

Real-time Monitoring of Handwashing Facilities in Myanmar

SUMMARY

The COVID-19 pandemic has forced the restriction of movement and closure of borders in many locations in Myanmar. This coupled with lack of access and mobility to certain areas for security reasons posed challenges to monitor handwashing interventions. In response, UNICEF developed a real time remote monitoring tool for handwashing facility distribution and installation using RapidPro, a free, open source software that allows users to easily build and scale mobile-based applications from anywhere in the world. The RapidPro monitoring tool enabled stakeholders to track progress made in distribution, installation and functionality of handwashing facilities and to further plan future interventions. Though initially deployed as a trial, this tool has the potential to be further developed and scaled up for additional remote monitoring applications in Myanmar and in other contexts.

Context

The COVID-19 pandemic is a stark reminder that one of the most effective ways to stop the spread of a virus is also one of the simplest: hand hygiene. Yet in 2020, an estimated 13.9 million people in Myanmar or 25 per cent of the total population lacked basic handwashing facilities with soap and water at home¹. A disparity between administrative regions and between urban and rural areas exists, with an estimated 70 per cent of the rural population having access to hand washing facilities with soap and water compared to 85 per cent in urban areas² (see figure 1).

Access to handwashing facilities with soap and water in schools in Myanmar was even lower than

households; nationally only 59 per cent of schools had access with 54 per cent in primary schools and 62 per cent in secondary schools in 2018³. Ensuring adequate hand washing services are critical to safe school reopening, allowing children to break one pathway of disease transmission.

Lack of hand hygiene facilities prevents from implementing effective Infection Prevention and Control (IPC) measures in health facilities, where patients and health care workers need to wash their hands and keep the environment clean in the COVID-19 context. Currently, access to hand hygiene facilities with soap and water at points of care is reported to be 91 per cent in Myanmar.⁴

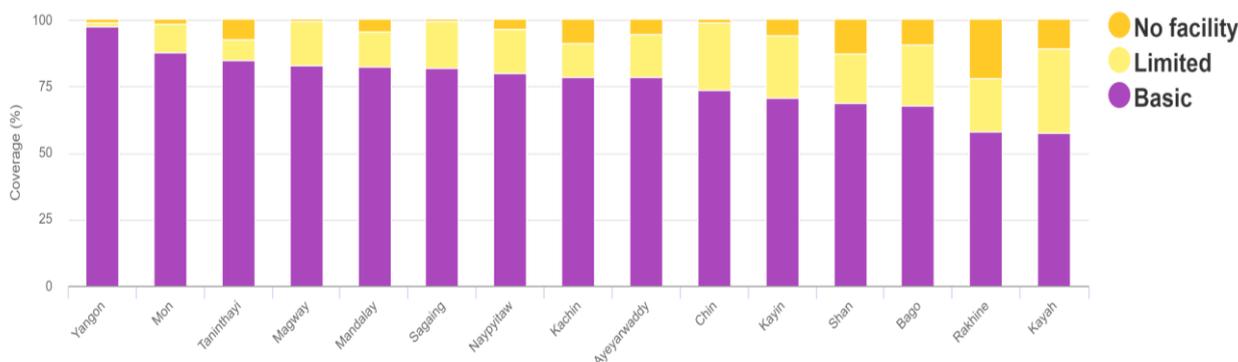
¹ WHO/UNICEF Joint Monitoring Programme data accessed from www.washdata.org

² www.washdata.org

³ <https://washdata.org/data/country/WLD/schools/download>

⁴ www.washdata.org

Figure 1. Hygiene service levels by region in Myanmar, 2020 estimates



Source: WHO/UNICEF Joint Monitoring Programme (2021) accessed at washdata.org

UNICEF has supported the government and other partners to advance handwashing in Myanmar in multiple settings using a variety of programming approaches. These include:

- **Enabling environment:** UNICEF supported the development of National Standards and guidelines on WASH in schools and minimum guideline on WASH in health care facilities.
- **Community engagement and behaviour change communications:** UNICEF includes handwashing promotion and communications in ongoing support to sanitation and hygiene programmes in communities and schools.
- **Delivery of handwashing services:** In schools UNICEF supports the use of the Than Shin Star approach (Three Star Approach to WASH in Schools) which includes capacity building and support to planning, budgeting and implementation, direct service delivery and distribution of supplies. In healthcare facilities, in addition to supporting the development of guidelines, limited support was provided on the installation of handwashing facilities.
- **Support to people in humanitarian situations:** Promotion of handwashing among internally displaced persons (IDPs) and host communities and direct service delivery with

provision of handwashing facilities, distribution of supplies and hygiene promotion.

Response: Improving monitoring

As part of the COVID-19 response to distribute and install handwashing facilities, there was a need to track installation and follow up on functionality of hand washing stations/services? However, due to COVID-19 restrictions and ongoing conflict in some locations, access and mobility were severely hampered.

Figure 2. Children washing their hands for Global Handwashing Day in Southern Shan



Credit: ©Khin Mar Win/UNICEF/2020

To address these problems, a real-time monitoring trial was established and launched in April 2020 by UNICEF in partnership with the Department of Rural Development, who supported data collection from Magway region. UNICEF built the monitoring tool using RapidPro, a free, open source software that allows users to easily build and scale mobile-based applications from anywhere in the world. RapidPro collects data via short message service (SMS) and other communication channels (e.g., voice and social media channels such as Facebook Messenger, Viber, Telegram, WhatsApp) to enable real-time data collection and mass-communication with target end-users, including beneficiaries and frontline workers. The system uses 'chat flow' in RapidPro and links it with Viber to collect information on handwashing station distribution and installation. This real time monitoring trial was established in only ten days after identifying minimum required parameters.

