Sharing Knowledge:
Using Telehealth to Disburse
Pediatric Expertise

Eastern Great Lakes Pediatric Center of Excellence

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Eastern Great Lakes Pediatric Center of Excellence | EIIC Emergency Medical Services for Children Innovation and Improvement Center

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Executive Summary

In February and May of 2020, the Telehealth Workgroup of the Eastern Great Lakes Pediatric Center of Excellence (EGLPCDR) conducted two surveys of Children's hospitals to assess regional telehealth capabilities. Both online surveys were tools for the workgroup's goal of developing a sustainable, regional telehealth network of pediatric expertise. The questionnaires revealed one key observation: *across the region, Children's Hospitals telehealth response to Covid19 was to maximize the use of available telehealth systems.* The Hospitals embraced telehealth as a tool to mitigate viral infection by limiting personal contact and expanding virtual care. Quickly exploiting existing telehealth capabilities, hospitals developed community partnerships, supported field hospitals and provided no-contact ambulatory care. As a tool of healthcare, telehealth was embraced and used in many new, imaginative ways to address a crisis at hand. This trend must continue beyond the current pandemic.

Background

In support of an overarching grant objective to develop coordinated pediatric disaster care capability, the Telehealth workgroup conducted two surveys of partner hospitals. A goal of the workgroup is to create an integrated telehealth network amongst regional Chlidren's Hospitals and with community hospitals more broadly. As a flexible, vibrant communications network, telehealth can serve as a crucial tool to capitalize and share pediatric expertise.

Step one of developing a regional telehealth network is to understand current hardware, software and platform capabilities of partner hospitals. Additionally, implementing telehealth operations requires developing multi-disciplinary teams of clinical providers, business managers and network engineers. Towards that end, survey #1 was designed to gather basic information about points of contact, equipment, network connectivity, bandwidth, and communications platforms at each Children's hospital.

External to grant objectives and spurred by the Covid19 pandemic, the healthcare industry fully embraced telehealth as a viable, non-contact option for delivery of care. Hospitals and hospital systems fielded equipment and expanded telehealth services en masse. Due to the timing of survey #1, the telehealth workgroup had a pre-Covid19 baseline of regional telehealth capabilities just before the pandemic. Survey #2 was designed and collected to record changes in regional telehealth capabilities after the initial pandemic surge, gathering data on equipment purchases, new platforms adopted and expanded use of telehealth.

Methodology

The survey group consisted of six, children's hospitals in the EGLPCDR region, with each facility submitting one response. Both surveys were conducted as online questionnaires. Questions were a mix of multiple choice, yes/no, and limited character free text. A typical question was: Have you integrated your Enterprise Video Communication Platform with your electronic medical records (Yes/No)?

Results

I. Survey #1 Telemedicine Survey

Survey section one featured eight administrative questions gathering hospital name and point of contact information. Section one is omitted from this report to de-identify survey responses. Section two (listed below) had ten questions to identify telemedicine equipment:

A. Q. Please select types of equipment in your environment:

   A. Mobile and wireless video conferencing, mobile carts, personal computers, laptops, I-pads, and tablets

B. Infrastructure / Gateway (Check all that apply):

   5 responses
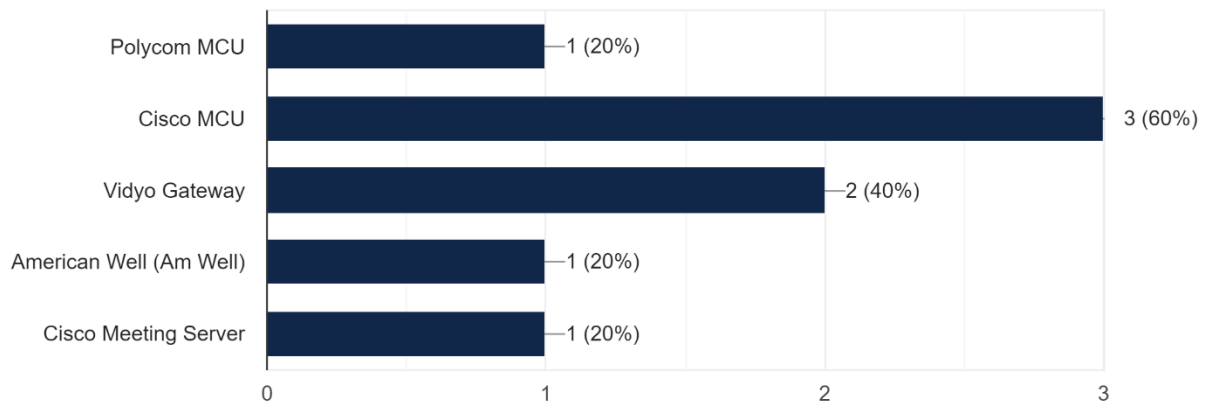
C. Q. Codec manufacturer:

   A. Polycom, Cisco, Vidyo and Zoom

D. Q. Video platform/software

   A. Polycom, Bluejeans, Zoom and various Cisco products

E. Q. Other platforms:

   A. Cisco Jabber Teladoc and Epic My Chart

F. Q. SIP Boarder Gateway:

   A. Cisco and Oracle

G. Q. SIP Dialing methods:

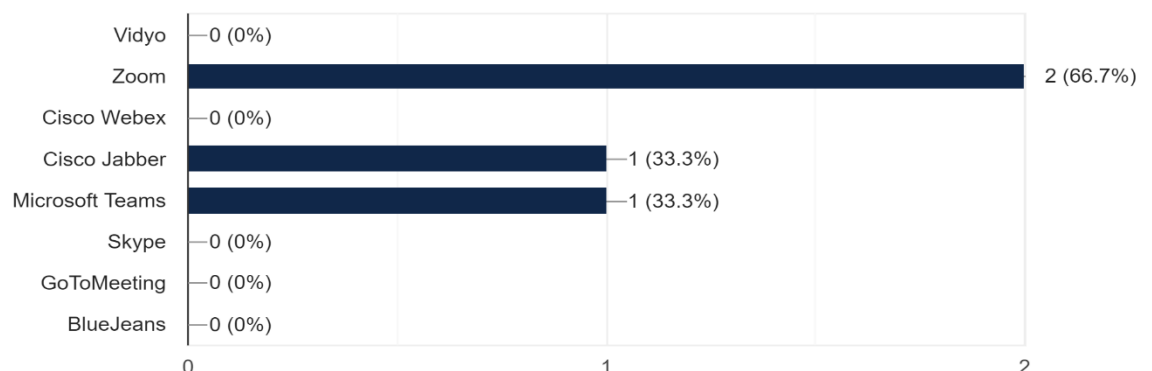   A. SIP H322, URI, 10 digit numbering and IP dialing

H. Q. Connections speeds:

  A. Between 512 kbps and 6 Mbps

I. Q. Content sharing capabilities:

  A. SIP BFCP and H239

J. Q. Describe telemedicine rooms/locations within your hospital:

  A. Conference room with in ED, dedicated telehealth rooms, ability to use rooms

    across medical center for telehealth, other clinical departments

II. Survey #2 Post Covid19 Telemedicine Survey

Survey #2 was organized into four survey sections: administrative, equipment, new uses of telehealth and refinements of telehealth. Survey section one asked four administrative questions gathering hospital name and point of contact information. Section one is omitted from this report to de-identify survey responses. Section two asked seven questions to identify equipment purchases made in response to Covid19. In addition to equipment purchases, hospitals expanded the use of telehealth to new areas. The three questions of section three identified new uses of telehealth. And the four questions of section four captured refinements to pre-existing telehealth operations in response to Covid19.
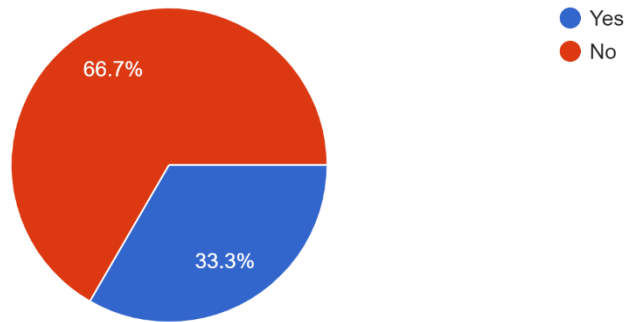
Section 2:

A. Q. Telehealth equipment purchases since 15 February 2020:

  A. Mobile carts, PCs, Laptops, I-pads, tablets, smart phones, web cams and

    Speakers.

B. Q. Other equipment purchases since 15 February 2020

  A. Tycocare devices, remote monitoring devices, monitors with built Audio/Video

C. Enterprise Video Communication platforms adopted since 15 February 2020 (Click all that apply):

3 responses

Chart showing:
- Vidyo: 0 (0%)
- Zoom: 2 (66.7%)
- Cisco Webex: 0 (0%)
- Cisco Jabber: 1 (33.3%)
- Microsoft Teams: 1 (33.3%)
- Skype: 0 (0%)
- GoToMeeting: 0 (0%)
- BlueJeans: 0 (0%)

