SMC Alliance annual meeting 2024

Summary of lessons learnt

SMC Alliance

Contents

Session I:
General Updates on SMC

- The main objective of administering SMC is to reduce the burden of malaria, not to reduce malaria transmission.
- Updated malaria guidelines include more flexibility for countries to tailor chemoprevention interventions based on the situation in their country to gain maximum impact, to gain the maximum impact and to use the WHO SMC field guide to guide their decisions.
- SPAQ remains the only medicine recommended for implementing SMC.
- The Global Fund supports malaria chemoprevention interventions including intermittent preventive treatment for malaria in pregnancy (IPTp), mass drug administration (MDA), intermittent preventive treatment for malaria in school children (IPTSc), perennial malaria chemoprevention (PMC) among others.
- The introduction of integrated interventions, including the vaccine, will be supported.

Session II:
Countries Presentations: Challenges and lessons learnt – Initial Implementation Experience

- More resources (human, financial and other) are needed to implement all cycles of SMC, manage adverse drug reactions, and document the results of campaigns.
- All segments of the community must be involved in SMC implementation.
- Adding more days for implementation, recruiting more community health workers, and increasing resources would help increase coverage.
- A caregiver led approach, right from administering the first dose of SPAQ, must be adopted to increase sustainability.
- Peer-led capacity building will help increase knowledge among volunteers and community health workers.
- Refresher trainings, focused on determining the eligibility of the child, would help avoid administering SMC to children of the wrong age group and causing stock-outs.
- The inclusion of community health workers in the referral circuit for sick and/or febrile children has contributed to the successful follow-up of children.
- When financial resources are constrained, the number of days, supervisors and delivery of stocks must be optimized. This may however come with a compromise in coverage levels.
- SP resistance must also be monitored to alert in case of an emergency, as resistance is increasing.

Session III:

Country Presentations: Challenges and lessons learnt – Integration with other public health interventions

- The integration of malnutrition screening has served as an opportunity to save many malnourished children during the lean period when food is scarce.
- Training healthcare workers on pharmacovigilance is needed. In addition, incentivizing workers living in high risk security areas is important to improve coverage and adherence.
- Local/national resource mobilization to finance SMC and extend it to other districts is important.
- In the event where malaria screening for children showing symptoms of malaria is incorporated into SMC campaigns, coverage levels can be adversely impacted if a large number of children are infected with malaria.
- Implementing SMC in routine mode could be an approach to reduce costs in comparison with implementation in campaign mode. Routine implementation however requires the presence of a well-established community system with adequate coverage of community health volunteers.
- Coverage results can be improved if community volunteers are better known and accepted by their community.

Session IV:

Countries Presentations: Challenges and lessons learnt – Hard to Reach Populations

- Involving community leaders for advocacy means that parents and caregivers can be more easily reached.
- Close monitoring of drug distribution teams enabled the majority of children to be reached within the timeframe set by the programme.
- Involvement of telecommunications networks and community radio stations can help in raising awareness.
- Adding additional distribution points such as a marketplace can help reach caregivers who are not at home during door-to-door campaigns.
- For areas experiencing security challenges, supervisors need to be regularly trained to ensure that they are aware of risks and responsibilities to adopt.
- To avert security risks for volunteers, in the event of ethnic conflicts, one of the main criteria for selecting volunteers is their ethnicity to avoid any flare up of ethnic-related conflicts.

Session V:
Countries Presentations: Challenges and lessons learnt – Digitization

- Audit trails allowed for tracking supervisors with issues. It also made monitoring easier.
- SMC coverage in areas implementing the community health policy generally increased (example of Benin).
- Introduction of digital tools in areas where the education of volunteers is low may be challenging. Additional training for volunteers will be needed in such cases.
- SMC cohort tracking can be enhanced via the use of unique beneficiary IDs assigned to each child's profile.
- It is also important to intensify education for caregivers on the importance of retaining the child's record card and unique IDs throughout the round.
- The loss of record cards or not being able to find unique ID assigned can lead to significant re-registration of children and therefore the estimates of complete SMC coverage may be lower, however inflated estimates of a single cycle coverage may be inflated.
- In terms of data analysis, there are challenges with determining the appropriate denominators for cohort tracking. Further discussion on how this can be addressed is important.
- Integrating SMC & ITN campaigns can provide benefits such as synergies on health workers' time and use of technology.

