

Implementing mass campaigns during a pandemic:

What we learnt from supporting
seasonal malaria chemoprevention
during COVID-19

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Key learnings

In 2020, the COVID-19 pandemic presented novel challenges to implementing community-based malaria control interventions. During this time, Malaria Consortium supported seasonal malaria chemoprevention (SMC) in Burkina Faso, Chad, Nigeria, Togo and Mozambique, reaching more than 12 million children 3–59 months. The pandemic posed a significant risk of transmission to SMC implementers. To minimise the risk of infection and maintain essential malaria services, 2020 SMC campaigns were implemented using strict infection prevention and control (IPC) measures based on Malaria Consortium and national IPC guidelines. Key learnings from implementing this life-saving intervention during a pandemic include the following:

1

Sound IPC measures are central to the safe implementation of SMC. They need to be based on scientific evidence, as well as national and international guidelines and IPC protocols.

2

Minimising risk for everyone involved in SMC requires adaptations to all SMC activities, especially planning, procurement, community engagement, training, SPAQ administration and supervision.

3

SMC implementers require COVID-19-related commodities, such as face masks, hand sanitiser and disinfectant, which are necessary for adherence to the IPC guidelines.

4

Early agreement on IPC guidelines for SMC, quality standards of COVID-19-related commodities and usage protocols helps inform SMC planning and procurement.

5

Strong commitment to enforcing IPC guidelines from national malaria programmes, along with an inclusive approach involving government and implementing partners, is crucial.

6

Low risk perception and exposure to misinformation among SMC stakeholders, implementers and communities pose a challenge. It is essential to clearly and consistently provide the rationale for IPC guidelines and promote adherence. Different target audiences will require different communication and engagement strategies.

7

IPC measures are most effective when explained clearly to SMC implementers, practised during training sessions and reinforced through supervision.

8

SMC can be a useful community platform to share public health information among target populations. Community distributors should be trained on communicating basic information on COVID-19 prevention and transmission to communities.



Caregiver administers SMC medication to child, Mozambique

Introduction

Significant progress in reducing the global burden of malaria has been made since the start of the millennium. The unprecedented expansion of malaria interventions in the twenty-first century has led to a considerable impact on malaria incidence and mortality. By the end of 2019, an estimated 1.5 billion malaria cases and 7.6 million deaths had been averted in this 20-year period.^[1] However, progress has levelled off, making it essential to ensure that proven malaria prevention and control strategies reach all who can benefit from these interventions.

In Africa, malaria persists as a leading cause of morbidity and mortality in young children, with an estimated 275,000 children under five having died from malaria in 2019.^[1] In 2020, the SARS-CoV-2 novel coronavirus (COVID-19) pandemic emerged as an additional challenge, and there were fears that the disruption to malaria services could result in a substantial increase in malaria deaths.^[2]

In the Sahel region, most childhood malaria infections and deaths occur during the rainy season, which generally lasts between three and five months. In 2012, the World Health Organisation (WHO) recommended SMC, the administration of a monthly course of sulfadoxine-pyrimethamine (SP) plus amodiaquine (AQ), or 'SPAQ', to children 3–59 months during the peak malaria transmission season, as an impactful approach to malaria prevention. SMC is mainly delivered door-to-door by trained community distributors. A full course of SPAQ is given over three consecutive days. On the day of the community distributor's visit to a household, one tablet of SP and one tablet of AQ, dispersed in water, are administered under the supervision of a community distributor. This is called directly observed treatment (DOT). Community distributors give the remaining two doses of AQ to the caregiver to disperse and administer daily over the next two days. Each full course of SPAQ confers a high degree of protection from malaria infection for approximately 28 days.

