



HIFA-mHEALTH-INNOVATE

Thematic Discussion

April-May 2022

RESULTS OF THE THEMATIC ANALYSIS

Background

To help them do their jobs, health workers are increasingly using their mobile phones to create their own **informal** and often innovative solutions.

These solutions can remove bottlenecks and plug gaps in weak health systems. But they can also lead to information sharing and storage in ways that are unregulated, and a threat to data security and patient confidentiality

The mHEALTH-INNOVATE project aims to explore:

- how and why health workers are using phones informally
- the advantages and disadvantages of informal mobile phone use
- how we might formalize these solutions without losing what makes them work

The mHEALTH-INNOVATE partners are: Makerere University, Uganda; the Norwegian Institute of Public Health; University of Western Norway; Norwegian University of Science and Technology; the University of Oslo, Norway; Johns Hopkins Bloomberg School of Public Health, USA; the World Health Organization; and the Healthcare Information for All network (HIFA).

Methods

1. HIFA working group agreed upon **five questions** to structure the HIFA discussion
2. HIFA members and other relevant **people invited to contribute**
3. Working group members **monitored contributions** and asked follow-up questions
4. **A thematic analysis** of the contributions carried out

More information about the working group, including member profiles:

<https://www.hifa.org/projects/new-mhealth-innovate-what-can-we-learn-health-workers-informal-use-mobile-phones>

Results

Twenty-five contributors (including 8 working group members)

Contributors based in UK (5), Uganda (3), India (3), USA (2), Switzerland (2), Zimbabwe (1), Cameroon (1), Nigeria (1), Ethiopia (1), Democratic Republic of Congo (1), Haiti (1) Iraq (1), Norway (1), Netherlands (1) and Philippines (1)

Seventy one contributions (**52 contributions** after removing invitations and follow-up questions from working group members)

Contributions organised into the following themes:

- **References** to reports and articles
- **How** are health workers using mobile phones in their work?
- To which extent are these mobile phone uses **informal**?
- **Why** are health workers turning to mobile phone-based solutions?
- What are the **challenges** and **possible solutions** when health workers use mobile phones?

How are health workers using mobile phones?

1. Using the phone's **clock, stopwatch, torch, camera and calendar** functions
2. Using the phone to **search for information** on internet-based resources
3. But **primarily** using the phone to **communicate** with others:
 - Colleagues/other health workers
 - Patients and families
 - Training, supervision

Communication via phone calls, text messages, social media platforms and communication apps. **WhatsApp** was the channel most commonly referred to

(Are there better, more established ways of organising these categories?)

1. Using the phone's **clock, stopwatch, torch, camera and calendar** functions
 2. Using the phone to **search for information** on internet-based resources
 3. Using the phone to **communicate** with other health workers or staff members in their own setting and in other parts of the health care system:
 - sharing practical, clinical and scientific information and resources with colleagues, for instance information about meeting schedules, regulations, and clinical guidelines
 - sharing experiences and ideas, supporting colleagues who are struggling, and offering psychological support
 - attending virtual meetings
 - tracking drugs and supplies, requesting supplies, and reporting supply chain issues and stock-outs
 - consulting each other on how to handle cases, especially between different levels of care
 - connecting health workers at different levels of the health system,
 - tracking and registering patient information and collecting data for the ministry or partner organisations
 - transmitting patient data, including images, to other levels of the system
 - submitting reports and statistics
 - facilitating patient referrals, including requesting referrals, transmitting patient information and organising transport
 - coordinating teamwork
1. Using the phone to **communicate with clients and patients**, patient groups and their families:
 - sharing general clinical information and education
 - sharing practical information, such as appointment reminders
 - following up individual patients, for instance, through teleconsultations, monitoring, treatment and follow-up
 - sending test results to patients
 2. Using the phone to **participate in online training, education, supervision and monitoring**

To which extent are these mobile phone uses **informal**?

Several of the contributors described how WhatsApp groups had been *initiated and established by the health workers themselves*.

One contributor mentioned that most of his mobile phone use “*is not directed by the institution, and therefore "informal"*”.

One contributor explained that while *the initiative came from the health workers themselves*, their leadership eventually started encouraging use of WhatsApp groups as a channel of communication.

Why are
health
workers
turning to
mobile
phone-based
solutions?

- To share information quickly
- To share information more frequently
- To help overcome lack of face-to-face services and limited mobility of patients and staff

1. Mobile phones allowed health workers to gather, search for and **share information quickly**

*“If ringing [...] to a specialist [...], I may leave my personal mobile phone number for the doctor to get directly back in touch with me that day, as getting back through **the surgery switchboard can be a lengthy wait** at times and I want them to contact me back asap about a clinical concern” (GP, UK).*

Covid-19: increased the need to spread information quickly and debunk misinformation....