Countries Presentations: community engagement

- Engaging leaders of displaced populations to help identify and track displaced children helps to reach these groups.
- Effective communication with beneficiaries is important to improve coverage.

Session VI:
Countries Presentations: Challenges and lessons learnt – Digitization

There is no evidence that one vaccine performs better than the other, however the R21 vaccine is significantly cheaper than the RTSS vaccine.

- Decisions on which vaccine to introduce should be made based on programmatic characteristics, such as affordability and supply considerations to allow for scale-up.
- There is need for strong planning and coordination between EPI and malaria programmes on how to implement the vaccine.

(continued)

Measurement/reporting

- Some countries report concerns about not seeing a clear impact of SMC when analyzing malaria data reported into the routine health information system. The SMC Field Guide contains some suggestions for analyses to help determine if SMC continues to be effective. Given complex malaria intervention landscapes and varied quality of available routine data, these analyses are often challenging.
- There is no formal recommendation on when to stop or scale back on SMC. Countries might need to make tough decisions due to resource constraints. SMC can be stopped or be scaled back in situations where there is a sustained reduction of malaria transmission; lack of visibly recorded impact of SMC as per malaria burden data; or in situations where funding for SMC is significantly reduced or unavailable.
- Countries scaling back or stopping SMC should share their experiences with the SMC community.
- DIGIT has been awarded USD 80 million to support countries in the setting up of campaign digitalisation infrastructure.
- DIGIT has no licensing cost, is scalable and all elements are reusable.
- The Malaria Atlas Project (MAP) is exploring using programmatic data to document geographic SMC coverage over time and SMC surveys for target group coverage estimates.
- MAP is also working on seasonality data and conducting geospatial mapping and analysis on SMC impact and SMC planning.
- PMC is applicable in areas with moderate to high malaria transmission where transmission is not seasonal.
- Although PMC was previously meant for infants, new data has documented the value of chemo-prevention in children aged 12 to 24 months. PMC is therefore now being explored during the second year of life to be administered when children come for vaccines.
- The PMC Community of practice convenes countries implementing PMC. The group works on research for policy adoption, process evaluation, impact evaluation, economic evaluation, and SP suitability evaluation.
- IPTSc is the administration of an antimalarial medicine at regular intervals to treat and prevent malaria infections in children who are old enough to go to school. It is administered to school-aged children living in areas with moderate to high perennial or seasonal malaria transmission.
- An IPTSc working group is being developed, which will convene countries interested in implementing IPTSc, and engaging stakeholders in malaria control, school health, and education in these countries.
- As a result of the SMC Impact project, nearly 200 000 children have been reached with SMC in the Gambia.
- As part of the SMC Impact project, LSHTM together with local partners conducted an economic evaluation in Mali, Niger, and Guinea.
- The SMC Impact project team is awaiting guidance from WHO on the new dosing of SPAQ for older children.
- In 2023, 53 million children were reached with SMC.
- Cumulatively, over 1 billion treatments have been delivered since 2012.
- In comparison to 2012, where 2 countries started SMC, by 2023, 18 countries were implementing SMC in about 900 districts.
- To join the research subgroup contact **Susana Scott** (Susana.Scott@lshtm.ac.uk); the advocacy and communications subgroup, **Ashley Giles** (a.giles@malariaconsortium.org) and the M&E subgroup contact **Suzanne Van Hulle** (suzanne.vanhulle@cr.org).h WHO.gui ??

Minutes

Opening of event

The 2024 SMC Alliance Annual meeting marks the 11th anniversary of the implementation of Seasonal Malaria Chemoprevention (SMC) and is the 6th meeting being organized by the Alliance. The meeting was hosted by the National Malaria Elimination Programme of Nigeria and held in Abuja, Nigeria.

The meeting was opened by Dr. André-Marie Tchouatieu, the Director of Access and Product Management of Medicines for Malaria Venture, who serves as the secretariat of the SMC Alliance. He handed over to Dr. Nnenna Ogbulafor, Head of Malaria Case Management of the National Elimination Programme (NMEP) of Nigeria, who welcomed Dr. Chukwuma Anyaike, the Director of Public Health of Nigeria, who represented the Honorable Minister of Health. Dr. Nnenna Ogbulafor also welcomed Mr. Chukwu Okoronkwo, who represented the National Coordinator of the Malaria Elimination Programme as well as the former national coordinator of the programme, Dr. Perpetua Uhomoibhi, who serves as the co-chair of the SMC Alliance; her fellow co-chair, Dr. Erin Eckert of Population Services International (PSI); and Dr. Peter Olumese, who represented WHO and the RBM Partnership to End Malaria.