The distribution of these effective antimalarials at monthly intervals during the rainy season in the Sahel region has been shown to be 75 percent protective against uncomplicated and severe malaria in children under five.^[3] Case-control studies from five countries have shown that SMC was associated with a protective effectiveness against clinical malaria of 88 percent and a reduction in the number of malaria deaths in hospital.^[4] SMC has the potential to avert millions of cases and thousands of deaths among children living in areas of highly seasonal malaria transmission.^[5] It has also been found to be a cost-effective intervention that significantly reduces malaria diagnostic and treatment costs.^[6] SMC has been successfully scaled up, reaching over 21 million children in 13 countries in 2019.^[1]

Our seasonal malaria chemoprevention programme

Malaria Consortium is a leading implementer of SMC. Along with other partners, we have demonstrated how SMC can be delivered safely and effectively at scale and easily adapted to diverse settings: multi-country evaluations of the Achieving Catalytic Expansion of SMC in the Sahel (ACCESS-SMC) project, which was led by Malaria Consortium, showed that SMC at scale was effective in preventing morbidity and mortality from malaria, with few serious adverse reactions reported.^[4]

SMC campaigns are implemented under the leadership of national malaria programmes and through countries' existing health system structures. Malaria Consortium provides technical and logistical support to ensure high coverage and quality of SMC implementation. We also conduct research and engage with the

international SMC community to build the evidence base for SMC, and contribute to SMC policy and practice. Our support spans all the components that together make up SMC (Figure 1).

In 2020, our SMC programme reached over 12 million children through the efforts of over 100,000 individuals.^[7] While we have supported SMC in Burkina Faso, Chad and Nigeria for a number of years, 2020 saw the expansion of our support to Togo and Mozambique.^[8] For a more detailed description of Malaria Consortium's SMC programme — which is supported mostly by philanthropic, as well as other, funding sources — refer to our 2020 philanthropy report.^[9]



Figure 1: As a community-based public health intervention, SMC comprises several key components.

COVID-19 and seasonal malaria chemoprevention

The WHO declared the SARS-CoV-2 novel coronavirus outbreak a global pandemic on 11th March 2020.^[10] The first case of COVID-19 on the African continent was confirmed in Egypt on 14th February 2020^[11] — within three months, it had spread throughout Africa, where most countries were experiencing community transmission.^[12] The pandemic presented a host of new challenges for the safe implementation of SMC campaigns, which were due to begin in July in most of the countries where we support SMC. Given that SMC is a time-bound, seasonal intervention, there was urgency for decision-making to limit the risk of transmission of COVID-19 during SMC delivery. In line with WHO recommendations,^[13] we advocated for SMC to be recognised as an essential health service and asserted that its discontinuation would risk a substantial increase in malaria cases

and deaths among children under five — which would put additional strain on health systems already under pressure because of the need to address COVID-19.^[14] We led the development of global operational guidance on adapting SMC to minimise risk, which was published by the Roll Back Malaria (RBM) Partnership to End Malaria.^[15] We also developed enhanced safety protocols for SPAQ administration that would apply to areas where we supported SMC implementation in 2020.^[16] Our internal guidance was based on the following principles of IPC:

- limiting in-person contact
- physical distancing of at least two metres
- use of face masks and respiratory hygiene
- regular hand hygiene

- disinfection of surfaces and frequently touched items
- assessment of temperature and symptoms
- preventing implementers with symptoms of COVID-19 from participating in the campaign.

We subsequently discussed this internal guidance with government and implementing partners to determine how it could be applied appropriately at a country level, for example by including IPC measures in training materials and including COVID-19 messages in communications plans. Our aim was to ensure that SMC could continue to be effective at preventing malaria while simultaneously protecting communities, community distributors and other implementers, staff and stakeholders.

Methods

Supporting the implementation of SMC during the COVID-19 pandemic and applying strict IPC guidelines resulted in invaluable insight that can inform not only the implementation of SMC going forward, but also that of community-based mass campaigns during a pandemic more generally. To consolidate and synthesise the lessons we learnt in 2020, Malaria Consortium conducted the following activities after the end of the annual SMC rounds in December 2020 and January 2021:

- a review of 21 SMC and COVID-19-related internal and external documents, including safety and IPC protocols, training tools and job aids
- semi-structured conversations with Malaria Consortium staff and malaria programme

partners to provide feedback on their experience of implementing SMC during COVID-19 (42 people in total)

- a validation exercise to substantiate the findings with key Malaria Consortium staff.

For the purpose of this exercise, we defined a lesson as any insight gained during implementation of an intervention that can be usefully applied to future or other interventions, including reflections on what went better than expected and what did not work well. All participants were informed about the purpose of the exercise and consented to their feedback being used anonymously in written outputs, including this learning paper. As the information requested related directly to respondents' professional role in SMC implementation, ethical

approval for this exercise from an independent review board was not obtained.

