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SUPPORTING THE SITUATION OF CHILDREN IN COVID-19

Rapid scan of UNICEF global/regional Digital Health support

Presentation to Digital Health & Innovations
Subgroup Child Health Taskforce
28 October, 2020
Alex Muhereza, UNICEF

UNICEF’s COVID-19 Response Health Profile

- Immediate preparedness and response measures specific to the CoVid-19 pandemic that reduce the potential for impact on regular health services
- Improving the capacity of the health system and of communities to prepare for and respond to CoVid-19, related conditions like pneumonia, and future disease outbreaks and emergencies.
- Ensuring that accurate health information is available to all communities, and that all available channels of communication are used to disseminate this information.

Preparedness & Response

1

Based on HSS Approach, developed & disseminated guidance on rapid identification and deployment Digital Health initiatives.

2

Donor & Digital Health initiatives mapping for community engagement and risk communication on COVID- awareness, infection, prevention and control.

3

User Engagement & Digital assets.

4

Digitally informed country level Emergency response plans.

Rapid Guidance for UNICEF Offices – Live document that will be updated continuously

31 March 2020

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Digital health and digital engagement for COVID-19 preparedness and response

In many countries, UNICEF teams support governments and partners to apply digital health solutions for health systems strengthening, using existing guidance. Focus has been on embedding digital health into community and primary health care programmes to increase and monitor access to quality services for children and their families. There has also been targeted support for national digital health strategies and action plans, governance frameworks, and aligning solutions to existing global guidance from WHO.

Digital solutions have direct value in health emergencies, specifically where they have been deployed and scaled for real-time surveillance and contact tracing, data collection, remote health worker training/motivation, social science data collection, risk communication and community engagement (RCCE), and demand generation.

In the context of the COVID-19 pandemic, countries must develop and deploy strategic action plans, which can benefit explicitly from digital health and digital engagement solutions. Plans should, when possible, be consistent with the PD-Health guidance on COVID-19 health service and health system strengthening considerations. To support countries in this regard UNICEF suggests action and can support country offices in the following areas:

1. **Digital channels for risk communication and community engagement (RCCE) can be valuable platforms to reduce transmission of the virus and tackle misinformation**

   Digital Engagement platforms can rapidly be activated for targeted risk communication initiatives to reduce transmission of the virus, tackling misinformation, or conduct surveys to estimate knowledge, misconceptions and rumors. UNICEF has in the past deployed Digital Health messaging initiatives through RapidPro, U-Report, WhatsApp and other platforms, like Viamo, for interactive voice recording (IVR) for communicating with the more rural and illiterate populations. Where already deployed, they can be easily adopted, activated and used. A draft map of country systems can be found here.

   - Conduct surveys: Conducting population-based surveys can be used to estimate existing knowledge, misconceptions and rumours.
   - Deliver content for behaviour change using digital platforms: Leveraging evidence-based behavior change strategies and widely accessible digital platforms to educate communities regarding signs, symptoms, and transmission routes that can interrupt virus transmission.
   - Adopt, modify and use existing platforms: Where such digital platforms are already deployed, they can be easily used as channels to deliver COVID-19 information to pregnant women, adolescents, and their families on how to prevent COVID-19 spread and where to seek assistance.

2. **Digital Health solutions for community health workers that protect them, interrupt the virus, and maintain routine health services, are priority investments for emergency response**

   Community Health Workers (CHWs) that are equipped, trained and supported, as part of a well-functioning health system, are particularly poised to play a pivotal role delivering essential care, especially in low-income countries with vulnerable health systems. To fight the pandemic, CHWs must be trained, safe, remote communication with CHWs, using existing digital platforms, such chatbots, SMS or IVR, can easily be leveraged in many countries and need to urgently be activated to provide remote training and information on case management, surveillance and interpersonal communication with community members

   - Conduct remote CHW training and supervision: To ensure that CHWs stay healthy it is important to train them on "no or distance

UNICEF Programme Division: Digital health and digital engagement for COVID-19 preparedness and response

