Regional Pediatric Disaster Telehealth Capability - Rural and Critical Access Hospitals

Region V for Kids Pediatric Center of Excellence

June 27, 2023

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Region V For Kids | EIIC Emergency Medical Services for Children Innovation and Improvement Center

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Executive Summary

In March and April of 2023, the Telehealth Workgroup of the Region V for Kids Pediatric Center of Excellence conducted a survey of rural and Critical Access Hospital to assess regional telehealth capabilities. The survey built upon previous work by expanding the database to cover non-children's, community hospitals. The survey supports the workgroup's goal of facilitating networking between children's hospitals and community hospitals. This survey revealed one key remark: *across the region, telehealth was used as a tool of sustainment for normal operations, not as a tool of pandemic response.* Quickly exploiting existing telehealth capabilities, hospitals transitioned to remote clinical operations to sustain pre-pandemic workloads. Operating under COVID-19 restrictions, telehealth served to maintain the level of routine medical services.

Background

In support of an overarching Region V for Kids grant objective to *develop coordinated pediatric disaster care capability*, the Telehealth workgroup conducted a survey of regional rural and Critical Access Hospitals (CAH). A goal of the workgroup is to facilitate telehealth networking between Children's Hospitals and 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 the current telehealth landscape of potential partner hospitals, including their hardware, software and platform capabilities. Additionally, implementing telehealth operations requires developing multi-disciplinary teams of clinical providers, business managers, and network engineers. Towards that end, the survey was designed to gather basic information about equipment, network connectivity, communication platforms and telehealth capability at rural and Critical Access Hospitals.

Methodology

The survey population consisted of rural and Critical Access hospitals throughout Region V for Kids catchment area. Although each facility was requested to submit one response, healthcare systems were encouraged to submit one response covering all the rural and Critical Access hospitals within their system. The survey was conducted as a web-based questionnaire using the Qualitrics platform. Questions were a mix of multiple choice, yes/no, matrix table, and limited character, free-text queries.

The survey was intentionally designed to place a minimal burden upon the respondents. In theory, a hospital representative well versed in telehealth operations should be able to complete the survey in under 20 minutes. To facilitate that objective, the follow directions were provided to respondents:

- Please do not feel compelled to invest significant time tracking down specific data points.
- Survey responses reporting little to no telehealth capability are critical data points for identifying gaps in pediatric telehealth networks.
- Please complete the survey even if most responses are blank.

Additionally, the survey was composed to:

- contain a narrow scope of topics to facilitate completion by a single hospital representative.
- allow almost all questions to be optional, thereby supporting a representative's quick submission.

Population

New for 2023, the Region V for Kids Telehealth Workgroup surveyed the FEMA Region V rural and Critical Access hospitals with a goal of a 30% to 50% response rate. Critical Access Hospitals were categorized using the Health Services and Resources Administration (HRSA) definition. Rural hospitals were identified using the American Hospital Association (AHA) definition, which in turn relies on rural area designations from the U.S. Office of Management and Budget and the Census Bureau. Counts of rural and Critical Access Hospitals per state were identified using the Critical Access Hospitals List maintained by the Flex Monitoring Team. The list is available at https://www.flexmonitoring.org/critical-access-hospital-locations-list.

Distribution

In March 2023, survey distribution occurred through three rounds of engagement (See image 2). During the first week of March, a survey informational one-pager and the survey were sent to rural and critical access hospital associations in Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. During the last week of March, state level Departments of Health, Healthcare systems, and Healthcare Coalitions of the same states were contacted. Finally, direct engagement of select rural and critical access hospitals was conducted during the second week of April. Prioritization of outreach during the final round targeted areas of low survey participation. The survey was open for a total of 60 days and closed on 30 April 2023.