Feedback from the participants focused on planning, procurement and supply management, community engagement, training, SPAQ administration and supervision. We have organised our lessons learnt under those themes.

Malaria Consortium also conducted mixed-methods research on IPC compliance among community distributors during SMC in 2020, including structured observations.^[17] The preliminary results suggest mixed adherence to the COVID-19 measures. Results will be published in mid-2021 and are not included in this learning paper.



SMC launch event, Mozambique

Our learnings

Planning

Planning usually begins several months before the start of the first SMC cycle. This involves determining where and when exactly SMC will be implemented, enumerating the target population of children 3–59 months and recruiting community distributors and supervisors.

In view of the risks that the pandemic posed, we put in place measures to prevent the transmission of COVID-19 among Malaria Consortium staff, partners and implementers. Measures included office closures, remote working and restrictions on national and international travel, as well as asking staff to voluntarily and confidentially report personal health risk levels using pre-defined risk categories that informed mitigation measures at work. This meant that most in-person meetings and communication about SMC planning shifted to online platforms, email, telephone calls and electronic sharing of documents, with any planned international travel cancelled.

As planning for the 2020 SMC campaign in most of the implementing countries was already underway when the pandemic began, we had to quickly determine appropriate COVID-19 IPC measures and adapt the SMC activities to minimise risk for everyone involved. Decision-making on what constituted safe IPC measures was fraught with uncertainty, due to limited evidence on the severity of COVID-19 and the degree of

transmission in sub-Saharan Africa at the time. Therefore, we aligned our internal IPC guidance with global standards and based these on the best available evidence at the time. Concurrently, we discussed our IPC guidance with government and implementing partners to ensure they were reflected in national SMC guidelines. In Nigeria, meetings were held at both the national and state level with recently appointed COVID-19 state task forces to micro-plan the approach to implementing SMC while ensuring adherence to Malaria Consortium IPC guidance, and to determine how to tailor this to the context of each state.

“As for the] development of the guidance plan, we looked at it at the NMEP [National Malaria Elimination Programme] level, with other partners, and integrated all of these measures as part of the Nigerian CDC [Centre for Disease Control]. Also at the state [level], at the beginning of pandemic, there were massive mobilisation efforts at all levels.”

(Ministry of Health staff)

In some instances, there was tension between national COVID-19 guidance and our internal IPC guidelines, which were sometimes perceived as too cautious. On this point, many respondents felt that it was key to discuss the IPC measures with country stakeholders to promote inclusivity of views, agreement and ownership, all while prioritising SMC implementers' safety.

“Developing the guidance happened in a short period of time. It was not lateral, nor straightforward. It was, rather, a web of activities in which every relevant person carried along...even though there was fear and a diversity of views, the guidance found a common ground. A lesson was that the incorporation of stakeholders into implementation was key; they were invited to observe and then provided their technical advice on how to improve.”

(Malaria Consortium staff).

Due to the addition of COVID-19 IPC measures that were necessary for implementing SMC safely during the pandemic, SMC budgets had to be adjusted. This increased the cost of SMC implementation, despite savings gained from cancelled travel and some in-person training. The latter still took place as much as possible; however, in order to adhere to the COVID-19 guidance on the maximum number of people allowed to gather in one location, the number of trainings required increased, which augmented the cost. The cost of SMC also increased due to the additional human resources needed to respond to the pandemic. Another significant cost factor was the need to procure COVID-19-related commodities (often referred to by respondents as 'PPE' — personal protective equipment). One respondent was of the opinion that urgency around the need for COVID-19-related commodities during global shortages meant that suppliers increased their prices due to the surge in rapid demand. The cost of procuring COVID-19-related commodities for SMC, including freight, constituted around seven percent of the annual SMC budget in 2020.

“Adding the COVID measures cost a lot. The amount of resources needed to implement SMC increased, things like PPE came at an extra cost. All of the materials, manuals had to be updated, printed, which incurred additional expense. More human resources were needed. An assessment was conducted to identify [staff at high risk], which ended up being around 20 percent of our [Malaria Consortium] staff so more people had to be recruited to cover their absence. Exposed cases also had to be isolated and withdrawn from fieldwork for two weeks and replacements found; sacrifices had to be made.”