Mr. Chukwu welcomed participants to Nigeria on behalf of the NMEP. He announced that SMC in Nigeria has grown from reaching about 50 000 children to reaching almost 30 million children. Dr. Perpetua Uhomoibhi, co-chair of the SMC Alliance, added that in Nigeria, SMC coverage has spread from nine states to twenty-one states. She also said coverage of SMC in areas already implementing the intervention is also increasing. She encouraged participants to learn from their peer countries during the meeting and welcomed everyone on behalf of herself and her fellow co-chair Erin Eckert.

Background and objectives of the meeting

Dr. Erin Eckert presented the background of the Alliance by saying the SMC Alliance is made up of countries, policy makers, multilateral organisations and funding agencies. She said SMC was recommended in 2012 as a tool to reduce the burden of malaria in areas with seasonal malaria transmission. However, there are now new countries piloting the intervention as well as existing ones who are either expanding or introducing the intervention into new geographies. She said the group meets to plan and coordinate activities. In addition, in 2022, the WHO amended its guidelines to allow for more flexibility for countries to adapt prevention strategies to the local context.

Erin then presented the meeting's objectives for the week and said participants will be learning about best practices and challenges for SMC implementation, plans for future campaigns, updates on ongoing projects as well as campaign innovations and digitization experiences. She encouraged countries to use the time to strengthen interactions with colleagues.

Opening words by the representative of RBM and the WHO country office
Dr. Peter Olumese

Opening words by the RBM Partnership to End Malaria and the World Health Organisation were presented by Dr. Peter Olumese who said; "We are in challenging times and SMC is one of the interventions that has helped countries to go through these challenges". Meetings such as this will help to review, reflect, and plan for future campaigns. He also talked about challenges associated with parasite resistance to some of the current anti-malarials which is causing these antimalarials to deliver less than what they previously delivered. There is therefore need to tailor and adapt current interventions and develop new tools. He added that increasing coverage is important to ensure that all those eligible receive the intervention. He added that we are also in interesting times as new interventions such as the malaria vaccine and other malaria chemoprevention: perennial malaria chemo-prevention, IPT for school children among others are also being introduced. Finding practical ways to combine and adapt these tools is essential for malaria elimination. What is more, while access to innovative tools is needed, innovations in making tools more accessible are equally needed to maximize the gains to be achieved.

Keynote address
Dr. Chukwuma Anyaike

Dr. Anyaike welcomed all country representatives and partners to the meeting and said Nigeria is delighted to be hosting the SMC stakeholders' meeting. He said no one must be left behind in the fight to eliminate malaria especially because the disease has been difficult to eliminate.

He added that the SMC Alliance annual meeting is important as it helps countries to share best practices, challenges and provide funding guidance for campaigns. Nigeria accounts for 27% of the world's malaria burden and eliminating malaria runs in tandem with the 4-point agenda for Nigeria's health agenda, governance, population, and health outcomes, unlocking the health sector value chain – improving health security in Nigeria. A major milestone for implementing SMC in Nigeria is that currently, 28 million children living in 383 eligible local governments in 21 states are covered by the intervention.

He thanked the NMEP, PMI, Malaria Consortium, The Global Fund, MMV and all funders for providing support for the meeting. He also thanked all global SMC implementers and said SMC will continue to support the drive for eliminating malaria. He assured meeting participants of Nigeria's commitment to eliminating malaria and encouraged them to visit various sites in Abuja. He then declared the meeting opened on behalf of the Honourable Minister of Health and Social Welfare.

Session I:
General Updates on SMC

World Health Organization Global Malaria Programme
Dr. Peter Olumese

Dr. Olumese opened the first technical session by presenting WHO's understanding of SMC, saying the definition of SMC has not changed. The mode of action of the intervention is to introduce a concentration of antimalarials in the blood to prevent malaria. Moreover, the main objective of SMC is to reduce the burden of malaria, not to reduce malaria transmission. Medicines used for treating malaria should not be used for SMC so that the emergence of resistance can be avoided or delayed. He reminded countries of discussions held around the revised WHO Guidelines for Malaria as the 2023 SMC Alliance's annual meeting held in Conakry, Guinea. The updated chemoprevention guidelines provide greater flexibility for the NMPs to adapt malaria control strategies to suit their settings. He also encouraged countries to use the SMC field guide which was developed in 2023.

