Telehealth Workgroup

White Paper

Executive Summary

The Assistant Secretary for Preparedness and Response (ASPR) awarded the Eastern Great Lakes Pediatric Consortium for Disaster Response (EGLPCDR) a grant to harness and develop best practices around disaster preparedness and response to be shared with other children's and non-children's hospital entities in the region. Each children's hospital partner has filled key roles to accomplish the organization structure to begin to address the activities and strategies in the workplan. The partners established 16 workgroups with respective leads to address the items outlined in the workplan, including the Telehealth Workgroup. (See Appendix C for members and sites.) Partners met weekly to update all sites on progress within workgroups, address areas for collaboration among workgroups, and answer questions with input from all partners.

Background

The work of EGLPCDR originally intended to implement a closed telehealth network of regional children's hospitals, which supported Activity A (strategy 1 and 2) and Activity C (strategy 3). The project trajectory was, however, fundamentally altered by the COVID-19 pandemic which initiated a transformational move to telehealth as an alternate mode of providing care. Mid-project, all grant work shifted to adapt to the new reality by capitalizing on emerging platforms and services to adopt an open, horizontal network. COVID-19 initiated a foundational transformation for pediatric telehealth. As an alternative to in-person care, telehealth created a socially distanced vehicle to continue to provide care that kept patients at home. In order to both care for their patient population and reduce the risk of COVID-19 exposure, hospitals rapidly embraced and expanded telehealth programs. Long-term plans and investments were implemented in a very short timeframe, with near universal adoption of the technology.

Telehealth proved a valuable tool for the specific task of pediatric disaster and surge response across the spectrum of care, including the areas of pre-hospital, rural clinic, community Emergency Department (ED), and children's hospitals. In addition to anticipated outcomes, several new uses for telehealth were identified:

1. To facilitate immediate, real-time, remote triage and pediatric consultation to frontline organizations from children's hospital;

2. To foster inter-organization nurse-to-nurse mentoring and education of pediatric care skills;
3. To host Regional Emergency Management coordination of disaster response, which occurred on telehealth networks; and
4. To exponentially expand the impact of the limited resource of pediatric Behavioral Health.

The project also revealed barriers to full use of telehealth capabilities. Regionally, state lines remained real barriers to a coordinated pediatric disaster response due to prohibitions on cross-border licensing and credentialing. The legitimate business interests and activities of billing, risk reduction, credentialing, and privileging all impeded inter-organizational disaster response. Unfortunately, pediatric disaster preparation, mitigation and response are not part of profitable business models.

Results of the Workgroup Activities

The EGLPCDR Telehealth work group supported grant activities by conducting the Advancing Capability exercise (see Appendix B for an exercise After Action Report). Work group activities included:

1. Using telehealth to provide Just-in-Time training and telementoring to support non-children's hospitals,
2. Providing strategies and technical telehealth support to deliver pediatric emergency medicine care in rural and remote areas,
3. Leveraging a telemedicine hub-and-spoke model to support the care of children with special health care needs (CSHCN),
4. Innovating telehealth programs to expanding pediatric disaster response capability, and,
5. Connecting non-children's hospitals with critical care, burn, trauma, CBRN, and behavioral health specialists at children's hospitals.

The Workgroup used a multi-modal approach to examine and develop telehealth for pediatric disaster response operations. Work commenced with individual and group interviews of subject matter experts (SMEs) from the specialized disciplines of telehealth program management, information technology equipment, video conferencing platforms, emergency management, and pediatric disaster response. The Workgroup members conducted multiple surveys of organizational telehealth capability and exercise participant expertise: two telehealth equipment surveys and four surveys in support of the Advancing Capability exercise. During the project, the Workgroup used iterative review and re-conceptualization of telehealth in support of pediatric disaster response.

COVID-19 directly impacted the work of EGLPCDR. Prior to the pandemic, the vision for a pediatric disaster telehealth network was of a formal, closed network of regional children's hospitals operating on a single platform with standardized equipment. The Workgroup also originally sought to elevate less telehealth-proficient organizations to a minimum, standard, and uniform level of capability all in service to pediatric surge and disaster care.