(Malaria Consortium staff)

“There was a negative impact on the budget, and more costs like procuring PPE and supporting routine implementation with hand sanitiser, face masks. Less people in a [training] class means having to pay more technical allowance training days to the consultant.”

(Malaria Consortium staff)

Some respondents commented that workload and time pressure during the planning stage were so high that there was insufficient time to put in place a system for monitoring the potential impact of SMC campaigns on COVID-19 transmission, or to think about how routine monitoring and evaluation (M&E) and research would need to be adapted.

LESSONS

Sound IPC measures are central to the safe implementation of SMC and need to be based on scientific evidence as well as national and international guidelines and IPC protocols. If in doubt, err on the side of caution.

Control of a pandemic requires collaboration between stakeholders at all levels. Task forces need to be established to discuss IPC guidelines and mitigating measures. To ensure buy-in among stakeholders, this process should be inclusive, involving government and implementing partners. Strong commitment to enforcing IPC guidelines from national malaria programmes is crucial.

Minimising risk for everyone involved in SMC requires adaptations to all SMC activities, especially planning, procurement, community engagement, training, SPAQ administration and supervision. IPC guidelines need to be reflected in and applied to SMC protocols, tools and materials.

IPC guidelines and SMC protocols need to be agreed as early as possible, so they can inform SMC planning and procurement.

Where possible, adherence to IPC measures, benefits, barriers and the impact of COVID-19 on quality and effectiveness of SMC should be evaluated through research and M&E — including routine household surveys — recognising that these activities themselves need to be conducted in a COVID-19-safe manner.

A system should be in place to monitor if SMC delivery has any effects on community transmission of COVID-19. This is likely to involve monitoring both official COVID-19 data and anecdotal reports.

Safe implementation of SMC during a pandemic comes at a cost. Commitment for increased funding needs to be secured from donors and stakeholders early during the planning and procurement phase of the campaign.

Procurement and supply management

Malaria Consortium directly sources and delivers SPAQ from a quality-assured manufacturer to central medical stores in the countries where we implement SMC. From there, we support national health supply chains to distribute the SPAQ and other SMC commodities to regional, district, health facility and community levels.

For the SMC campaigns in 2020, we not only had to obtain COVID-19-related commodities to prevent the spread of the virus, but we also needed to rapidly specify, quantify, quality check, procure and distribute these items, which included face masks, hand sanitiser and disinfectant. Moreover, we had to do so at short notice and in the face of rising global demand, shortages, a flooding of the markets with poor quality supplies and broader supply chain interruptions. Malaria Consortium staff explained the importance of linking the procurement of these items with national procurement and mobilisation efforts, while also balancing the prioritisation and supply chain management of other essential items. Another lesson was to define and clearly articulate the standards for each commodity with partners — for instance, the type of face mask, e.g. reusable cloth versus disposable medical, and the type and percentage of alcohol in hand sanitiser — and check the quality provided by the supplier against agreed specifications for large volumes over dozens of locations across multiple countries.

We also had to decide and agree on the quantification of COVID-19-related commodities for SMC activities, which required close collaboration between programme and operations colleagues, as these decisions had significant implementation and cost implications. For example, how often hands should be sanitised, which would inform how much hand sanitiser would be needed per community distributor per day, or how often face masks

should be changed. Figure 2 shows the COVID-19 related commodities Malaria Consortium procured and how they were used.

We sourced COVID-19-related commodities locally wherever quality and price allowed, to reduce item and transportation costs, as well as transit delays, especially as some shipments were subjected to quarantine periods. However, in some cases, sourcing internationally could facilitate better quality and prices.

“We also had to worry about quality — there were some dodgy suppliers out there. The majority of items were locally sourced but we did buy some things internationally. We procured things nationally and locally. For example, for items needed in Chad, we ordered from Burkina Faso and ordered them to be sent to Chad, telling the supplier that we would only pay once the shipment actually arrived in Chad.”
(Malaria Consortium staff)

Previous relationships with suppliers proved to be beneficial at a time when many consumers were competing for the same commodities. For example, the same supplier of SPAQ medicines in China also produced face masks, which helped with timely procurement of those items.