D. Have you integrated your Enterprise video communication platform with your electronic medical records?

3 responses

- Yes
- No

66.7%

33.3%

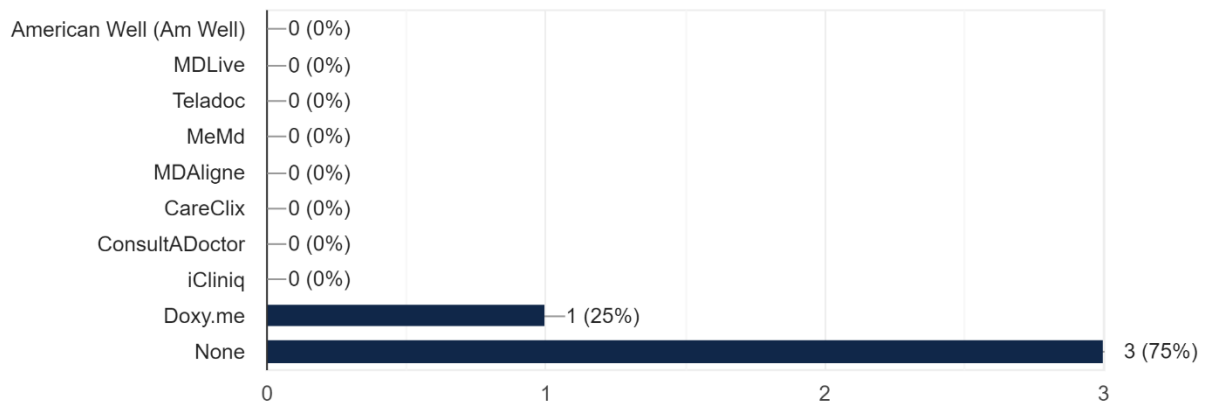E. Q. Infrastructure/Gateway purchased since 15 February 2020:

A. None

F. Q. Codec equipment purchased since 15 February 2020:

A. None

G. Telemedicine Provider platforms adopted since 15 February 2020 (Click all that apply):

4 responses

American Well (Am Well)	0 (0%)
MDLive	0 (0%)
Teladoc	0 (0%)
MeMd	0 (0%)
MDAligne	0 (0%)
CareClix	0 (0%)
ConsultADoctor	0 (0%)
iCliniq	0 (0%)
Doxy.me	1 (25%)
None	3 (75%)

Section 3:

H. Q. Since February 15th, telehealth has expanded to include:

A.

|		
community Partners	use at alternative care	sub-specialty care
network partners	site primary care	behavioral health
use at field hospital	specialty care	new services

I. Q. Since February 15th, telehealth usage has expanded to include:

A.

patient triage	specialist consultation
tele-ICU	staff to family communication
tele-monitoring	new uses

J. Since 15 February 2020, has telehealth management at your hospital expanded to include (Click all that apply):

4 responses
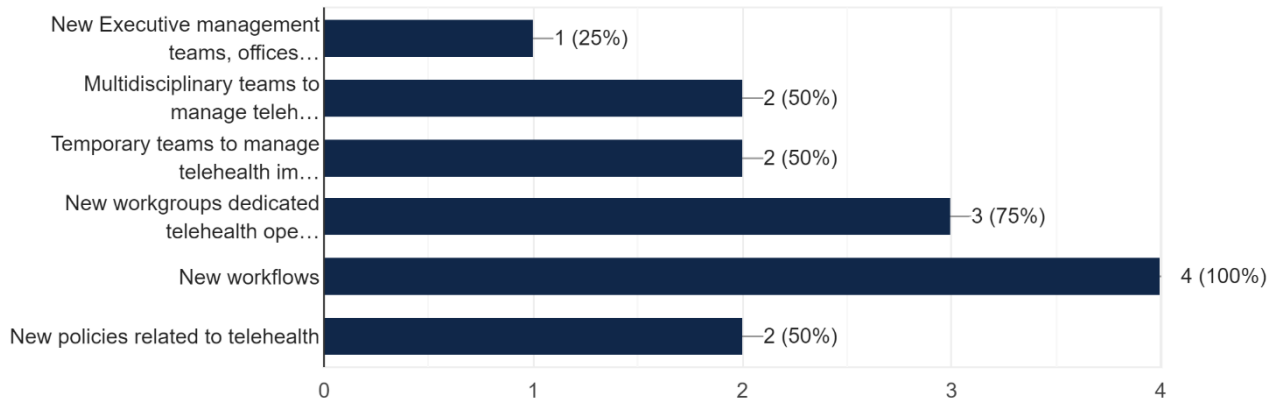
Section 4:

K. Q. Since February 15th, changes to pre-existing telehealth include:

A.

user access, interface and functionality	telehealth website
new training curriculum	telehealth help desk
training additional staff	state telehealth policy
policy for initial patient contact	hospital system policy
patient management	internal hospital policy

L.   Q. Additional telehealth refinements since February 15th:
    A. Updated telehealth policy
M. Q. Lessons learned since February 15th:
    A. Telehealth needs to be easily scalable and have increased capacity
N. Q. Telehealth innovations specific to future pediatric disaster response:
    A.   ED consult with community hospital and pediatric specialty consult from Children's hospital.

Conclusions

Analysis of survey results reveal one key takeaway: the telehealth response to Covid19 is a story of hospitals capitalizing on pre-existing telehealth capabilities. Although some equipment was purchased and platforms contracted, telehealth transformation occurred primarily as an effort to expand and take advantage of the capabilities already at hand. Coalition hospitals used telehealth to connect with community partners and EDs, support field hospitals and consult with alternative care sites. Telehealth was a tool for staff to family communication, triage, monitoring, mentoring and training. Multi-disciplinary teams modified systems, wrote new policies, developed workflows, and created help desks to rapidly implement telehealth. While it has been a growing sector within the healthcare industry, Covid19 compelled wide spread acceptance and implementation of telehealth. Covid19 also demonstrated telehealth as an effective tool for response to pediatric disaster.