Countries are also requested to use national data to determine specific modalities within which they would like to implement SMC. Countries can find the most updated guidelines on the WHO Global Malaria Programme's website. These can also be found on the MagicApp and the Malaria Toolkit App.

The target population for SMC are children at risk of severe malaria, living in highly seasonal malaria transmission areas. A highly seasonal malaria transmission area is an area where malaria transmission is high (60% of cases during a 4-month period), during four consecutive months and transmission is reduced in other areas. The clinical attack rate of malaria (without SMC) in this area is also at least 0.1 episodes per child during the transmission season in the target group. In most countries the burden of malaria transmission is highest in children under 5 years of age. As such if children in other age groups are at high-risk of getting severe malaria, then the country can decide to implement SMC targeting those age groups.

SMC cycles are administered with a 28-day interval between cycles, with cycles beginning at the start of the malaria transmission season. Having a peak malaria transmission season of less than three months or cycles is not considered as seasonal. What is more, implementing more than 5 cycles of SMC has been shown to contribute little to reducing the burden of malaria. The recommended medicine for implementing SMC is still SPAQ. He added that in combining SMC with other interventions, countries must tailor the intervention to gain the maximum impact.

Updates from the Global Fund
Susann Nasr

The Global Fund has been increasing support for SMC since Grant Cycle (GC) 5 with many countries requesting funding. The Global Fund has increased resources for SMC to 225 million for GC 7. The number of children covered by SMC using funding from the Global Fund has also increased. Not all countries providing SMC have gone through grant-making for GC7 as of February 2024.

In alignment with the updated guidelines from WHO, the Global Fund has adjusted its funding for SMC. However, there have been fewer requests from countries for expansion to additional age groups or new geographies while there have been more requests for monitoring and evaluation, data quality, and strengthening SMC programmes and quality.

Last year, there were numerous gaps in maintaining historical coverage of GF-supported SMC. At the moment, most countries have been able to cover gaps by finding efficiencies and deprioritizing other interventions.

The Global Fund also supports malaria chemoprevention interventions including IPTp, mass drug administration, intermittent preventive treatment in school children, and perennial malaria chemoprevention, among others; although there is a limited funding ask for these interventions. Funding is also available for integrated activities such as the development of the national strategic plan, social behavioral change, community-based surveys (MIS/DHS), among others. GAVI is also supporting the roll out of the malaria vaccine. The introduction of integrated interventions which include the vaccine as well as implementation of the vaccine, alone are also supported.

Session II:
Countries Presentations: Challenges and lessons learnt – Initial Implementation Experience

MADAGASCAR
Dr Lala Yvette Razafimaharo

Madagascar started its SMC campaign from December 2023 to January 2024. The country implemented one cycle of SMC for children aged 5–14 years of age in five cycles. The implementation of SMC was supported by UNICEF. The country chose to sensitize selected communities and implement a door-to-door approach and digitize SMC data entry. For digitalization, mobile tools were used, and these were integrated with DHIS. The NMP is now attempting to integrate the data in the DHIS2 programme.

Challenges faced by Madagascar during the implementation of SMC include the following: very tight timing for the allocation of community health workers and inputs; taking medicines late in the day by door-to-door or at school in the heat and with children taking them on an empty stomach; this led to adverse drug reactions and hence cases of refusal. Management of adverse drug reactions was also problematic.

There was also weak involvement of the political, administrative, religious, and traditional authorities. What is more, there were financial constraints as the New Funding Model 3 (Grant Cycle 5) grant from the Global Fund ended at the end of December, leaving the NMP with a gap for the 2nd, 3rd, and 4th cycles. Challenges the country faces include finding an appropriate structure for financing for future SMC campaigns. Documentation of the first campaign has also been challenging.

COTE D'IVOIRE
Dr. Agnon Jacques

Based on the new WHO guidelines for Malaria, Cote d'Ivoire was found to be eligible for implementing SMC. The country therefore adopted SMC for children under 5 years. 28 districts in the country were found to be eligible for SMC. The NMP piloted two cycles of SMC in Dabakala and Dikodougou districts via the door-to-door community-based strategy. The coverage target was 80% of the children aged five years and below. In addition to SMC, other activities such as malaria screening were organized. Planning meetings at several regional levels were held with PMI, PSI, Mali, and Cameroon supporting Cote d'Ivoire in the implementation of SMC.