Medical face masks

To be worn during training and SPAQ administration by SMC implementers

1,700,773

Soap

For hand washing at training venues and health facilities

69,878 bars

Buckets with tap and basin

For hand washing at venues and health facilities without access to running water

2,652

Hand sanitiser

For disinfecting, hands during SPAQ administration

91,492 litres

Bleach

For making bleach solutions to clean hard surfaces at training venues and health facilities, and to clean SMC tools during SPAQ administration

31,824 litres

Rubber gloves

To be worn while cleaning with bleach

59,863

Spray bottles

For applying bleach solution to hard surfaces and SMC tools

58,550

Paper towels

For wiping down hard surfaces and SMC tools where bleach solution was used

2,399,316

Disposable cups and spoons

For SPAQ administration, where caregivers could not provide clean cups

617,457

Digital thermometers

To take SMC implementers' temperature at the beginning of each day

3,082

Waste disposal bags

To collect discarded face masks and used paper towels during SPAQ administration

250,410

LESSONS

SMC implementers should be given COVID-19-related commodities, such as face masks, hand sanitiser and disinfectant, which are necessary for them to adhere to the IPC guidelines.

Early definition of specifications and quantification of COVID-19-related commodities is important to ensure the right quality and quantities are sourced and made available on time. This includes agreeing to quality standards and usage protocols between stakeholders prior to procurement.

Low-quality or poorly specified fabric facemasks and hand-cleaning products can significantly increase the risk of transmission of COVID-19 during the SMC campaign.



Figure 2: Essential commodities we procured with philanthropic funding in 2020 to help prevent COVID-19 transmission

Community engagement

To ensure that communities understand the rationale for SMC and support its implementation, we typically conduct sensitisation meetings with local leaders and community members, broadcast radio spots and enlist town announcers to disseminate information during the campaign.

In the context of the pandemic, many of these activities had to be cancelled or adapted; for example, instead of a larger meeting held at the provincial level, several smaller meetings were held at the district level to reduce participant numbers. SMC implementers and community distributors wore face masks and practised IPC measures such as physical distancing, using hand sanitiser and disinfecting items. These were not perceived as fitting in with local customs in some locations, where shaking hands and close personal greetings indicate familiarity and goodwill; such actions help not only to build trust within the community, but also to promote acceptability of SMC.

“The community distributors find it very difficult to keep social distancing. Everybody in the community knows them and if they don't greet people [with handshakes], culturally it is seen as rude.”

(Malaria Consortium staff)

At the community level, particularly in rural areas and villages, respondents commented that the general public, and even community distributors, may not believe COVID-19 exists or may be sceptical about the disease's severity. Several respondents noted that in urban areas or capital cities, the public may be better informed about COVID-19 and more aware of the risks. Respondents suggested a range of reasons for low risk perception, including: that reported COVID-19 cases in the implementing countries were relatively low, community members may not know anyone personally who had fallen ill with

COVID-19, and the symptoms are similar to other 'familiar' diseases like the flu or common cold. A few respondents also referred to community perceptions that COVID-19 only affects people living in cities or rich people. One respondent noted that some people believe that heat, being African and one's religion are all protective against the virus.

“In villages, people do not believe that the disease exists because they don't know anyone with the disease among the people they know. The educated people believe in the disease but it's a minority. It's a new disease so it's hard to manage. At the beginning, there was a stigma around the disease; people thought it was like Ebola. Now people are reassured. People do not follow the measures. They still greet each other with handshakes. In the general population, the fear of the disease is gone and people have the same life as before.”

(Malaria Consortium staff)

In Mozambique, where SMC had not been implemented before, there were concerns about how the COVID-19 IPC measures would affect community uptake and acceptability. However, according to Malaria Consortium staff in country, during SMC implementation, acceptance and coverage were perceived as high. Several respondents suggested this was because adhering to and accepting COVID-19 IPC measures had been normalised over time, prior to the implementation of SMC in Mozambique. Implementation in the country began concurrently with the rainy season, in November 2020, whereas campaigns in other countries mostly began in July 2020.

“Where SMC had not been implemented before [Mozambique], we were worried about coverage and acceptability. There was also the issue of the acceptability of the COVID guidelines by caregivers — what would they think about handwashing and masks? Would that affect their acceptability of SMC in the community?”

(Malaria Consortium staff)

Examples from a few countries highlighted the importance of consistent messaging and awareness-raising activities on COVID-19 prevention measures to counter low risk perception and to promote acceptability and compliance, drawing on lessons from the Ebola outbreak.