The UNICEF Myanmar WASH team used the real time monitoring tool to report and account for handwashing stations that were distributed and installed in Magway region, Rakhine, Shan and Kayin state of Myanmar. Data is collected after installation of handwashing facilities by Department of Rural Development staff and UNICEF field officers. The data collected, which currently is limited to distribution and installation, can be linked to Power-BI app to allow further analysis for reporting. This allows UNICEF to track overall progress, such as how many handwashing facilities have been installed and how many remain, where they are located (e.g., schools, health care facilities or COVID centres) and how many children or adults are benefitting from them. The information is then analysed. Currently, the monitoring data is used mainly to assess how many school or health care facilities were supported with handwashing facilities across the country.

⁵ Government of Myanmar, *Intercensal Survey*, Department of Population, Ministry of Labour, Immigration and Population, Naypyidaw, 2019.

The RapidPro system can also be used as a two-way communication tool, making it particularly useful for remote monitoring when travel is not possible.

The monitoring tool works in any location where there is a mobile phone with internet connection. This makes it feasible in many locations in Myanmar where about 86 per cent of households owned at least one mobile phone in 2019. At the national level, internet access at home was 56 per cent while for urban and rural areas, access was 75 percent and 49 percent, respectively⁵. The stated coverage of internet connectivity indicates that the monitoring system could be highly scalable. The cost for each user is low as it works across social networks, with notably high use of the messaging app Viber within the Myanmar context. The skills from regional Technology for Development UNICEF colleagues were important to establish the system, showing the potential for quick collaboration between sections to establish digital monitoring systems for emergency uses.

The design of this monitoring system involved the government and UNICEF. While UNICEF took the lead in availing the technical expertise to design the system, the system is relatively low cost with most of the cost tied to volunteers from Department of Rural Development and UNICEF field officers accessing the internet to collect and uploading data.

To broaden the monitoring scope of the real-time monitoring tool beyond distribution and installation of handwashing facilities, questions to track functionality of handwashing facilities have been developed and are under discussion. Additionally, behavioural monitoring is planned to be incorporated in the system to collect core hand hygiene practices. Once completed, the new questions can be piloted in the field. If these parameters are incorporated and tested, the country will have a solid database on access to

handwashing facilities and behaviour change trends that can be used for planning and implementation of hand hygiene programmes in the future. To increase use of the monitoring system, there is a plan to introduce the tools to other interested partners prior to final implementation.

Conclusions and lessons

The real time monitoring tool was an effective way to track distribution and installation of handwashing facilities remotely, enabling UNICEF and its partners to track progress made and plan further actions. Because it made use of existing RapidPro systems, it could be developed and deployed quickly. It is a user-friendly tool running at a low cost.

In the future, it could be modified beyond monitoring hand washing installations to including functionality and other context specific parameters, extending its purpose to other monitoring and programme needs. There is significant potential to develop the same tool for monitoring other types of infrastructure and to improve accountability to affected populations in distribution of emergency supplies. For example, trial tools were developed to provide teachers with checklists and advice on whether schools were COVID-safe as part of a back to school campaign (which was later put on hold).

The monitoring tool was feasible because of the fair level of internet connectivity in the country. Where data charges are a barrier, credit incentives could be used and have been done so successfully in other countries. Though not currently done, where there is no mobile internet coverage it would be possible to extend the system through SMS networks with additional modifications in the future.

The tool faced some technological challenges as well as issues with establishing systems for ongoing use. For example, on the technological

side, the RapidPro platform currently does not support functions such as multiple response options. Most importantly, there is no requirement that the system be used, hence the system was only used at the beginning of the COVID-19 outbreak and scale up has been limited. UNICEF is working to solve technical and logistical challenges to ensure optimum utilization and scaling up of the monitoring system.

The pandemic brought greater attention to handwashing and created momentum for new and expanded handwashing programmes. This real time monitoring tool developed for Myanmar could be localized and deployed in other contexts. To shorten the time required for development, the existing tool could be setup as a template with guidance on how to adapt to country context.

Next steps

In 2020, UNICEF contracted British Broadcasting Corporation (BBC) Media Action to create a child-focused multimedia campaign to promote handwashing as a lifetime habit, and to promote and increase interest in adaption of better hygiene and sanitation practices. The campaign is based on an audience-centred approach, creating a series of creative media outputs distributed across radio, television and digital platforms. The campaign is one of the first steps towards supporting the development of a national road map on hand hygiene. Other components for the road map for hand hygiene will be to mobilize political leadership, develop a costed plan, mobilize financing and supply hand hygiene products and services and strengthen institutional arrangements.

In 2021, UNICEF WASH is continuing to use multiple implementation modalities to mitigate humanitarian access challenges due to both COVID-19 and conflict. Increasing focus is needed to support local organization capacity building and engagement with local contractors and communities to enable them to participate in

WASH response more effectively through technology like RapidPro.

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References

WHO/UNICEF Joint Monitoring Programme data accessed from www.washdata.org [last accessed 15.03.2021]

Government of Myanmar, *Intercensal Survey*, Department of Population, Ministry of Labour, Immigration and Population, Naypyidaw, 2019.

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Notes and Acknowledgements

Note that this knowledge product report covers the period prior to January 2021. All references to government contained herein refer to government counterparts with which UNICEF was engaged prior to the February 2021 military takeover. Following the military takeover, UNICEF has not been engaging at a senior level with counterparts in the military authorities and is exploring alternative modes of programme delivery.

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