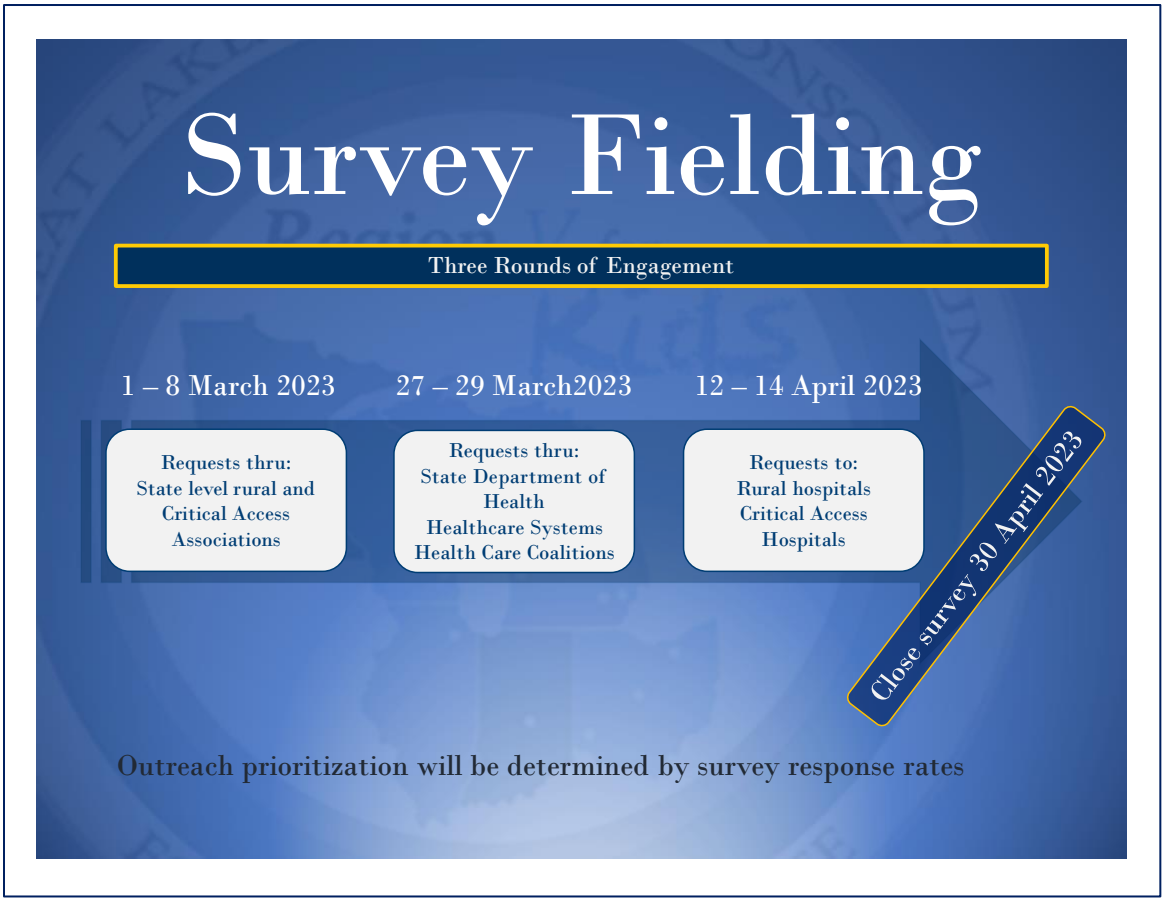


Image 2: Survey Distribution Plan

Organizations selected for engagement were identified using the state guides feature of the Rural Health Information Hub website. The types of organizations selected for survey distribution included departments of health, rural hospital associations, Critical Access Hospital networks, and regional telehealth resource centers. Specific hospitals and healthcare systems were identified using the Critical Access Hospitals List maintained by the Flex Monitoring Team.

Results

I. Telemedicine Pediatric Environmental Scan

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

Designed to facilitate quick progress and easy completion, the survey allowed respondents to skip many of the questions. Instead of compelling research to identify specific data points, the skip feature allowed respondents to continue progress and submit responses based upon their knowledge. While every question received sufficient responses, 17% of the total database was left blank.

Section One: Administrative Questions
Question 1: Omitted from this report to de-identify survey responses

Section Two - Hardware, Platforms, and Applications

Question 2:

Please list the primary types of equipment your organization used to conduct telehealth tasks prior to February 2020.
(Check all that apply)

	iPads / Tablets / Smartphones	Desktops / Laptops	Telehealth Carts	Room Based Video Conferencing Systems
Hard Wired	0	7	0	14
Wireless	0	21	0	0
Wired and Wireless	3	10	14	0

Question 3:

Please list the primary types of equipment your organization uses to conduct telehealth tasks that were adopted from February 2020 to present.
(Check all that apply)

	iPads / Tablets / Smartphones	Desktops / Laptops	Telehealth Carts	Room Based Video Conferencing Systems
Hard Wired	0	3	0	10
Wireless	21	3	0	0
Wired and Wireless	3	17	7	0

Question 4:

Does your organization use any of the following telemedicine provider platforms?
(Select all that apply)

	Pre-pandemic **Before February 2020**	During and after pandemic **After February 2020**
American Well (Am Well)	7	7
MDLive	0	6
Teladoc	1	3
MeMD	0	0
MD Aligne	0	0
CareClix	0	0
ConsultADoctor	0	0
iCliniq	0	0
doxy.me	3	10
None	27	23

Question 5:

What is the primary enterprise video communication platform your organization uses to conduct telehealth patient visits.
(Please select one)

	Pre-pandemic **Before February 2020**	During and after pandemic **After February 2020**
Vidyo	10	3
Zoom	2	17
Cisco Webex	7	7
Cisco Jabber	0	7
Microsoft Teams	3	6
Skype	0	7
GoToMeeting	0	3
Other	6	3

Question 6:

Please select all other video communication platforms your organization may use to conduct telehealth patient visits.
(Please all that apply)

	Pre-pandemic **Before February 2020**	During and after pandemic **After February 2020**
Vidyo	11	11
Zoom	13	25
Cisco Webex	7	10
Cisco Jabber	0	0
Microsoft Teams	9	15
Skype	2	6
GoToMeeting	3	3
Other	8	8