Out of over 61,000 children targeted, 72% were covered. Coverage was evaluated using a rapid assessment test. Many children were absent during the first day due to farming activities as parents took children to farms. In contrast, on the second day, most children were present to receive SMC. The implementation of SMC was also digitalized.

Challenges

Some mothers forgot to administer the medicine to their children. Some children were also reluctant to take the medicine. In addition, there is a need for a strategy to reach children who are absent during the administration of SMC. It would also be helpful to expand SMC to cover more districts; this will however require more resources. All segments of the community must also be involved.

Lessons learnt

Adding two additional days for implementation as well as recruiting more community health workers would help increase coverage.

SOUTH SUDAN
Dr. Aleu Pioth Akot

South Sudan has one of the highest child and maternal mortality rates in the world and so expansion of SMC will help address reduce needless child deaths as malaria is the highest killer for children in the country.

The NMP of South Sudan implemented SMC for the first time in 2023 from August to November via a door-to-door community-led approach. Four cycles of SMC were implemented in 2 counties (Aweil South and Aweil West Counties). In 2024, this will be increased to five cycles in the same 2 counties. The age range covered remains 3–59 months.

Results from a pilot study showed that administering SMC was associated with an average decrease in caregiver reported malaria by 82%. Comparing routine data from 2022 (when SMC was not implemented) and 2023 in one of the counties showed a 40% lower incidence in 2023. No adverse reactions were registered during the period of implementation. Generally, there was a high demand for SMC.

Challenges

Resources were limited and so certain communities which were targeted could not be covered. Prolonged flooding also limited access to beneficiaries for SPAQ. Some of the volunteers could not read and write, which equally affected the quality of the services provided.

Low interest by caregivers also affected coverage. Some parents also enrolled older children so they could benefit from the intervention, although they were not targeted. Some caregivers also did not see the need to use other malaria prevention interventions in addition to SMC, which was problematic as interventions should ideally be used together.

Actions to improve future campaigns

Better sharing of information would help with planning for the intervention. There also needs to be sustainable peer-led capacity building to increase the knowledge and capacity of those who administer SMC. A caregiver led approach for administering SPAQ must also be adopted to increase sustainability.

MOZAMBIQUE
Albertina Chihale

Madagascar started its SMC campaign from December 2023 to January 2024. The country implemented one cycle of SMC for children aged 5–14 years of age in five cycles. The implementation of SMC was supported by UNICEF. The country chose to sensitize selected communities and implement a door-to-door approach and digitize SMC data entry. For digitalization, mobile tools were used, and these were integrated with DHIS. The NMP is now attempting to integrate the data in the DHIS2 programme.

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There was also weak involvement of the political, administrative, religious, and traditional authorities. What is more, there were financial constraints as the New Funding Model 3 (Grant Cycle 5) grant from the Global Fund ended at the end of December, leaving the NMP with a gap for the 2nd, 3rd, and 4th cycles. Challenges the country faces include finding an appropriate structure for financing for future SMC campaigns. Documentation of the first campaign has also been challenging.

UGANDA
Jane Nabakooza

In 2021, Uganda attempted to reduce the burden of malaria by piloting the implementation of five cycles of SMC in children under the age of five in two districts. This was increased to eight districts in 2022 and then nine in 2023. Implementation started in May and ended in September. About 277,000 children were targeted. The coverage rate for 2023 was 86.6%. The main funders for 2022 are the Global Fund, BMGF, and GiveWell through Malaria Consortium.

SMC distribution was done via a door-to-door approach. In all situations, the team tried to reduce cost and increase adherence to the intervention. Hard to reach populations, including nomadic pastoralists,who move around a lot in search for greener pastures, were targeted through their community leaders. The NMP also organized a training programme to build the capacity of community leaders and to provide guidance for them. An enumeration exercise was conducted on children under 5 using census data. Village Health Teams, who serve as community distributors in Uganda, also test for malaria and other community health illnesses. Documentation, reporting, and pharmacovigilance was also conducted. End of cycle and end-of-round surveys were also conducted.