“Evidence informed the guidance, and examples from the past were drawn upon; for example, the measures followed during the Ebola outbreak with the messaging being similar 'stop people from dying', push that message. The guidance was evidence based and open to everyone. This has to be translated into different languages and very specific, reiterated at the end of each cycle. It was important to disseminate COVID-19 health messaging at all levels.”

(Malaria Consortium staff)



A caregiver in a Fulani settlement in Sokoto state, Nigeria, administers SPAQ to her child under the supervision of community distributors. This is known as DOT.

Several respondents from Nigeria described how SMC implementation facilitated opportunities to enhance national COVID-19-prevention efforts, such as mass media campaigns and spreading messages at the household level.

“Because of SMC and the COVID measures, all workers were trained on COVID and they raised awareness about COVID-19 in every household; the SMC implementation complemented COVID awareness and prevention. [Malaria Consortium] provided face masks and hand wash; this complemented state and country efforts. Other services adhere to handwashing and immunisation — now the health workers have face masks.”

(Malaria Consortium staff)

Related to this observation, in Nigeria, a study on COVID-19 knowledge, beliefs, prevention behaviours and misinformation found that receiving information from community distributors during the campaign was significantly associated with a higher likelihood of caregiver knowledge of COVID-19 prevention behaviours. This demonstrates the important role SMC can play in sharing information about COVID-19 among communities.^[18]

Despite initial concerns about negative community perceptions of SMC, demand and uptake for SPAQ were reported as high across the implementation countries — as were community distributors' use of face masks and their adherence to IPC guidance during the pandemic. Nevertheless, several staff commented on the necessity of establishing a response plan to address negative rumours. Most respondents considered community awareness raising and engagement on SMC and COVID-19 even more important in the pandemic context to promote continued acceptance and support.

LESSONS

Low risk perception and exposure to misinformation among SMC stakeholders, implementers and communities pose a challenge. It is essential to clearly and consistently provide the rationale for IPC measures, promote adherence and explain adaptations to how the intervention is delivered. Different target audiences will require different communication and engagement strategies.

Community engagement is a crucial component of SMC, but even more so during a pandemic. Messaging around the prevention of COVID-19 needs to be aligned with national social and behaviour change communication strategies.

Cultural and contextual issues need to be considered, without compromising the scientific soundness of the IPC guidelines.

SMC can be a useful community platform to share public health information among target populations. Community distributors should be trained on communicating basic COVID-19 prevention and transmission information to communities.

A rumour management strategy would help to mitigate the effect of negative rumours about SMC.

Training

Prior to the start of the first SMC cycle, all trainers, health facility workers, community distributors and supervisors attend training on SMC. Typically, this starts at the national level with a training-of-trainers; training is then cascaded down the health system levels.

This component of the intervention required significant adaptations to provide training in an IPC-compliant way. In many locations, due to travel restrictions, the training-of-trainers shifted from the trainer being physically present to virtual facilitation. This new mode of working and learning posed several challenges, particularly the need for all participants, including the trainer, to learn an entirely new platform (such as Microsoft Teams or Zoom). Other issues included internet connectivity, poor bandwidth and background noise issues, which were perceived as disruptive; language barriers, especially in Mozambique where training was being delivered for the first time; and the absence of certain participatory adult training techniques, for example, in-person demonstrations, role plays and trainer observation of trainees completing tasks. Because of limited access to internet and IT equipment and support, trainings at the lower health system levels remained in-person. However, strict IPC measures were applied; for example, limiting participant numbers per training. Moreover, job aids and training tools needed to be adapted to comply with COVID-19 IPC guidance, and to be user-friendly in different languages and contexts.

“We didn’t know we could implement not in-person meetings, trainings, but we can. Short videos of each training module are helpful. It is best to send information to WhatsApp as a way of refreshing; videos are a good way to refresh knowledge. Virtual meetings are too long, and people leave sometimes. It is important still for high-level meetings to be face-to-face.”

(Malaria Consortium staff)



LESSONS

While feasible at the national and state level, remote trainings are not practical at lower levels of the health system. In-person training will continue to be required, but suitable IPC measures need to be applied.

It is important to train SMC implementers on IPC measures and any required adaptations to the SMC protocol. This should include practical demonstrations and opportunities for SMC implementers to practise.