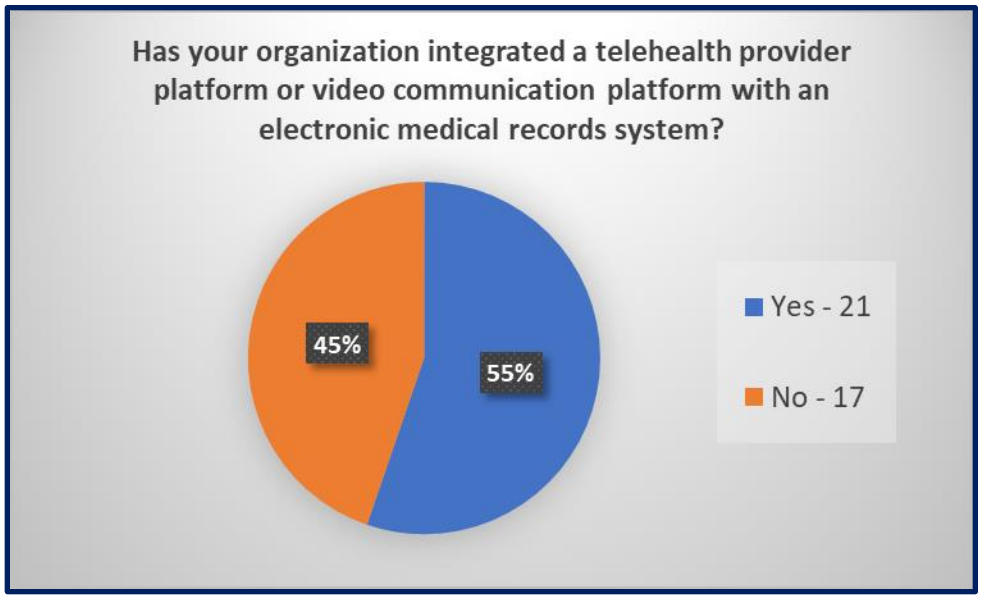
For the next two questions, please answer each question to reflect your organization's current state of telehealth operations without regard to pre-pandemic, during, or post pandemic considerations.

Question 7:

Please list any peripheral tools your organization currently uses to conduct telehealth tasks (i.e. handheld ultrasound scanners, electronic stethoscopes, etc).
Please list all accessory items.

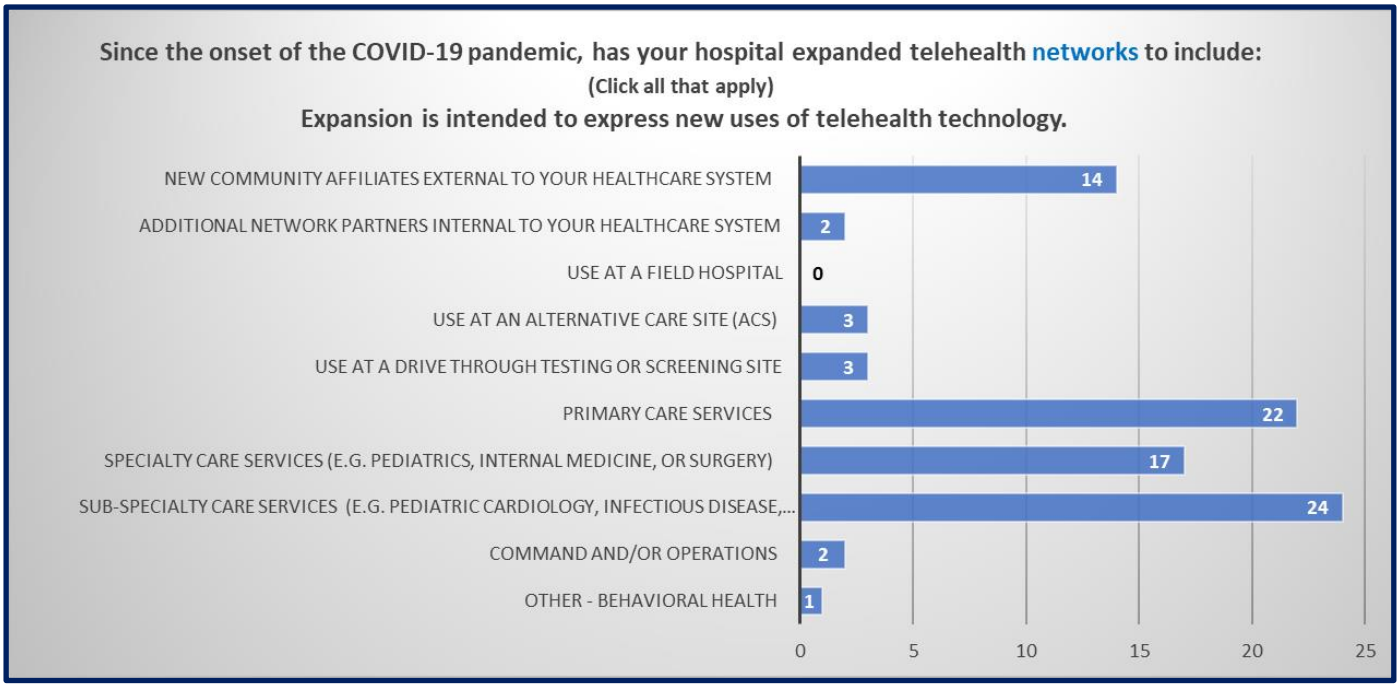
TytoCare Device and modules	15
Electronic Stethescopes	24
Electronic Otoscope	10
Dermatological Camera	1
PTZ In-room Video-conferencing Camera	2

Question 8:

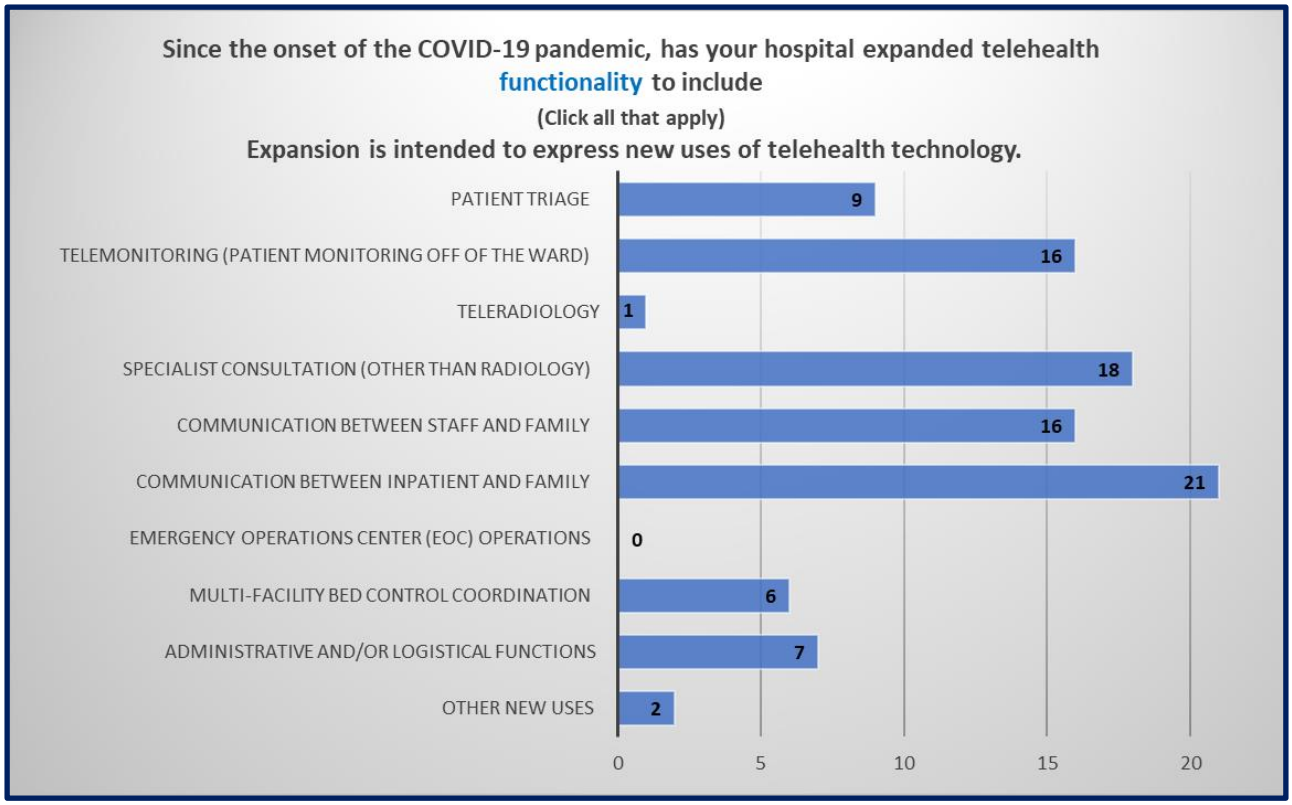


Section 3 Recent Expanded Uses of Telehealth

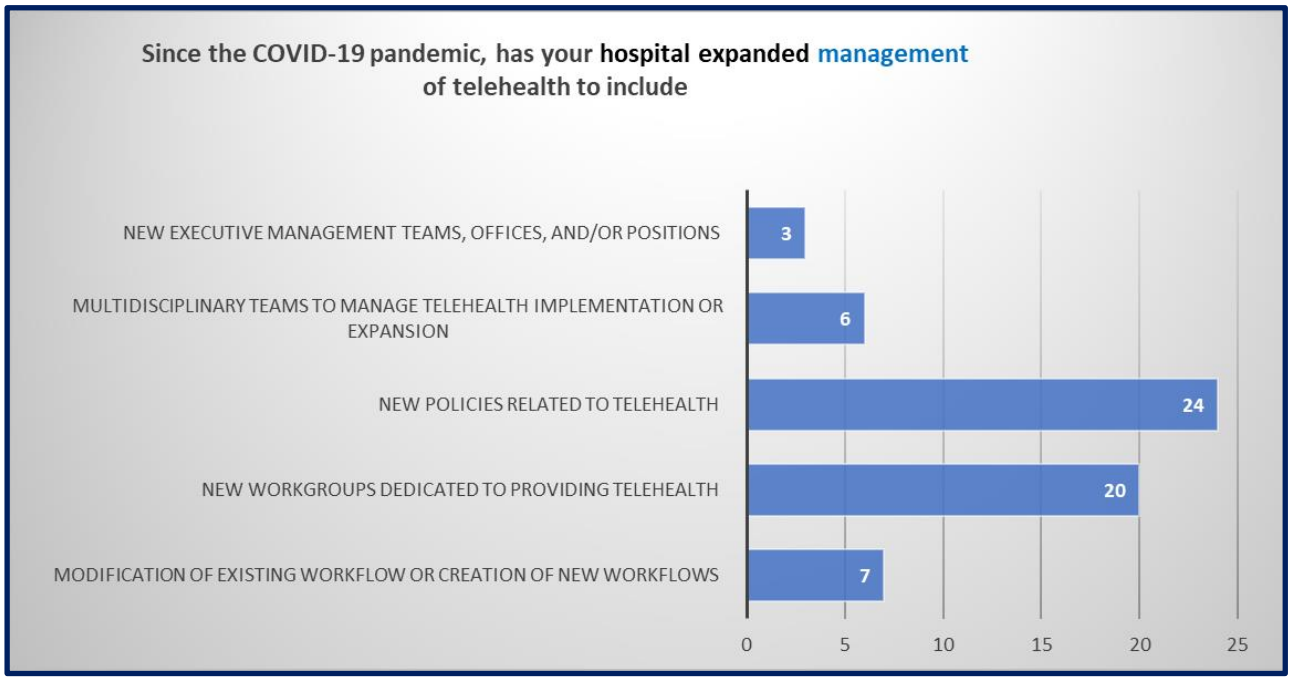
Question 9:



Question 10:

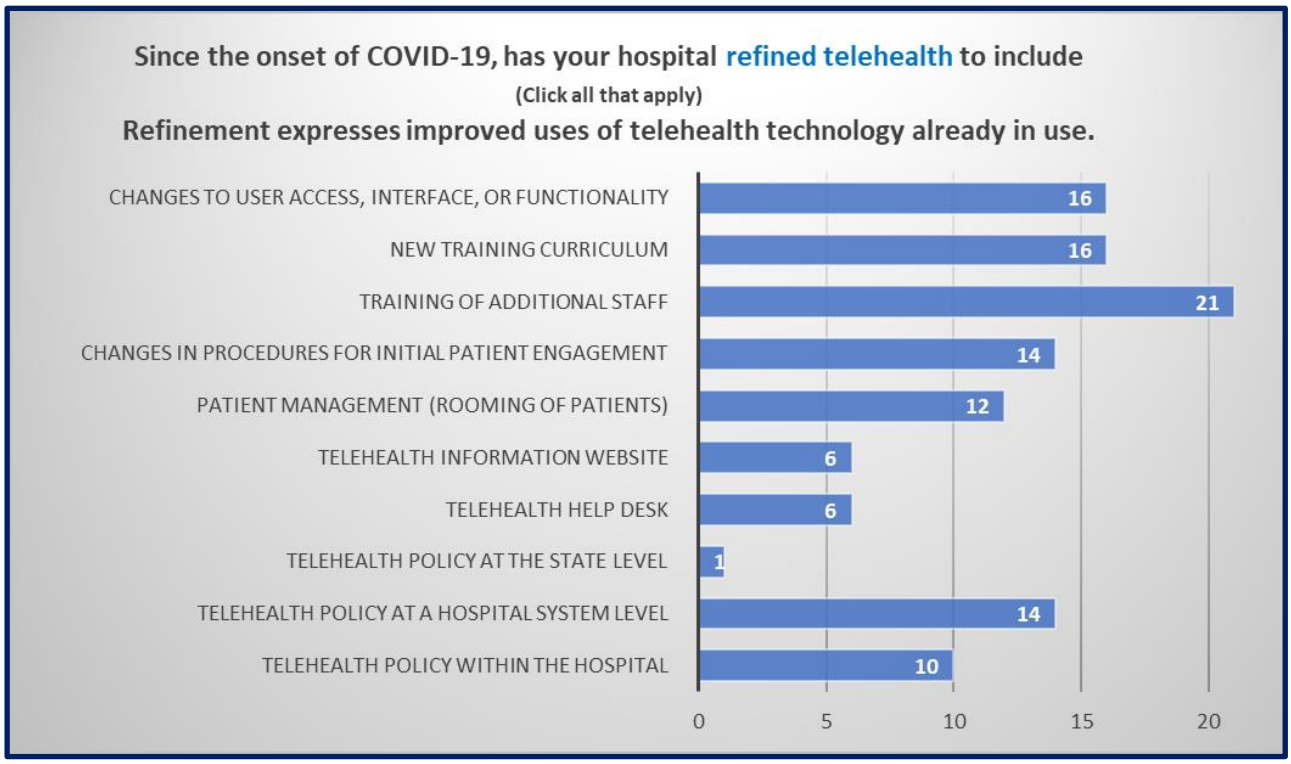


Question 11:



Section 4 Refinement of Telehealth

Question 12:



Question 13:

Please list additional refinements of Telehealth since the onset of the COVID-19 pandemic

Implementing backup Telehealth platform in the event a primary platform fails.

