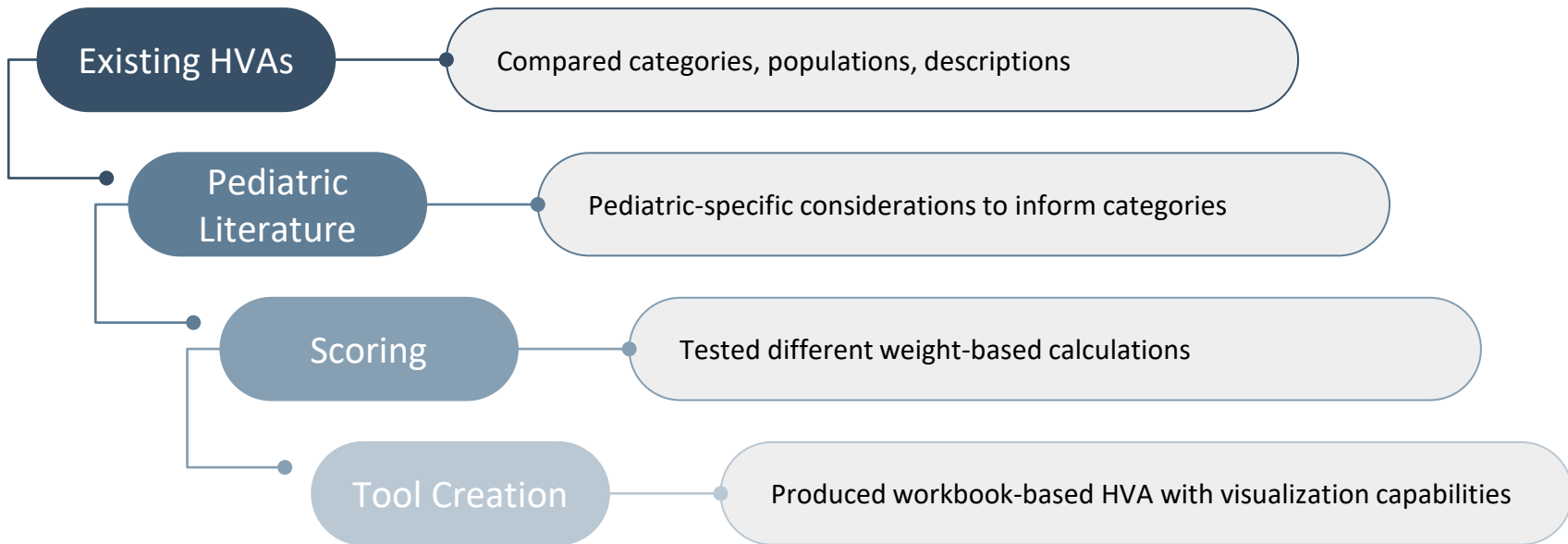
To existing HVAs through chosen categories



Not Exhaustive

Not meant to replace hospital-level HVAs





PEDIATRIC HVA | HVA Template



Scoring Key (select an option below for more information):

Healthcare Systems Impact Preparedness

- Region has capability to offset patient surges and direct overflow to nearby institutions
- Regional coordination has been established to transfer older children from pediatric to adult hospitals
- Region can absorb the loss of pediatric bed capacity (low: <5%, moderate: 5 - 15%, high: >15%) through transfers and ability to rapidly create temporary pediatric bed space
- EMS has the resources to treat and transport hazard-impacted children

Hazard Impact Measures								Likelihood	Hazard Preparedness Efforts				VULNERABILITY SCORE
Human Impact		Healthcare System Impact			Community Safety Infrastructure			Hazard Likelihood	IMPACT SCORE	Human Impact Preparedness	Healthcare System Impact Preparedness	Community Safety Infrastructure Preparedness	
Acute Pediatric Morbidity	Long-Term Pediatric Morbidity	Hospital	Public Health	Emergency Medical Services	Family Reunification	School/Childcare	Shelter/Food						
1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	0 - Implausible 1 - Low 2 - Moderate 3 - High	Weighted score of hazard impact and likelihood	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	1 - Low 2 - Moderate 3 - High	Weighted risk of exposure to hazard impact, incorporating likelihood and preparedness
I. NATURAL OCCURRING HAZARDS													
Tornado/Severe Wind									0.00				0.00
Severe Thunderstorm									0.00				0.00
Public Health Epidemic									0.00				0.00
Sinkholes/Karst									0.00				0.00
Earthquake									0.00				0.00