.....both among health workers and patients:

“2020 saw us do much Covid education for staff and parents together over phone (dos and don'ts) and reach out to allay the fears and anxiety of children and families during the lockdown.” (Paediatrician, India)

2. Mobile phones allowed health workers to share information more frequently

During Covid-19, the increased need for equipment led to a need for more frequent tracking and notification of stock levels:

*“During the peak of the pandemic, it was critical to track availability of PPE at health facilities weekly, but the traditional stock tracking system used a monthly and quarterly system. In order to ensure timeliness of reporting, **google forms were created** and those with smart phones used these to send weekly updates on stock status.”* (Pharmacist, Zimbabwe)

3. Mobile phones helped overcome a **lack of face-to-face services and limited mobility** of patients and staff

During Covid-19:

*“During the COVID-19 lockdowns, facility health set up **informal WhatsApp groups** [...] to ensure quality service delivery. Such groups had the participation of facility health workers, community health workers [...] and local leaders. The facility health workers would use such channels to conduct mentorship sessions after trainings during the lockdowns. Community health workers would also use the same channels to secure first line help, report reactions to medication [...] and share weekly progress reports.”* (Project manager, Uganda)

“Mobile phone during the challenging lonely periods was sometimes the only device for health care workers to connect with each other both for physical and psychological support.” (Global health professional, Switzerland)

3. Mobile phones helped overcome a **lack of face-to-face services and limited mobility** of patients and staff

In remote areas or in conflict-affected settings:

*“In Cameroon where there is a conflict, mobile phones are used to send reports and statistics to the regional level. Health supervisors can no longer move to local health units or District Health Services to perform their duties. Health officials at the local level have become supervisory authorities. Without any formal knowledge to perform these tasks, the local health personnel are required to do this. Even the District Medical Officers who have abandoned their services depend now only on the local health staff for reports. **This is done only with the help of a mobile phone.**” (Development professional, Cameroon)*

Could emergency situations help formalise the use of mobile phones?

One contributor suggested that the Covid-19 pandemic was an emergency situation that helped 'formalise' the use of mobile phones.

Challenges and possible solutions when health workers use mobile phones

- Patient confidentiality issues
- Lack of policies and guidelines
- Poor access to phones among patients
- Low levels of literacy and digital literacy among health workers
- Language issues

Concern about patient confidentiality issues

Solutions suggested included:

- limiting what health workers discuss on the phone
- locking phones and subscribing to antivirus and anti-hacking tools
- anonymising patient data
- creating awareness

Lack of formal policies and guidelines

Contributors called for:

- formal policies on mobile phone use when transmitting information
- more guidance regarding type of information that should or should not be shared
- guidance about how to share patient information while anonymising it

Poor access to mobile phones among patients and their families

Impacted on health workers' opportunities for mobile phone-based communication

One contributor described how this problem had been partly addressed during the Covid-19 pandemic by pairing families with community health workers who owned mobile phones.

Low levels of literacy and digital literacy among health workers

Suggested solutions: further training in the mobile phone use, and use of audio or video recordings to record information – although implications for patient confidentiality and data management:

“I noticed that a few of our community workers [...] who used to participate well in the community meetings in the pre-covid phase were less active at this juncture as compared to the rest in the group. It turned out that some of our workers (particularly the ones with practical experience but did not complete high school) were not adept at writing long sentences and did poorly in the capacity building lessons. [...] That was when we came up with a few innovative solutions to ensure participation by all staff and parents. We taught them to use voice notes to convey important information as well as to be a part of the ongoing capacity building.” (Paediatrician, India)

“Some CHWs resort to audios and video audios and video recordings – recording themselves while describing the client’s condition or situation. They did not record the clients themselves except in situations where it was necessary, and then only recording the specific body part. But this creates a challenge for data management.” (Project manager, Uganda)

Language issues

Suggested solutions:

- digital platforms in local languages - but maintenance is a challenge
- Google translate could help to a certain extent, but additional manual translation also necessary

Funding issues

Health workers often paid for phones, maintenance and airtime, despite the phones being used for work purposes

Internet and infrastructure

Need for communication applications that can be used without internet access.

Information quality

WhatsApp referred to as “a game-changer for time access to medical information (**both correct and wrong**).”

Other contributors referred to the need for improved online information, including hotlines, automatic response centres, information databases and libraries.

Conclusion

- Range of mobile phones uses, but a focus on the mobile phone as a channel for two-way communication
- Range of challenges tied to mobile phone use, many with equity implications.
- Findings reflect previous research of mobile phone use among health workers.
- What is novel - many examples of the increased use of mobile phone communication due to Covid-19
- Covid-19 may have helped formalise the use of mobile phones

For more information

The mHEALTH-INNOVATE project: <https://www.fhi.no/en/cristin-projects/ongoing/mhealth-innovate/>

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