Challenges encountered and actions to improve them

Quality of SMC implementation was a challenge. Data is now used for focused support supervision in areas and villages where there are challenges. SMC support supervision tools have been digitized and these are being analyzed for further planning.

In 2023, the major issue encountered was the cost of SMC. To address this issue, SMC is now conducted over three days not four, the number of supervisors was decreased, and stocks were delivered for the entire round rather than by cycles. The NMP will continue to engage districts to increase their contribution for SMC and continue to innovate and identify other avenues for decreasing the cost of SMC. Severe malaria is also high in children aged 5–14 years. As such, there are discussions underway to understand the feasibility of introducing SMC in this age group as well. The NMP also believes that it is expedient to explore the feasibility of introducing SMC in neighbouring districts as well as strengthening cross-border collaboration as some eligible children move to Kenya.

What is more, markers for SP resistance are increasing. SP resistance is therefore being monitored to address this. As part of efforts to identify alternative medicines, DHA Piperaquine is being compared to SP and has been found to have the same level of efficacy.

Session III:
Country Presentations: Challenges and lessons learnt – Integration with other public health interventions

BURKINA FASO
Dr. Boulaye Dao

In 2023, Burkina Faso implemented three cycles of SMC from June to October in children aged three months to 5 years. Coverage ranged from 80 to over 100 percent in some districts. Districts that experienced security issues had lower coverage. Internally displaced children were also covered by SMC. About 4101 adverse drug reactions (about 0. 1% of children reached) were recorded. No fatal event was however recorded.

Malnutrition screening was also integrated into the SMC campaign. As the administration of SPAQ is contraindicated in severely malnourished children, the integration of screening has made it possible to avoid mistakenly administering SMC to malnourished children at community level.

In view of the large number of new acutely malnourished children screened, referred, and integrated into the care programme, the integration of screening at a lower cost is an opportunity to save many children during the lean period. Mosquito breeding sites are highly developed during the winter season, and implementing SMC also serves as an opportunity to make people aware of the presence of these sites and their link to malaria transmission. Full participation of families in the destruction of the sites is a means of ensuring their sustainability for combating mosquito breeding.

Issues to be addressed include prompt electronic payment of community health workers as well as use of the right data on the extent of the burden of malaria to adequately plan SMC implementation. Training healthcare workers on pharmacovigilance and incentivizing workers living in high security risk areas is also important. To add on to this, pursuing domestic financing as an additional means of funding as well as deciding on the right strategy for implementing SMC are important.

GUINEA
Dr. Yaya Barry

In 2023, Guinea implemented SMC from June/July to October in children aged three months to 5 years. Four cycles were implemented in 16 districts while five cycles were implemented in Dabola. Coverage ranged from 97% in the 16 districts implementing four cycles and 99% in Dabola district.

A digitization campaign, trialing and comparing the Open Data Kit (ODK) for Nginx and PostgreSQL Administration (ONA platform) with DHIS2, was implemented to promote electronic archiving of data and improve planning for SMC campaigns while reducing the cost of reproducing tools. As a follow up, the NMP would like to extend coverage of the digitization of individual data to other health districts. It would also be important to choose a single application for the country after evaluating the two solutions (ONA or DHIS2) as well as digitization of SMC campaign monitoring tools.

The NMP will also need to advocate to the government to mobilize resources to finance SMC and extend the intervention to other districts. The timelines for implementing SMC also need to be more strictly adhered to.

SENEGAL
Dr. Standeur Nabi Kaly

In 2023, Senegal implemented SMC in 16 districts from June to October for children aged three months to ten years. Coverage was about 98% in all 16 districts. Three cycles of SMC were implemented in 7 districts, four cycles in 5 districts and five cycles in 4 districts. Until now, SMC has not been digitized. However, in 2024, two Health Districts will be piloting the digitization of SMC. The timely availability of drugs, funds and adequate management of SMC has meant that SMC could be started on schedule and the set targets (coverage of at least 95%) could be achieved.

5,081 adverse events, including 3 serious convulsions were managed. 58% of these adverse events occurred in older children (5 to 10 years). The free medical treatment of adverse events recorded in the health districts has had a major positive impact on the willingness of caregivers to administer SMC.

Some populations have been difficult to reach for years. These include students in Koranic schools and people living in gold-mining areas. Strategies such as training koranic teachers to administer SMC and mapping households that have refused SMC have been developed over the past 2 years to reach these populations.