Real time eligibility

Additional virtual clinics

Expansion of e-consults

Additional e-visit services

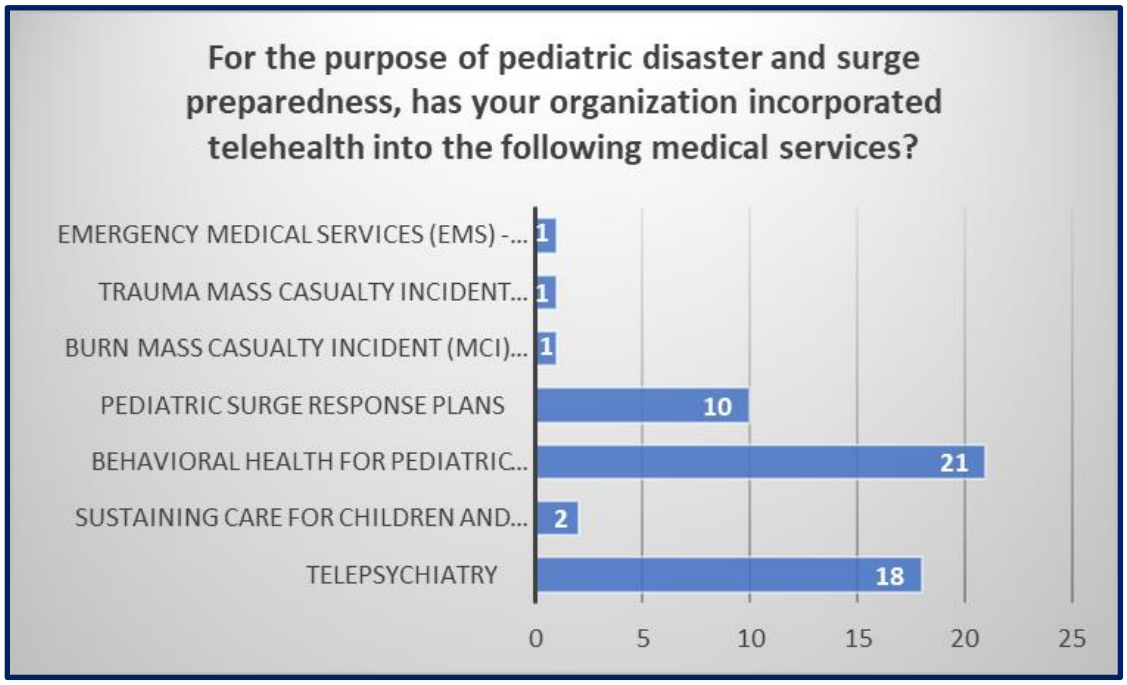
Expansion of specialist services

Expansion of Tele-ED and Tele-stroke

Expansion of telehospitalist program

Expansion of telepsychiatry

Question 14:



Question 15:

Please list unique telehealth lessons learned at your organization since the onset of the COVID-19 pandemic.

Having a primary and backup telehealth system is critical for sustaining virtual care

Embedding in the EMR is not as important as we once thought.

Accommodating telehealth learners is crucial for an academic health center.

Having a virtual waiting room increases provider satisfaction.

Treat virtual visits like in person visits leads patient and provider dissatisfaction.

Technology has proven to be an asset within rural health.

Need training on use of telehealth to keep people out of the hospital setting and still provide safe care

Telehealth requires additional patient support.

Telehealth is critical in caring for patients in a pandemic.

Optimizing clinician and patient workflows for efficiency and timeliness is a continutal process

Patients still really like to have face to face visit

Question 16:

Please list any existing or conceptual telehealth innovations specifically useful for future pediatric disaster care.

Integration into schools with physician to school nurse consultation

On demand virtual care for patients

Rural hospital using e-ER to access pediatric expertise

Remote patient monitoring

Direct-to-consumer telehealth visits with peripheral equipment

Grow and expand pediatric specialty care via telehealth

Conclusions

In addition to several observations, analysis of survey results reveals one key takeaway: *the telehealth response to the COVID-19 pandemic was not directed towards responding to the pandemic, but rather towards supporting standard clinical operations under pandemic restrictions*. Respondents reported an expansion of telehealth operations to support clinical, specialty, and sub-specialty services. In that regard, telehealth is more a tool of clinical sustainment than disaster response.

Additional observations include:

- Covid-19 compelled widespread acceptance and implementation of telehealth technology.
- When changing video conferencing platforms, hospitals tended to select the familiar services of Zoom and Microsoft Teams.
- Recent purchases of telehealth equipment reflect a preference for wireless, mobile equipment.
- Behavioral Health and Telepsychiatry were the clinical areas to experience the greatest grow of telehealth service.
- Expansion of telehealth into new clinical areas occurred.
- As a tool of pandemic response, telehealth was not broadly implemented to support off-site facilities and services.

Region V for Kids

2023 Pediatric Telehealth Survey

Region V for Kids Pediatric Disaster Response Center of Excellence
Pediatric Telehealth Capabilities Survey

Introduction The Region V for Kids Pediatric Telehealth Capabilities Survey is designed:
1) to identify baseline pediatric telehealth capabilities and gaps within FEMA Region V
2) to assist planners in developing telehealth networks that connect Critical Access Hospitals (CAHs) to Children's Hospitals
3) to be completed in 20 minutes or less
4) for a hospital's telehealth lead, an information technology lead, or a virtual care operations lead
5) with a narrow scope of topics to facilitate completion by a single hospital representative
6) for a healthcare system's telehealth representative to submit one response on behalf of all CAHs with the system (if applicable)
7) to serve as a guideline for planning and development of additional pediatric telehealth capabilities

Please do not feel compelled to invest significant time tracking down specific data points.

Survey responses reporting little to no telehealth capability are critical data points for identifying gaps in pediatric telehealth networks. Please complete the survey even if the majority of responses are blank.

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All data will be de-identified before publication: proprietary information will not be released. Hospital identification is collected only for the purpose of follow up questions from a research scientist.