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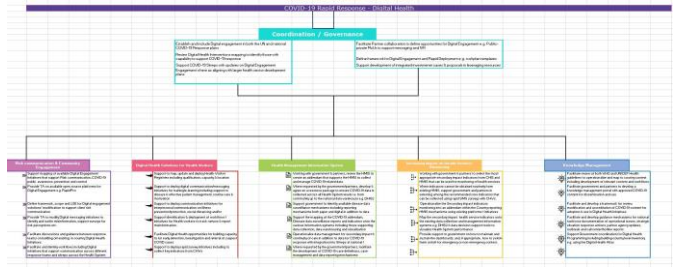
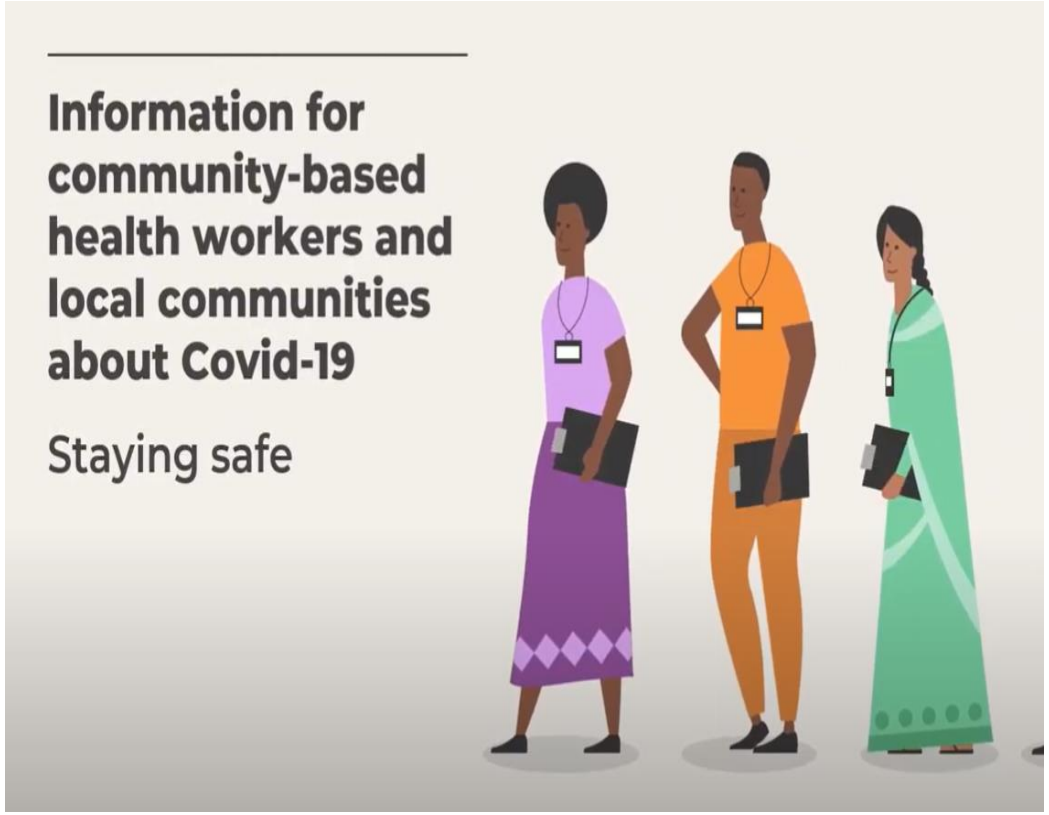