A pilot project linked SMC with screening for malaria cases. The project recorded many sick children during the rainy season, preventing them from receiving SMC, although they were treated for malaria. This strategy makes it possible to reduce the number of cases of “disguised” illness declared by parents during the administration of SMC. This large number of sick children however impeded the district from achieving the desired coverage for SMC.

Another project is piloting using SPAQ co-blisters with orange-flavoured amodiaquine (developed by S-Kant Healthcare) as well as mass administration of DHA PQ-based medicines in one district.

CAMEROON
Dr. Dominique Bomba

In 2023, Cameroon implemented SMC in 16 districts from June to October in children aged three months to five years. Coverage was about 96%. Four cycles of SMC were implemented in 33 districts and five cycles in 14 districts.

Since Cameroon's 2014–2018 malaria strategic plan, SMC has been included among the country's malaria prevention strategies. In 2016, SMC was introduced in areas with highly seasonal transmission of the disease (North; Far North).

Comparing routine versus mass campaign administration of SMC

SMC has been implemented in mass campaign mode with a significant mobilization of resources and logistics without strengthening of the health system as a consequence. Key challenges that have been encountered include integration into existing programmes; sustainability of the intervention; and decrease in funding.

In view of this, SMC in routine mode was piloted and compared with the mass campaign mode. A number of findings have been made. These include the fact that implementing SMC in routine mode ($1.02 per child) is cheaper than in campaign mode ($1.24 per child). Community Health Workers have also been equipped with working materials for routine activities and hence there is no need for the purchase of materials. There has also generally been an improvement in the treatment and referral of fever cases in the community during SMC campaigns. What is more, there has been an improvement in the quality of data collection tools used for SMC.

However, there is a need to better integrate SMC activities, such as better acceptance of the populations. Community volunteers should also be better known and accepted by their community, among others. Additional training is needed for community health workers to strengthen routine SMC and improve upon the target coverage. It would also be helpful to digitize the data collection process for the administration of SMC.

In comparing routine SMC administration versus mass campaign mode administration, routine SMC administration was considered to be a more innovative, effective, and efficient approach, and was well accepted by households. Routine SMC however does not differ greatly from the mass campaign in terms of programmatic results. Routine implementation of SMC however requires the presence of a well-established community system with adequate coverage of community health volunteers.

Session IV:
Countries Presentations: Challenges and lessons learnt – Hard to Reach Populations

GUINEA BISSAU
Dr. Mouhammed Ould Hamed

In 2023, Guinea Bissau implemented SMC in four regions via a mass door-to-door campaign from August to November in children aged three months to five years. Coverage ranged from 47% in Bolama to 97% in Tombali.

During the campaign, a number of lessons were learnt. These include the following: involving community leaders for advocacy means that parents and caregivers can be more easily reached. Close monitoring of drug distribution teams enables the majority of children to be reached within the timeframe set by the programme. What is more, involvement of telecommunications networks and community radio stations helps in raising awareness.

Actions that helped increase uptake of SMC included radio debates on the campaign, raising awareness among community radio stations in local languages, and videoconferencing during SMC campaigns to facilitate the exchange of experiences between regions.

In certain areas in the Gabú, Tombali and Bolama health regions, there was difficulty in accessing SMC. Increasing the number of local volunteers would help increase coverage in these areas that are difficult to access. Providing community volunteers with rain protection equipment, medicines, and monitoring tools will also help to improve the implementation of SMC.

Guinea Bissau equally piloted the digitization of SMC. Issues encountered include delays in data synchronisation due to poor internet coverage in the country while corrective actions include offline use of the system in areas without internet access, real-time visualisation of data, review and revision of data reported during the campaign, and availability of computer-literate supervisors, as well as immediately resolving problems found on the tablets.

In the coming year, the NMP intends to improve upon planning for SMC and exchange of SMC campaign data in cross-border areas with Senegal and Guinea, as well as extending SMC to older children aged five to ten years.

KENYA
Ekai David Logialan

Most of Kenya is malaria free. However, a number of districts experience low, moderate, and high malaria transmission. Kenya initiated SMC in 2023 via a pilot project implementing five cycles starting from June in one district, reaching 35 000 children. The pilot project was carried out in the Turkana district, a low to moderate malaria transmission district which experiences strong seasonality of malaria cases. The area hosts two refugee camps. In addition, there are mobile populations in that area that sleep outdoors and need alternative prevention interventions. 75% of malaria cases occurred in children under five years.