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I. NATURAL OCCURRING HAZARDS													
	Tornado/Severe Wind								0.00				0.00
	Severe Thunderstorm								0.00				0.00
	Public Health Epidemic								0.00				0.00
	Sinkholes/Karst								0.00				0.00
	Earthquake								0.00				0.00

Impact Score

Determines a hazard’s impact on children. Broken into pediatric-specific *impact / severity* categories that mirror PHRAT (*human, healthcare system, and community safety infrastructure* impacts) and then novel sub-categories that apply to children.



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Sinkholes/Karst									0.00				0.00
Earthquake									0.00				0.00

Vulnerability Score

Incorporates hazard preparedness into final score. This allows managers to describe regional preparedness for each major 'impact score' category in order to gauge overall hazard preparedness.



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PEDIATRIC HVA | HVA Template



Hazard Impact Measures								Likelihood	
Human Impact		Healthcare System Impact			Community Safety Infrastructure			Hazard Likelihood	IMPACT SCORE
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Human Impact



Healthcare System Impact



Community Safety Infrastructure



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Template Scoring Key:

Hazard Impact Measures								Likelihood	
Human Impact		Healthcare System Impact			Community Safety Infrastructure			Hazard Likelihood	IMPACT SCORE
Acute Pediatric Morbidity	Long-Term Pediatric Morbidity	Hospital	Public Health	Emergency Medical Services	Family Reunification	School/Childcare	Shelter/Food		
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Scoring Key (select an option below for more information):

Hospital

- Hazard creates need for pediatric-specific equipment and specialized staffing across region
- Hazard reduces regional pediatric bed capacity by less than 5% (low), 5 - 15% (moderate), or more than 15% (high)
- Hazard limits the use of multiple hospitals
- Hazard causes regional patient surge and influences capability of multiple hospitals to absorb surge

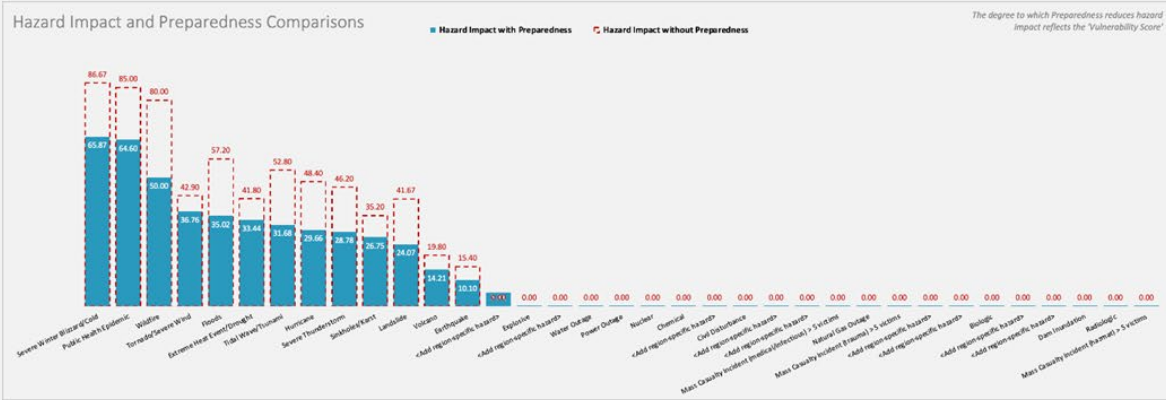
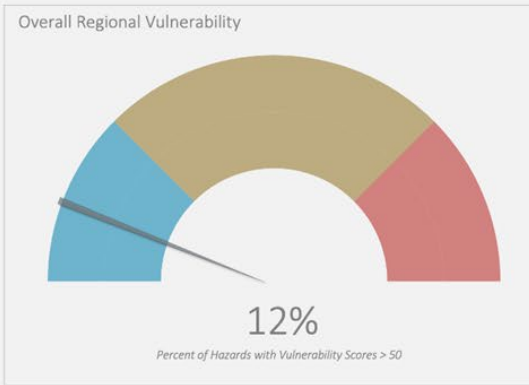
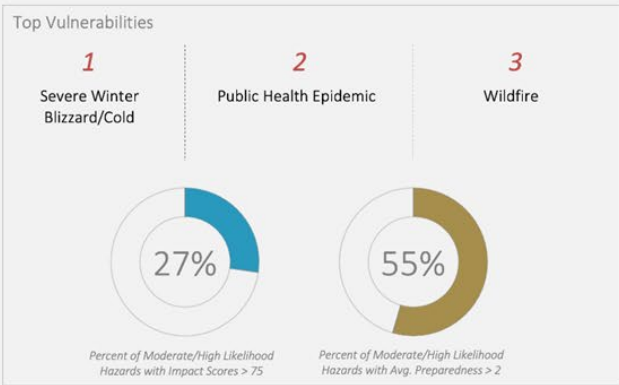
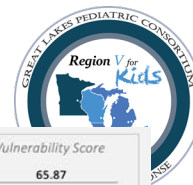
Scoring Key (select an option below for more information):