Please visit Region V for Kids Telehealth to read reports from previous telehealth surveys: https://emscimprovement.center/domains/preparedness/asprcoe/eglpcdr/telehealth/

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Q1 First and Last name of person submitting the survey

_____

*

Q2 Email Address

_____

Q3 Job Position / Job Title

_____

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Q4 In which state is your primary place of work? (Please select one)

- ○ Illinois (1)
- ○ Indiana (2)
- ○ Michigan (3)
- ○ Minnesota (4)
- ○ Ohio (5)
- ○ Wisconsin (6)

Q5 Name of Hospital/Organization

Note: If responding on behalf of multiple rural and Critical Access Hospitals (CAHs) within your healthcare system, please name your healthcare system followed by the hospital type and location. Example: *First Healthcare System: Rural hospitals at Wausau, Eau Claire, and Oshkosh - CAHs at Sheboygan, Fond du Lac, and Kenosha.*

_____

Q6 Is your hospital a rural hospital or state designated Critical Access Hospital (CAH)?

- ○ Yes (1)
- ○ No (2)

End of Block:

Start of Block: Hospitals

Display This Question:
If Is your hospital a rural hospital or state designated Critical Access Hospital (CAH)? = Yes

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Section 1 **Hardware, Platforms ,and Applications**

Q7 Please list the primary types of equipment your organization used to conduct telehealth tasks **prior to February 2020**. (Check all that apply)

	iPads / Tablets / Smartphones (1)	Desktops / Laptops (2)	Telehealth Carts (3)	Room Based Video Conferencing Systems (4)
Hard Wired (1)	☐	☐	☐	☐
Wireless (2)	☐	☐	☐	☐
Wired and Wireless (3)	☐	☐	☐	☐

Q8 Please list the primary types of equipment your organization uses to conduct telehealth tasks that were adopted **from February 2020 to present**. (Check all that apply)

	iPads / Tablets / Smartphones (1)	Desktops / Laptops (2)	Telehealth Carts (3)	Room Based Video Conferencing Systems (4)
Hard Wired (1)	☐	☐	☐	☐
Wireless (2)	☐	☐	☐	☐
Wired and Wireless (3)	☐	☐	☐	☐

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Q9 Does your organization use any of the following telemedicine provider platforms? (Select all that apply).

	Pre-pandemic - **Before February 2020** (1)	During and post pandemic - **After February 2020** (2)
American Well (Am Well) (1)	☐	☐
MDLive (2)	☐	☐
Teladoc (3)	☐	☐
MeMd (4)	☐	☐
MD Aligne (5)	☐	☐
CareClix (6)	☐	☐
ConsultADoctor (7)	☐	☐
iCliniq (8)	☐	☐
doxy.me (9)	☐	☐
None (10)	☐	☐

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Q10 What is the primary enterprise video communication platform your organization uses to conduct telehealth patient visits. (Please select one):

	Pre-pandemic - **Before February 2020** (1)	During and post pandemic - **After February 2020** (2)
Vidyo (1)	○	○
Zoom (2)	○	○
Cisco Webex (3)	○	○
Cisco Jabber (4)	○	○
Microsoft Teams (5)	○	○
Skype (6)	○	○
GoToMeeting (7)	○	○
Other (8)	○	○

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Q11 Please select all other video communication platforms your organization may use to conduct telehealth patient visits. (Please all that apply):

	Pre-pandemic - **Before February 2020** (1)	During and post pandemic - **After February 2020** (2)
Vidyo (1)	☐	☐
Zoom (2)	☐	☐
Cisco Webex (3)	☐	☐
Cisco Jabber (4)	☐	☐
Microsoft Teams (5)	☐	☐
Skype (6)	☐	☐
GoToMeeting (7)	☐	☐
Other (8)	☐	☐

Q12 For the next two questions, please answer each question to reflect your organization's current state of telehealth operations without regard to pre-pandemic, during, or post pandemic considerations.

Q13 Please list any peripheral tools your organization currently uses to conduct telehealth tasks (i.e. handheld ultrasound scanners, electronic stethoscopes, etc). Please list all accessory items.

_____

_____

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Q14 Has your organization integrated a telehealth provider platform or video communication platform with an electronic medical records system?

- ○ Yes (1)
- ○ No (2)

Section 2 **Recent Expanded Uses of Telehealth**

Q15 Since the onset of the COVID-19 pandemic, has your hospital **expanded telehealth networks** to include (Click all that apply):
Expansion is intended to express new uses of telehealth technology.

- ☐ New community affiliates external to your healthcare system (1)
- ☐ Additional network partners internal to your healthcare system (2)
- ☐ Use at a Field Hospital (3)
- ☐ Use at an Alternative Care Site (ACS) (4)
- ☐ Use at a Drive Through testing or screening site (5)
- ☐ Primary Care services (6)
- ☐ Specialty Care services (e.g. Pediatrics, Internal Medicine, or Surgery) (7)
- ☐ Sub-specialty Care services (e.g. Pediatric Cardiology, Infectious Disease, or Plastic Surgery) (8)
- ☐ Command and/or Operations centers (9)
- ☐ Other new services not listed (10) _____

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Q16 Since the onset of the COVID-19 pandemic, has your hospital **expanded telehealth functionality** to include (Click all that apply):
Expansion is intended to express new uses of telehealth technology.