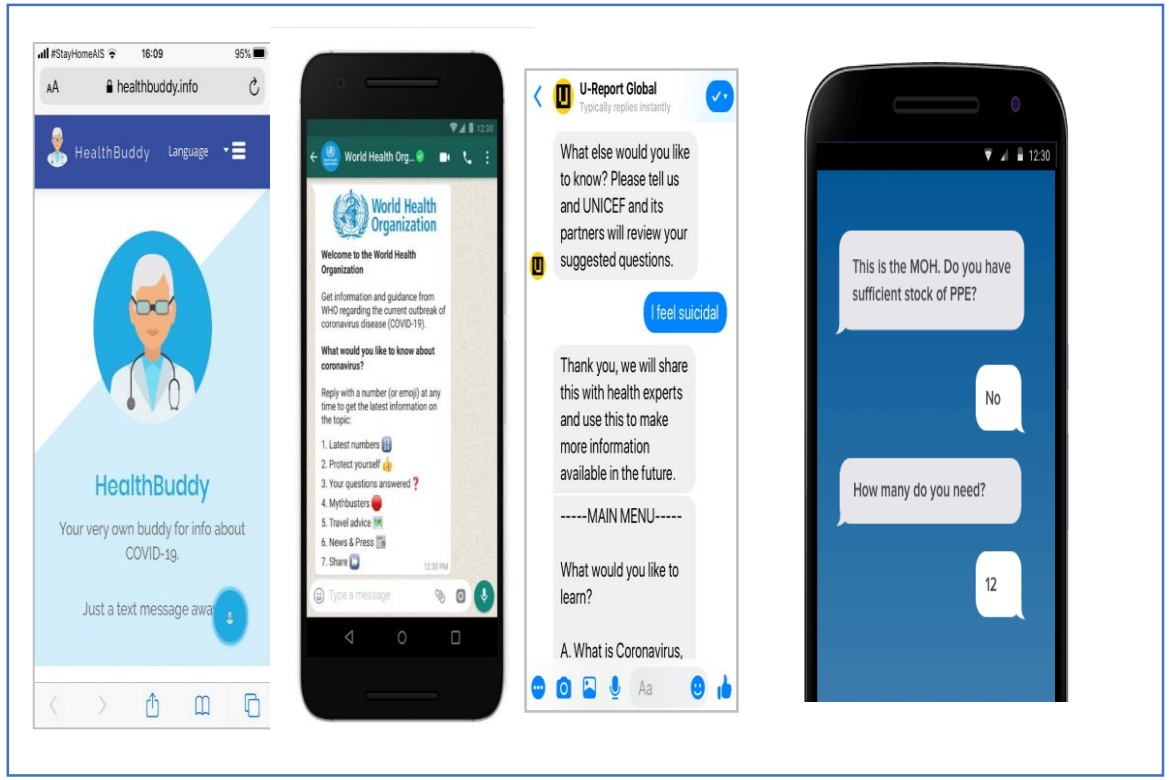
Health System Capacity



- At the onset of COVID-19, assess the Health System level preparedness for Response
- Capacity to interrupt virus transmission.
- Build Frontline Health workers Interpersonal skills
- Conduct remote CHW Training and supervision

Health Information

Health Buddy | Health Alert | U-Report | SMS



Burkina Faso

Enhancing digital health to support COVID-19 surveillance and response

- Characterized by deteriorated security and in humanitarian crisis
- By August 2020, the country had registered 1,153 cases with 54 deaths
- Adopted digital solutions to support health care service provision and continuity
- Support COVID-19 contact tracing, detection of suspected cases in the population and searches for undeclared contact cases
- Supplements the call center function
- COVID-19 knowledge management - notifications on symptoms, suspected cases & response actions
- Used by at least one health worker in 409 facilities in 6 regions across Burkina Faso

511 alerts with **18,983** people followed up to date

- UNICEF supporting RapidPro setup, resources mobilization and partner collaborations

Experience so far

Lessons

- Rapid deployment and support through existing community practices
  - Flexibility in use, features & capabilities.
- Immediate value in supporting Public Health emergencies response including increased interest from governments.

Challenges

- Streamlined content development, management and dissemination
- Lack of demonstrated digital public goods for analytics & visualization
- Clear investment case vs value over period time & response to context needs

Thank you.

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Resource Guide to Assess Digital Health Platforms for COVID-19 Case Management and Contact Tracing

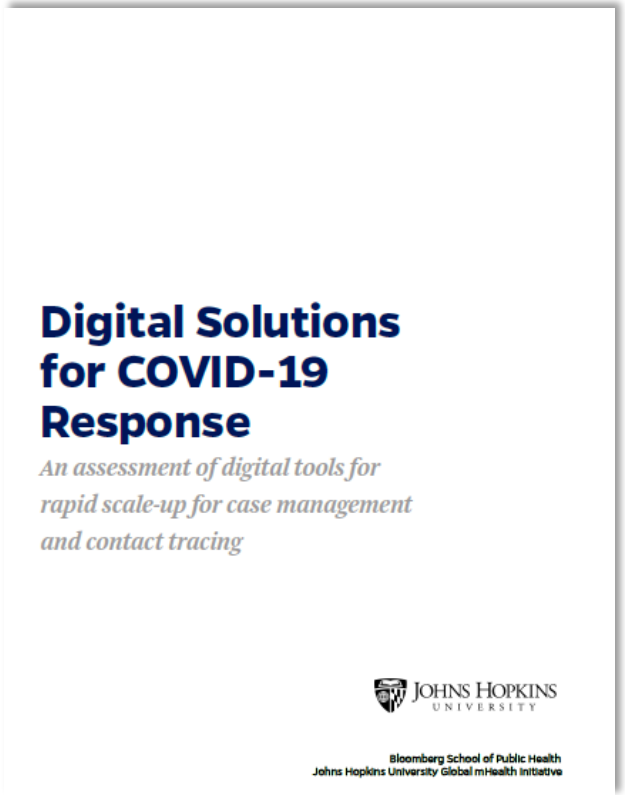
Dr. Smisha Agarwal
Research Director, Johns Hopkins University Global mHealth Initiative
Assistant Professor, Department of International Health
Johns Hopkins Bloomberg School of Public Health