Family Reunification

- Level of displacement due to hazard on regional or statewide level
- Regional capabilities and personnel needed to facilitate reunification



PEDIATRIC HVA | HVA Template



Hazard Description	Vulnerability Ranking	Vulnerability Score
Severe Winter Blizzard/Cold	1	65.87
Public Health Epidemic	2	64.60
Wildfire	3	50.00
Tornado/Severe Wind	4	36.76
Floods	5	35.02
Extreme Heat Event/Drought	6	33.44
Tidal Wave/Tsunami	7	31.68
Hurricane	8	29.66
Severe Thunderstorm	9	28.78
Sinkholes/Karst	10	26.75
Landslide	11	24.07
Volcano	12	14.21
Earthquake	13	10.10
<Add region-specific hazard>	14	5.31
Explosive	15	0.00
<Add region-specific hazard>	16	0.00
Water Outage	17	0.00
Power Outage	18	0.00
Nuclear	19	0.00
Chemical	20	0.00
<Add region-specific hazard>	21	0.00
Civil Disturbance	22	0.00
<Add region-specific hazard>	23	0.00
<Add region-specific hazard>	24	0.00
Mass Casualty Incident (medical/infectious) > 5 victims	25	0.00
Natural Gas Outage	26	0.00
Mass Casualty Incident (trauma) > 5 victims	27	0.00
<Add region-specific hazard>	28	0.00
<Add region-specific hazard>	29	0.00
Biologic	30	0.00
<Add region-specific hazard>	31	0.00
<Add region-specific hazard>	32	0.00
Dam Inundation	33	0.00
Radiologic	34	0.00
Mass Casualty Incident (hazmat) > 5 victims	35	0.00



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01



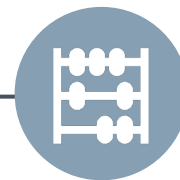
Tool Feasibility

02



Regional Collaboration

03



Score Subjectivity





HVA QR Code

Downloadable From EMSC/EIIC Website

Example Region:

Location: Central-Eastern Texas, Close to Gulf

Population: 1.5 million metro (total); 400k < 18yo

Hospitals:

- 4 large adult hospitals and ~7 small-mid community hospitals (3k+ beds) w/ <100 pediatric beds.
- 1 pediatric hospital (400+ beds)

Weather Events:

- Tornadoes, Blizzards, Floods, Heat Waves
- Storms but no majors Hurricanes in last 5+ years





HVA QR Code

Downloadable From EMSC/EIIC Website



Hurricane, Pediatric HVA Scoring:

Acute Pediatric Morbidity
<p>1 - Low</p> <p>2 - Moderate</p> <p>3 - High</p>

Scoring Key (select an option below for more information):