COVID-19 thoroughly changed the direction of the project towards demonstrating and exercising a decentralized, horizontal network of hospitals using equipment and networks organic to their institutions. COVID-19 prompted the rapid adaptation and availability of HIPAA-compliant, video-conferencing platforms operating on off-the-shelf IT equipment—which greatly reduced the barriers to using telehealth. Suddenly, a decentralized, horizontal network of children's and non-children's hospitals was possible. Additionally, children's hospitals developed and engaged partners as best suited to local resources and needs.

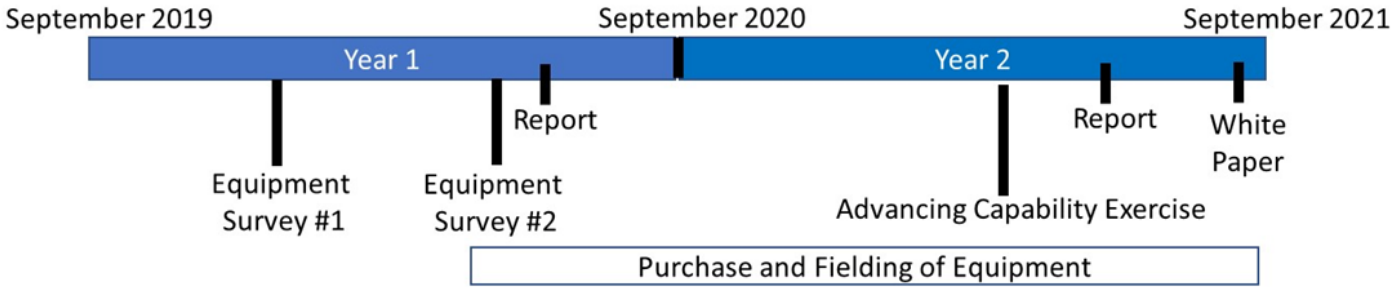
Along with COVID-19, standard business practices pushed the Workgroup towards adopting a decentralized and organic network were. The original plan created a third-party relationship for the organization purchasing and providing a common telehealth platform. Hence, if network hospitals A and B conducted telehealth on a platform provided by hospital C then, unless it was a party to the engagement, hospital C would be liable for actions on the part of hospitals A and B. This liability proved to be universally unacceptable. A decentralized telehealth network overcomes this issue by relying solely on two-party engagements.

Asset Assessment

The Telehealth Workgroup conducted multiple surveys to evaluate organizational telehealth equipment, platforms, and capabilities (as noted, two telehealth equipment surveys and four surveys in support of the Advancing Capability exercise). Surveys also captured the collective expertise of telehealth stakeholders.

As a fortunate accident of timing, the Workgroup conducted its initial survey of regional children's hospitals telehealth equipment, systems, and technical capabilities in February 2020, just before the full onset of COVID-19 in the U.S. Recognizing the opportunity to capture the real-time impacts COVID-19 was having on pediatric telehealth, the survey was rerun in May 2020. The final report, *Sharing Knowledge: Using Telehealth to Disburse Pediatric Expertise,* compares, contrasts and reports the results of both surveys. (See Appendix A for this report).

In the second year of the grant, the Workgroup conducted the Advancing Capabilities exercise (see Appendix B). A timeline of the Workgroup's key outcomes is presented below.



Survey Findings

Impact on Telehealth

The surveys revealed one key observation: *Across the region, Children's Hospitals telehealth response to COVID-19 was to maximize the use of available telehealth systems*. Hospitals capitalized on pre-existing telehealth capabilities, some adding new platforms and services lines.

Although some equipment was purchased and some platforms contracted, telehealth transformation occurred primarily as an effort to expand and take advantage of the capabilities already at-hand. Hospitals quickly exploited existing telehealth capabilities, developed community partnerships, supported field hospitals, and provided no-contact ambulatory care. While it has been a growing sector within the health care industry, COVID-19 compelled widespread acceptance and implementation of telehealth by hospitals and other health care providers.

Results

Intentional results as related to the grant announcement and proposal were all accomplished during the *Advancing Capability* exercise on May 20, 2021. (See Appendix B for a full exercise report and additional details.)