Context

- Anticipation of overwhelmed health systems and governments globally by COVID-19
    - Capacity to manage critically ill patients in hospitals and remote monitoring of patients at home
    - Planning of large-scale contact tracing programs
- Digital platforms can support case management and contact tracing
    - While also meeting needs of healthcare providers and public health officials on the frontlines
- This report fills that gap, by identifying platforms that could serve those health systems and governments

Digital Solutions for COVID-19 Response

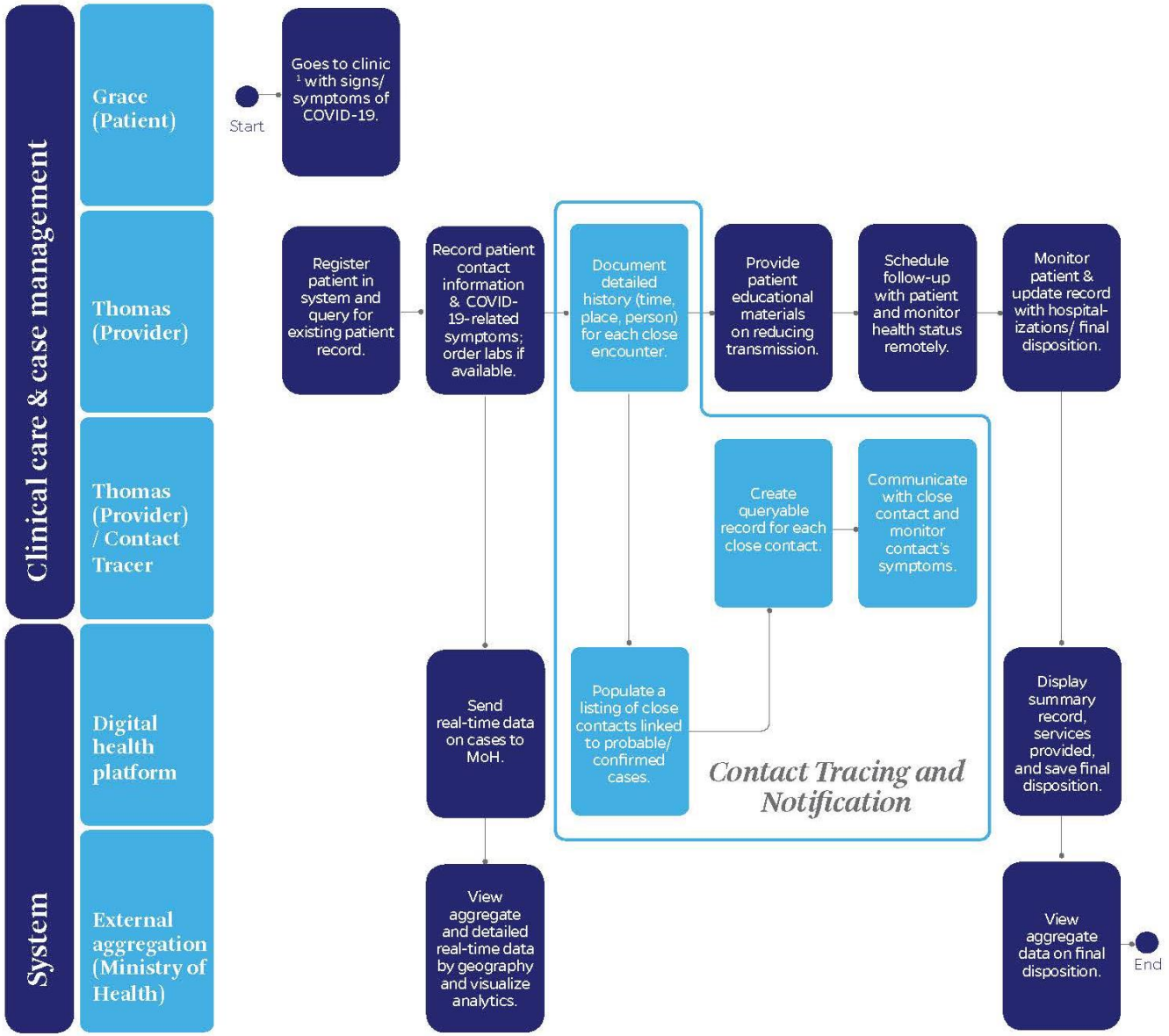
- A rapid assessment of **nine** digital platforms to address COVID-19 related case management and contact tracing
- Supported by the Bill & Melinda Gates Foundation
- **Platforms**: CommCare, Community Health Toolkit (CHT), DHIS2 Tracker, Go.Data, ODK, OpenSRP, RapidPro, SORMAS, and WelTel