- ☐ Patient Triage (1)
- ☐ Telemonitoring (patient monitoring off of the ward) (2)
- ☐ Teleradiology (3)
- ☐ Specialist consultation (other than radiology) (4)
- ☐ Communication between staff and family (5)
- ☐ Communication between inpatient and family (6)
- ☐ Emergency Operations Center (EOC) operations (7)
- ☐ Multi-facility bed control coordination (8)
- ☐ Administrative and/or Logistical functions (i.e. coordinate staff and supply re-allocation) (9)
- ☐ Other new uses (10) _____

Q17 Since the onset of the COVID-19 pandemic, has your hospital **expanded management of telehealth operations** to include (Click all that apply):
Expansion is intended to express new methods to manage telehealth technology.

- ☐ New Executive management teams, offices, and/or positions (1)
- ☐ Multidisciplinary teams to manage telehealth implementation or expansion (2)
- ☐ New policies related to telehealth (3)
- ☐ New workgroups dedicated to providing telehealth (4)
- ☐ Modification of existing workflow or creation of new workflows (5)

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Section 3 **Refinement of Telehealth**

Q18 Since the onset of the COVID-19 pandemic, has your hospital **refined telehealth** to include (Click all that apply):
Refinement is intended to express improved uses of telehealth technology already in use.

- ☐ Changes to user access, interface, or functionality (1)
- ☐ New training curriculum (2)
- ☐ Training of additional staff (3)
- ☐ Changes in procedures for initial patient engagement (4)
- ☐ Patient management (tasks associated with prepping or rooming of patients) (5)
- ☐ Telehealth information website (6)
- ☐ Telehealth help desk (7)
- ☐ Telehealth policy at the state level (8)
- ☐ Telehealth policy at a hospital system level (9)
- ☐ Telehealth policy within the hospital (10)

Q19 Please list additional refinements of Telehealth since the onset of the COVID-19 pandemic

_____

_____

_____

_____

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Q20 For the purpose of pediatric disaster and surge preparedness, has your organization incorporated telehealth into the following medical services?

	Yes (1)	No (2)
Emergency Medical Services (EMS) - i.e. Telehealth in the pre-hospital space for non-clinical patients (1)	○	○
Trauma Mass Casualty Incident (MCI) plans (2)	○	○
Burn Mass Casualty Incident (MCI) plans (3)	○	○
Pediatric Surge response plans (4)	○	○
Behavioral Health for pediatric patients (5)	○	○
Sustaining care for Children and Youth with Special Health Care Needs (CYSHCN) (6)	○	○
Telepsychiatry (7)	○	○

Q21 Please list unique telehealth lessons learned at your organization since the onset of the COVID-19 pandemic.

_____

Q22 Please list any existing or conceptual telehealth innovations specifically useful for future pediatric disaster care.

_____

_____

_____

End of Survey

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Appendix B: Survey Flyer

Telehealth Capabilities Survey

The Region V for Kids Pediatric Disaster Response Center of Excellence invites your hospital to participate in a Telehealth Capabilities Survey. Our goal is to leverage telehealth technology for pediatric disaster and pandemic response. Region V for Kids seeks to identify current pediatric telehealth capabilities throughout FEMA Region V in support of expanding and innovating new uses of telehealth.

The Region V for Kids Pediatric Telehealth Capabilities Survey is designed:

1) to identify pediatric telehealth capabilities and gaps within FEMA Region V
2) to assist planners in developing telehealth networks that connect rural and Critical Access Hospitals (CAHs) to Children's Hospitals
3) to be completed in 20 minutes or less
4) with a narrow scope of topics to facilitate completion by a single hospital representative

One of the following should complete the survey:

Telehealth Lead
Information Technology Lead
Virtual Care Operations Lead

Data Security:

Each participant's data will be de-identified before publication: proprietary information will not be published. Organizational identification is collected only for the purpose of follow up questions from a research scientist.

Please complete the survey by 30 April 2023

Survey Link and QR Code:
https://umich.qualtrics.com/jfe/form/SV_3fqH2I8Z13Rxdyu

Please visit Region V for Kids Telehealth to read reports from previous telehealth surveys: https://emscimprovement.center/domains/preparedness/asprcoe/eglpcdr/telehealth/

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Appendix C: Definitions

Definitions

Critical Access Hospital (CAH): A Medicare participating hospital certified as meeting these regulatory requirements (this list isn't all-inclusive, it only listing some basic criteria) (Source: Medicare Learning Network Booklet MLN006400 April 2023):

- Located in a state that established a rural health plan for MRHFPs.
- Located in a rural area.
- Provides 24-hour emergency services, 7 days a week.
- Doesn't exceed 25 inpatient beds.
- Report an annual average acute care inpatient Length of Stay (LOS) of 96 hours or less.
- More than a 35-mile drive on primary roads from any other hospital or a 15-mile drive on secondary roads from other hospitals.

Rural Hospital: Rural hospitals are those not located within a metropolitan area with metropolitan areas defined by the U.S. Office of Management and Budget and the Census Bureau (Source: American Hospital Association)

Acronyms

AHA – American Hospital Association

ASPR - Administration for Strategic Preparedness and Response

CAH – Critical Access Hospital

HRSA – Health Resource and Services Administration

LOS – Length of Stay

MRHFP - Medicare Rural Hospital Flexibility (Flex) Program