It is also important to clearly communicate and explain the rationale behind the IPC measures and adaptations to the SMC protocol during SMC training.

SPAQ administration

Community distributors go door-to-door to deliver SPAQ. Each monthly course of SPAQ involves one single dose of SP and three daily doses of AQ. Caregivers administer the first dose of SP and AQ under the supervision of the community distributor, and give the remaining two doses of AQ over the following two days. If a child is very sick, or has an allergy or a fever, the child is referred to the health facility to be evaluated.

Due to the COVID-19 pandemic, the SPAQ administration procedure was adapted to comply with the IPC guidance, while maintaining DOT. Rather than community distributors preparing the first dose of SPAQ and giving it to the child, they were asked to place the medication blister packs on a table or mat and instruct the caregiver to prepare and administer the medications. Community distributors stood two metres away and wore masks.

Respondents' perceptions varied on whether caregiver drug administration facilitated or hindered a child accepting the medications. Some felt that because caregivers know their children better than community distributors do, children would be more likely to accept the medicines from a caregiver. They, therefore, felt this should be a permanent change to the way that SPAQ is administered in SMC campaigns, beyond the context of the pandemic. Other respondents believed that because community distributors are more experienced at preparing and administering the medication, the change to caregiver administration of SPAQ on day one might hinder uptake.

A few respondents expressed concerns that, to minimise contact, community distributors may deliver SPAQ blister packs to caregivers without directly observing the drug administration, and give little information about SMC and COVID-19 to caregivers. Also, it may not be practical for community distributors to adhere to physical

LESSONS

distancing guidelines at all times. This contrasted with a comment from a national malaria programme staff member who thought that quality was not affected by the change.

“SMC is a well-accepted intervention; I don’t think the measures have had an effect on quality. Caregivers are used to giving medicine to their children so what community distributors observed — they give them instructions and monitor. No quality issues.”

(Ministry of Health staff)

For SMC community distributors, physical distancing and disinfecting items presented cultural challenges that hindered adherence to IPC guidelines during SPAQ distribution.

“Using disinfectant on surfaces is very odd in the community where people don’t even own furniture and place items on the floor. Often, the disinfectant stayed in storage at the health facilities, where staff did use it.”

(Malaria Consortium staff)

A few respondents mentioned the importance of context in deciding which COVID-19-related commodities would be most appropriate to provide. For instance, hand sanitiser is more appreciated in locations where water is scarce, and it would be difficult to utilise bars of soap and buckets for hand hygiene.

Several factors reportedly facilitated compliance, including: the protection of self and communities; frequent reminders; support and supervision; provision of requisite COVID-19-related commodities, which was perceived to create a compliance-friendly environment; knowledge and understanding of SARS-CoV-2 transmission and the COVID-19 disease; and the general embeddedness of national COVID-19 measures prior to the start of the SMC campaign.

While COVID-19 IPC measures did not affect SMC coverage, the impact on quality of SMC implementation needs more consideration; for example, with regard to observing DOT. Research could help in obtaining a better understanding of how IPC measures may affect quality of SMC implementation and how operational challenges could be addressed. This needs to take into account the perspectives of SMC implementers and the need to be mindful of cultural and contextual barriers.

No single IPC measure will provide full protection from transmission of airborne infections. Full adherence to all IPC measures by all SMC implementers is not always practical and cannot be assumed. Consequently, effective protection requires a mix of complementary IPC measures, including physical distancing, hand hygiene and wearing of face masks.

The unanimous perception among respondents was that SMC coverage had not been affected by complying with the IPC guidance. Administrative coverage data as well as household surveys conducted in 2020 showed generally high coverage and no substantial difference compared with previous years.^[9] To date, there is no indication that SMC implementation may have contributed to the transmission of SARS-CoV-2 in the implementation settings.



A community distributor maintains a two-metre distance from a caregiver and child during SPAQ administration in the 2020 SMC campaign in Nigeria.