1. Use of telehealth to provide Just-in-Time training and telementoring to support non-children's hospitals,
2. Provision of technical telehealth support to deliver pediatric emergency medicine care in rural and remote areas,
3. Leverage of a hub and spoke model to support the care of special needs children
4. Innovation of telehealth programs to expanding pediatric disaster response capability,
5. Connection of non-children's hospitals with critical care, burn, trauma, CBRN, and behavioral health specialists at children's hospitals

In addition to the intended objectives, the Workgroup also accomplished additional objectives, exceeding expectations for the grant year. Unanticipated successes of the project are the expansion of telehealth to include:

1. Inter-hospital, Nurse-to-Nurse mentoring and training of pediatric care,
2. Inter-state Departments of Health coordinating and planning for supply shortage of critical pediatric supplies during a regional pandemic,
3. Cross-border provision of Just-in-Time pediatric Behavioral Health disaster response training
4. Pediatric trauma consultation to en route ambulance crew
5. Coordination, management, and tracking of pediatric Ebola infected patient from first contact to final disposition using National Emerging Special Pathogens Training and Education Center (NETEC) principles and process.
6. Use of hand-held ultrasound scanners in pre-hospital environment.

The Workgroup also identified multiple barriers to fully using telehealth as a tool for pediatric disaster response. The barriers reflect ancillary functions required for a seamless, regional response to pediatric disaster and surge response. Specifically, the barriers include:

1. *Individual State Regulation*: Due to each state's individual regulatory regime, physicians are not able to provide care across state lines consistently. This barrier limits pediatricians in non-affected states from consulting or providing care to areas experiencing disaster or surge.
2. *Credentialing / Privileging*: Due to each hospital or health care system's certifying their own physicians, pediatricians are not able to consult or provide care to external hospitals without pre-existing, formal contracts.
3. *Business Model*: Given the rarity and altruistic nature of disasters and surge response, investments in pediatric disaster planning, infrastructure and agreements are not profitable.
4. *Billing*: Successful billing for services rendered during disaster or surge events requires pre-execution of service contracts.
5. *Competition*: Hospitals and healthcare systems have pre-established, formal telehealth relationships with external organizations. Provisional telehealth networks supporting pediatric disaster may undercut the formal relationships.

With the impact of COVID-19, Standardization evolved from establishing a fully uniform telehealth system to creating the minimum level of telehealth capability necessary to participate in an organic network. Fielding of equipment involved the purchase and distribution of tablets and handheld ultrasound scanners to network partners. The next action was the Development of local partners and specific pediatric disaster telehealth tasks for children's hospitals to demonstrate. During the four-hour *Advancing Capability* Exercise on May 20, 2021, EGLPCDR children's hospitals partnered with local hospitals to demonstrate the tasks. (As noted, an After Action Review of the exercise is attached as Appendix B.) The final action of implementation is Evaluation, as represented by this report and the included appendices.

Conclusions & Recommendations

The Telehealth Workgroup has demonstrated that telehealth is a viable, useful tool for pediatric disaster response. From real-time trauma care to post-event behavioral health follow-up, telehealth connects experts directly to a point of need. Although COVID-19 triggered the rapid adoption of equipment and platforms, ancillary functions lag behind. To realize the maximum potential telehealth has to offer pediatric disaster and surge response, investment to address and resolve issues associated with the ancillary functions of telehealth are needed.

As demonstrated by the project, telehealth is a valuable tool for pediatric disaster and surge response. To effectively use telehealth to its full potential, the underlying ancillary functions that support telehealth operations need to be created. The current regulatory and business landscapes do not support the use of telehealth during disaster. Additional work is needed to

address the ancillary functions needed to maximize telehealth systems. Inter-state license reciprocity, business and medical liability waivers and profitable transition to disaster operations are issues overdue for resolution. Concepts that can help overcome these barriers need to be identified, tested, and implemented.

On a separate note, telehealth for pediatric disaster and response is almost universally focused on the provision of care. In addition to care, Emergency Management is a vital component of disaster response. Policies, best practices, and networks to leverage telehealth for emergency management functions need to be identified, tested and implemented.