Acute Pediatric Morbidity

- The number of children impacted by hazard and the severity of injuries
- Age-based physiology makes children more vulnerable to hazard

Hospital
<p>1 - Low</p> <p>2 - Moderate</p> <p>3 - High</p>

Scoring Key (select an option below for more information):

Hospital

- Hazard creates need for pediatric-specific equipment and specialized staffing across region
- Hazard reduces regional pediatric bed capacity by less than 5% (low), 5 - 15% (moderate), or more than 15% (high)
- Hazard limits the use of multiple hospitals
- Hazard causes regional patient surge and influences capability of multiple hospitals to absorb surge





HVA QR Code

Downloadable From EMSC/EIIC Website



Hurricane, Pediatric HVA Scoring:

Acute Pediatric Morbidity
<p>1 - Low</p> <p>2 - Moderate</p> <p>3 - High</p>

Scoring Key (select an option below for more information):

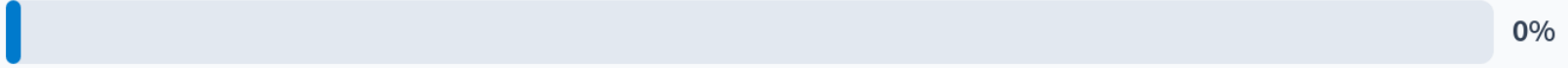
Acute Pediatric Morbidity

- The number of children impacted by hazard and the severity of injuries
- Age-based physiology makes children more vulnerable to hazard

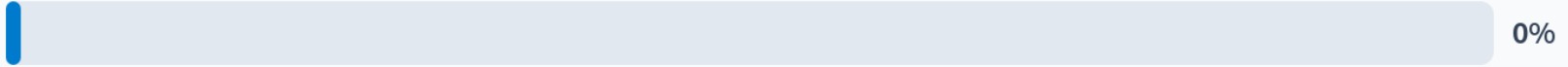


Acute Pediatric Morbidity Ranking:

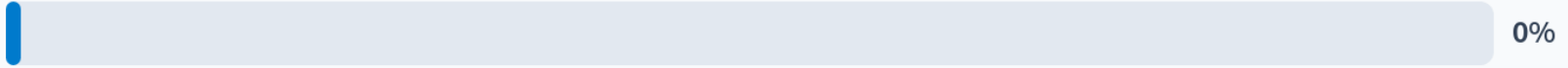
1 - Low



2 - Moderate



3 - High





HVA QR Code

Downloadable From EMSC/EIIC Website



Hurricane, Pediatric HVA Scoring:

Hospital

- 1 - Low
- 2 - Moderate
- 3 - High

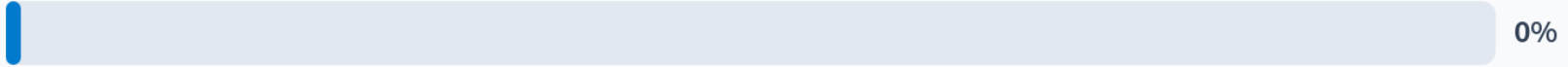
Scoring Key (select an option below for more information):

Hospital

- Hazard creates need for pediatric-specific equipment and specialized staffing across region
- Hazard reduces regional pediatric bed capacity by less than 5% (low), 5 - 15% (moderate), or more than 15% (high)
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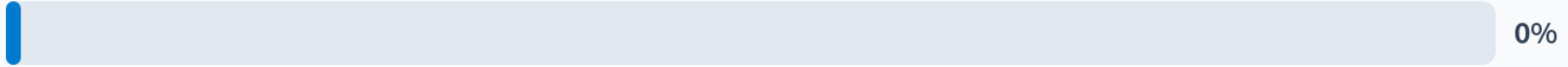
Hospital Ranking:

1 - Low



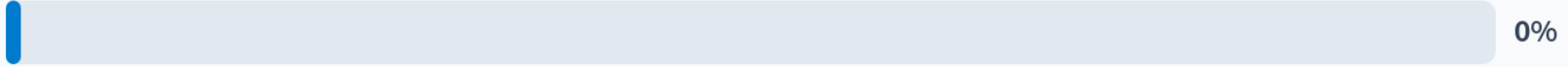
0%

2 - Moderate



0%

3 - High



0%



Eastern Great Lakes Hospitals, Pediatric HVA Responses:

	Hospital 1	Hospital 2	Hospital 3	Hospital 4	Hospital 5	Hospital 6
<i>Hazard Ranking 1</i>	Public Health Epidemic (46.4)	Tornado/Severe Wind (18.7)	Public Health Epidemic (37.2)	Mass Casualty (Infectious) (60.8)	Civil Disturbance (28.0)	Public Health Epidemic (54.1)
<i>Hazard Ranking 2</i>	Tornado/Severe Wind (38.1)	Power Outage (16.9)	Chemical Hazard (34.8)	Public Health Epidemic (60.8)	Tornado/Severe Wind (20.0)	Mass Casualty Infectious) (46.8)
<i>Hazard Ranking 3</i>	Supply Chain Shortage (34.7)	Floods (14.5)	Power Outage (21.3)	Cyber Incident (41.6)	Severe Winter Blizzard/Cold (15.8)	Cyber Incident (38.8)
<i>Hazard Ranking 4</i>	Information Systems Failure (32.1)	Severe Winter Blizzard/Cold (13.3)	Severe Winter Blizzard/Cold (20.0)	Tornado/Severe Wind (39.9)	Public Health Epidemic (15.2)	Tornado/Severe Wind (37.3)





 Eastern Great Lakes Hospitals, Pediatric HVA Rankings for ‘Tornado/Severe Wind’:

	Human Impact		Healthcare Systems Impact			Community Infrastructure Impact		
	Acute Pediatric Morbidity	Long-Term Pediatric Morbidity	Hospital	Public Health	Emergency Medical Services	Family Reunification	School/ Childcare	Shelter/ Food
Hospital 1	2	2	3	2	2	2	2	2
Hospital 2	2	1	1	1	1	1	1	1
Hospital 3	1	1	1	1	1	1	1	1
Hospital 4	2	2	2	2	2	3	3	3
Hospital 5	2	3	2	1	3	3	2	3
Hospital 6	2	1	2	2	2	2	2	3





Eastern Great Lakes Hospitals, Pediatric HVA Rankings for 'Tornado/Severe Wind':

	<i>Human Impact</i>		<i>Healthcare Systems Impact</i>			<i>Community Infrastructure Impact</i>		
	Acute Pediatric Morbidity	Long-Term Pediatric Morbidity	Hospital	Public Health	Emergency Medical Services	Family Reunification	School/ Childcare	Shelter/ Food
Hospital 1	2	2	3	2	2	2	2	2
Hospital 2	2	1	1	1	1	1	1	1
Hospital 3	1	1	1	1	1	1	1	1
Hospital 4	2	2	2	2	2	3	3	3
Hospital 5	2	3	2	1	3	3	2	3
Hospital 6	2	1	2	2	2	2	2	3



Planning to distribute electronic version of HVA to 10 Pediatric Pandemic Network Hub sites.

PPN Dissemination



Use surveys to determine how institutional/regional HVAs currently completed and who is involved.

Assess Current HVA Practices



Geographic Variations



Predetermined Category Scores



HVA QR Code



Analyze how different regions rank/view hazards differently.

Incorporate predetermined hazard likelihood, geographic social determinants of health.



Conclusions

The HVA is a **useful** and **required component** of regional emergency preparedness which can be applied to identify **unique vulnerabilities**

Use of this **Regional Metrics self assessment tool** at regular intervals (every 1-2 years) can assist regional entities to evaluate the domain measurements that have changed as a result of their mitigation strategies.

Both tools - especially when used together - will allow communities to have a broader perspective to the vulnerabilities within their region that affect **children and families** as they prepare their disaster plans.



Questions?

Pediatric Disaster Scorecard

Deanna Dahl-Grove, MD dld7@case.edu

Pediatric Hazard Vulnerability Analysis

Brandon Kappy, MD, MPP bkappy@childrensnational.org



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