Compliance in Nigeria: Variation across states

“For the first cycle in July, panic [about COVID-19 transmission] was high. The community distributors and ad hoc staff were happy to have support and comply. They were all provided with masks and hand sanitiser and happy to practise the guidance. There was also strict supervision. They don’t see themselves as being forced to comply; they see it as a safety measure and comply 100 percent. In Kano, there is the best adherence, it is not difficult. This was the epicentre, so awareness was everywhere. The community distributors are aware of the harm and risk. They saw masks as a way to protect themselves. At the state level, there was training on COVID-19 and mask use became a norm. In Yobe, this was the second best for compliance, and it was more difficult. The face masks were cloth and reusable, not surgical.

They were not as comfortable and made it hard to breathe, especially in the hot weather. The donor only approved cloth so they couldn’t afford the medical masks. In Katsina, we had to reinforce compliance. Here, there is an extra level of supervisor as the state funds additional supervisors. The LGAs [local government areas] and communities enforce the use of face masks. This is also included now in the processing checklist for supervisors, and there is a feedback loop for compliance.

Engagement included targeted advocacy as COVID-19 measures may impact acceptability. Traditional rulers were engaged, and the radio house broadcast messages. People demand SPAQ coverage.”

(Malaria Consortium staff)

Supervision

During SPAQ distribution, trained facility-based health workers and supervisors oversee the work of community distributors. Both community distributors and supervisors collect administrative monitoring data and SPAQ accountability data.

Given that IPC guidelines applied to both supervisors and community distributors, field supervision continued despite the pandemic. However, travel restrictions and the physical distancing guidelines led to some changes in the presence and frequency of in-person supervision. In Nigeria, a benefit to changes in supervision was that the supervisors of supervisors were required to complete electronic forms — which had a date and time stamp — to minimise contact with paper-based items. This may have encouraged their physical presence in the field. A separate adaptation that provided supportive supervision involved sending SMS messages to community distributors to enhance adherence to COVID-19 IPC measures.

“SMC is designed to be implemented by community volunteers who are not educated, and the design is to support them by a more closely oriented supervisor. However, due to COVID, we had to minimise supervision and there was less physical supervision. However, at the same time, for the supervisors of the supervisors, who now had to fill out electronic forms on a device, as opposed to the pre-COVID paper-based manual forms that digitally recorded a time and location stamp, perhaps this pushed them more to the field than in previous times because their actions were being recorded, so a positive effect.”

(Malaria Consortium staff)

Another respondent reflected that the COVID-19 pandemic expedited a shift from paper-based to digital systems, which had a beneficial knock-on effect for reporting in Nigeria.

“We now avoid pieces of paper and there has been a faster shift towards digitalisation. Which was happening already, but COVID-19 has sped up this process.”

(Malaria Consortium staff)

LESSONS

Supervision is an integral part of delivering high-quality SMC campaigns. Despite the pandemic, field presence of supervisors is required, but strict IPC guidelines have to be applied.

Supervision is also an important mechanism for reinforcing adherence to IPC measures among community distributors. Supervisors need to understand the rationale and practicalities and they need to be present in the field to provide constructive feedback to community distributors.

The pandemic has underlined the need to increase the use of digital tools to strengthen SMC delivery.



A blister pack containing SPAQ medication. A full course of SPAQ confers a high degree of protection from malaria infection for approximately 28 days.

Seasonal malaria chemoprevention in 2021

This learning exercise served to document how a multi-country community-based intervention at scale was adapted during a global pandemic, as well as what worked well and what could be improved, for organisational learning and dissemination among the wider SMC, malaria and global health community.

There are positive signs and the global community is making significant strides in the fight against COVID-19; however, viral transmission, morbidity and mortality of the disease remain threats globally in 2021. We are determined to continue our work with national malaria control and elimination programmes and implementing partners to deliver the campaign safely, drawing on our technical expertise and experience, and our lessons learnt in 2020, while

taking into account emerging evidence. Malaria Consortium and its partners are well prepared for this and we plan to expand the SMC programme in 2021 to reach 16 million children under the age of five in Burkina Faso, Chad, Nigeria, Togo, Mozambique and — starting in 2021 — Uganda.

We welcome the opportunity to work with our partners to shape and improve the SMC campaign, disseminate learning across the public health community, and ensure that the campaign is implemented safely with the full support of the global SMC community. We believe that it is more important than ever to build on the learnings and successes of 2020 to make the 2021 SMC campaign the most extensive and beneficial to date.



Community distributors in Mozambique, where the SMC campaign was implemented for the first time in 2020.

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