Use Cases for the Platforms

- COVID-19 Case Management
- Contact Registration & Follow-Up
- Port of Entry Screening & Follow-Up
- Event-based Surveillance System
- Lab Test Tracking
- Healthcare Worker Training
- Facility Readiness and Stock Tracking

COVID-19 Use Case: *Workflow for Patient Triage, Referral for Testing, Contact Listing and Notification, and Follow-Up*



[1] Process will vary if patient is seen at home.

Patient Triage, Referral for Testing, Contact Listing and Notification, and Follow-Up

Use Case Key: 1 = Yes 0 = No	CommCare[A]	CHT[B]	DHIS2 Tracker[C]	Go.Data[D]	ODK[E]	OpenSRP[F]	SORMAS[G]	RapidPro/ TextIt[H]	WelTel[I]
As a community healthcare worker, I may need to perform the following tasks:									
1. Risk assessment for suspecting and existing COVID-19 patients									
Register patients in the system with a unique ID	1	1	1	1	1	1	1	1	1
Query patient's past health from the system	1	1	1	1	1[E]	1	1	1	1
Record patient contact information (e.g. address, phone number, emergency contacts)	1	1	1	1	1[E]	1	1	N/A[H]	1
Input patient demographics, vital signs, risk factors, and symptoms related to COVID-19*	1	1	1	1	1	1	1	1	1
Provide educational materials for patients through audio, video, and images (regarding preventative measures like quarantine, handwashing, etc.)	1	1	0	0	1	1	1	1	1
Schedule a follow-up with patients	1	1	1	1	0[E]	1	1	1	1
Communicate with patient/contact via phone call	1	1	1	1	1[E]	1	1	1	1
Communicate with patient via one-way messaging (e.g. SMS, social media, in-app, WhatsApp)	1	1	1	1	1[E]	1[F]	1	1	1

Patient Triage, Referral for Testing, Contact Listing and Notification, and Follow-Up

Use Case
Key: 1 = Yes
0 = No

Use Case	CommCare[A]	CHT[B]	DHIS2 Tracker[C]	Go.Data[D]	ODK[E]	OpenSRP[F]	SORMAS[G]	RapidPro/ TextIt[H]	WelTel[I]
As a community healthcare worker, I may need to perform the following tasks:									
2. Referral for testing									
Order laboratory investigations	1[A]	1	1	1	0[E]	1	1	N/A[H]	1
Receive updates when the results are available	1[A]	1	1	1	0[E]	1	1	N/A[H]	1
3. Contact listing of suspected and existing COVID-19 cases									
Document detailed contact history about the time, place, and person for each close encounter	1[A]	1	1	1	1	1	1	N/A[H]	1
Create a listing of close contacts linked to the suspected and existing COVID-19 cases	1	1	1	1	1	1	1	N/A[H]	1
Create record to input demographics and risk factors of the close contact	1	1[B]	1	1	1	0	1	N/A[H]	1
Select/modify contact record in case of errors*	1	1	1	1	0[E]	0	1	N/A[H]	1
Query the record of the close contacts from the system	1	1[B]	1	1	1	0	1	N/A[H]	1
4. Exposure Notification for 'close contacts' of suspecting/existing COVID-19 cases									
Communicate (two-way) via a messaging service with the close contact (SMS, Whatsapp, others)	1	1	0	0	N/A[E]	1[F]	0	1	1

Selecting an Appropriate Platform based on the Context

- The “quality attributes” of the platforms

- Refers to criteria that can be used to judge the general operation
    - E.g. system architecture, usability, security, and scalability

- Assessed via a maturity scale of 0-2, with ‘0’ indicating that the functionality does not exist, and ‘2’ indicating a well-developed functionality

Non-functional requirements

Usability:
This describes features that make it intuitive for a user to interact with the system.

Documentation, Training, and Support:
The availability of support services and training.

Open Access and Developer Community:
The number of people who can customize the software, and provide training and operational support.

Standards, Interoperability, and Data Accessibility:
Adherence to global norms and standards to facilitate operations with other healthcare systems.