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Appendices

- **Appendix A. Sharing Knowledge Report**
- **Appendix B. Advancing Capability Exercise AAR**
- **Appendix C. Workgroup Members and Sites**

Sharing Knowledge: Using Telehealth to Disburse Pediatric Expertise

Eastern Great Lakes Pediatric Center of Excellence

June 1, 2020

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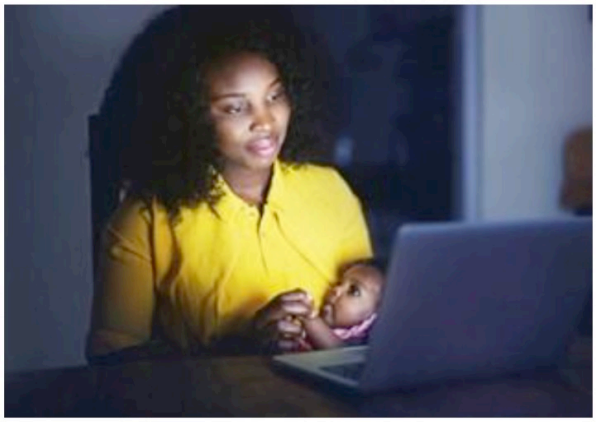
The full Report is available at **Sharing Knowledge Telehealth Report webpage**.

Eastern Great Lakes Pediatric Consortium for Disaster Response

Advancing Pediatric Telehealth Capability: Use of Technology During Disaster Response



After-Action Report/Improvement Plan – Edition2
8 August 2021

The After-Action Report (AAR) aligns exercise objectives with preparedness doctrine. Analysis of Core Capabilities, Analysis of Exercise Generated Data, and Evaluation of Exercise Effectiveness are included.

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The full After Action Report is available at **Advancing Capability Exercise Website**.

Appendix C. Workgroup Members and Sites

Marie Lozon, MD (**Lead**)
Professor, Department of Emergency Medicine
Professor, Pediatric Emergency Medicine
Professor, Department of Pediatrics
Chief of Staff,
Michigan Medicine
Children's Emergency Services, Department of Emergency Medicine
University of Michigan Medical School
Associate Chief Clinical Officer
C.S. Mott Children's and Vonvoigtlander Women's Hospital

Kimberly Burkhart, PhD
Assistant Professor
University Hospitals Rainbow Babies and Children's Hospital

Ryan Cunningham
Formerly of Nationwide Children's Hospital

Becca Edema
Virtual Health Telemedicine Specialist
Spectrum Health System

Linda Fletcher, RN, NP
Project Coordinator
C.S. Mott Children's Hospital

Stephanie Flohr, RN,BSN, MHSA
Nurse Educator
Spectrum Health/Helen DeVos Children's Hospital

Jeremy Kelly, CC-EMT-P-IC
Emergency Preparedness Specialist, Business Assurance
Spectrum Health/Helen DeVos Children's Hospital

Ajay Khilanani, MD
Pediatric Critical Care Medicine
Medical Director, HDVCH Digital Health
Spectrum Health/Helen DeVos Children's Hospital

Carolyn Landis, PhD, CBSM

Pediatric Psychologist, Division of Developmental & Behavioral Peds/Psychology University Hospitals Rainbow Babies and Children's Hospital

Seth Linakis, MD
Attending Physician, Emergency Department
Nationwide Children's Hospital
Ellen McManus
Formerly of Nationwide Children's Hospital

Michelle Moegling, RN, BSN, CPN
Coordinator, Community Pediatric Emergency Services
University Hospitals Rainbow Babies and Children's Hospital

April Parish, BS
Project Manager, RI Emergency Medicine
Nationwide Children's Hospital

Josh Petro
Unified Communications Architect
University Hospitals Rainbow Babies and Children's Hospital

Jennifer Ruschman
Senior Project Manager
Cincinnati Children's Hospital

Ron Ruffing, MD, MPH, MSP
Chief, Division of Pediatric Emergency Medicine
Children's Hospital of Michigan

Nathan Timm, MD, FAAP
Medical Director, Office of Emergency Preparedness and Response,
Division of Emergency Medicine
Cincinnati Children's Hospital Medical Center
Professor, Department of Pediatrics
University of Cincinnati College of Medicine

Kalpesh Unadkat
Network Architect Lead; IT Monitoring Lead
University of Michigan Health System