Reliability:
The system's potential to run consistently without failure.

Scalability:
The application's ability to maintain performance over time as the number of users increases.

Devices and Operating Systems:
Types of devices and operating systems supported by the system.

Messaging:
Support for messaging services such as SMS, WhatsApp, and Facebook Messenger.

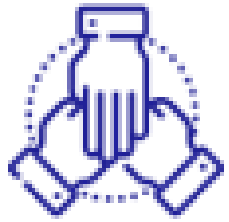
Security:
Ways in which to safeguard the security and privacy of the data.

Analytics:
Capacity of platform to support extensive reporting and analytic capabilities.

Time to Deployment:
Factors that impact the amount of time taken to get the application ready for deployment in a country.

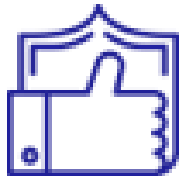
Cost Considerations:
Factors that impact cost such as licensing fees, customization, operational support, and technical support.

Open Access and Developer Community



- The community that can customize the software, and provide training and operational support
- **Benefits**: system can be adapted with plausibly lower upfront costs, leverage existing resources, knowledge and standards
- **Drawbacks**: Difficult to adapt without adequate documentation, support community, local expertise. May promote reliance on external technical experts and limit sustainability.
- DHIS2 Tracker, ODK, and RapidPro have the most active global implementer communities
    - Local expertise to customize & support, without active involvement of steward organization

Reliability



- The system's potential to run consistently without failure
- All nine platforms can be deployed on the cloud
- All nine platforms allow data to be stored locally, and uploaded when connection is available

- **Low connectivity environments:**
  - Duplication of IDs
  - Data transfer

Cost Considerations

- All applications, besides WelTel and Go.Data, have free open-source licensing, but they have varying support provisions
- CommCare, CHT, ODK, Go.Data, OpenSRP, and SORMAS can provide support for a fee
- RapidPro and DHIS2 Tracker provide advanced troubleshooting support
- WelTel follows tiered subscription-based pricing model
- **Specific to COVID-19, these services may be available free of cost or at a highly discounted price.**

Access report:

https://drive.google.com/file/d/1yCP7t1di_ofQ0YhuPAD1Oqcj1aTo74k5/view

Contact:

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Resources

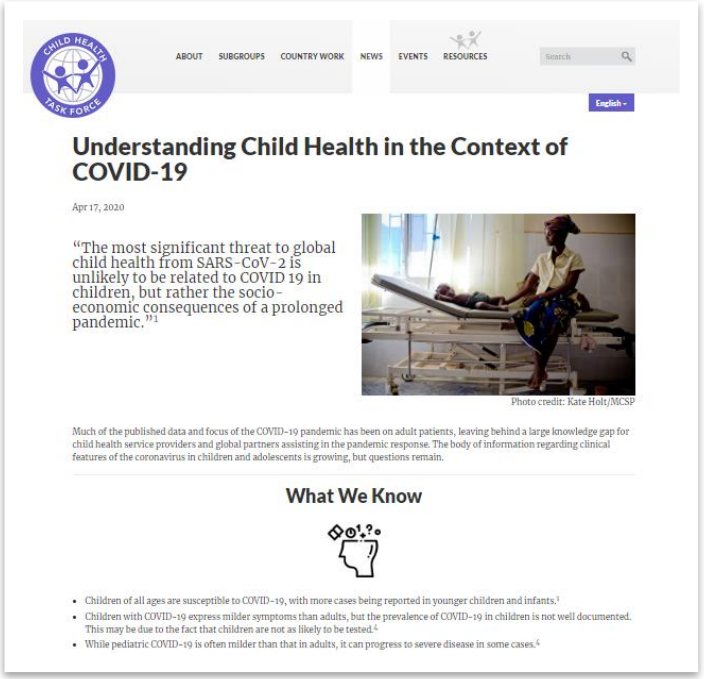
Engage with co-chairs:

- Darlene Irby - Darlene.Irby@jhpiego.org
- Jeanne Koepsell - jkoepsell@savechildren.org

Subgroup information, recordings and presentations from previous meetings are available on the subgroup page of the Child Health Task Force website: https://www.childhealthtaskforce.org/subgroups/digital-health

**The recording and presentations from this webinar will be available on this page later today*

Become a member of the Child Health Task Force: www.childhealthtaskforce.org/subscribe



Check out the Task Force Child Health & COVID-19 web page for additional resources!

Suggestions for improvement or additional resources are welcome. Please email childhealthtaskforce@jsi.com.