The proposed project is an operations research project to guide community-informed delivery models for SMC in remote populations in Turkana. A community mapping and formative mixed methods research project has already been carried out. As a next phase, the project will qualitatively collect information on how to adapt SMC delivery models to meet the needs of this community. There is also a project to quantify the prevalence of P. falciparum malaria in households with children under five years.

The NMP also designed a project to access hard-to-reach populations. Advocacy components of the project included community engagement, messaging, and SMC delivery. During the implementation phase, a number of children missed the intervention. These include those accompanying caretakers for farming activities; children living with disabilities or those whose caretakers were struggling with addiction, HIV-related illnesses or homeless; children living in families who have conflict with community health promoters (CHPs); and those whose caretakers prefer traditional medicine. Additional children missed were those residing in township areas or homes with high-security walls or guard dogs.

The NMP also has a number of questions they will be investigating such as: can we identify any CHPs and households who will be migrating? Can we deploy each CHP with an assistant? Are there opportunities to engage non-health or other overlooked community resources for the door-to-door activities? Can we leverage digital platform household registers?

GHANA
Dr. Dora Dadzie

Ghana implemented four cycles of SMC in 2023 in children aged 3-59 months starting from June to November/December instead of October, due to late release of funds. 69 districts were targeted and 85% of the target population received all doses. In 2024, five cycles of SMC will be implemented. No major adverse event was recorded. One main issue is insufficient funding. SMC is funded by the Global Fund and PMI; but a funding gap still exists.

Generally, Ghana has low security risks. However, within one region, there has been a long-standing ethnic conflict. This conflict has been associated with a loss of lives, displacement, and property destruction. This district has as such persistently had low SMC coverage. The region also has limited oversight by healthcare workers. To overcome these challenges, the NMP worked with local leaders and security agents to safeguard the lives of volunteers.

To avert security risks for volunteers, one of the main criteria for selecting volunteers is their ethnicity to avoid any flair up of conflict. The team also used ICT to monitor daily coverage and react when coverage levels are very low. Government vehicles were also used to help with identification so that communities can relate with the volunteers. Due to frequent movement, it was difficult to estimate the target population. This also affects the management of adverse drug reactions as ethnic groups cannot cross territories to go to health facilities. Due to partaking in external activities by caregivers, caregivers must be reached before 6AM or after 6PM. However, Bawku has a curfew that starts at 6PM which makes reaching caregivers difficult.

To adequately reach caregivers, the NMP would like to add an additional distribution point such as a marketplace. Supervisors also need to be regularly trained to ensure that they are aware of risks to address and responsibilities to adopt.

MAURITANIA
Dr. Abdallahi Amar Ely Salem

In 2023, Mauritania implemented three cycles of SMC from October to December in children aged 3–59 months. 87% of the target population received all doses. No major adverse event was recorded. One main issue is insufficient funding.

As part of the monitoring and evaluation process, the quality and monitoring of data needs to be improved for greater effectiveness and efficiency, hence the integration of SMC data into DHIS2 in 2023. This will help reduce errors, making it easier to detect anomalies and correct them.

The main aim for implementing SMC is to protect children aged 3–59 months against malaria and in particular, protect children living in the Mberra refugee camp as well as nomadic populations who are not usually reached by mainstream approaches. A mobile distribution system has also been set up to reach remote or hard-to-reach populations.

To improve SMC implementation in 2024, the NMP will start planning for SMC on time and ensure communication activities are initiated before each visit. They will also improve upon the implementation of mobile distribution.

In 2023, SMC was not coupled with other interventions. Nevertheless, the distribution of insecticide treated nets took place at the same time as SMC. As implementing actors are the same, duplication of activities was avoided.

Session V:
Countries Presentations: Challenges and lessons learnt – Digitization

TOGO
Dr. Tchassama Tchadjobo

In 2023, the NMP commenced SMC implementation in July and ended in October with four cycles of SMC being administered. In 2022, in support of the NMP, WHO conducted a stratification exercise for malaria transmission. Based on the results of this exercise, the NMP will include four additional districts making 23 districts eligible for SMC in 2024. About 464 000 children were covered by SMC in 2023 in these districts. The coverage rate was 82%.

Digitization of SMC data collection started in 2023. However, due to challenges, it could not be expanded. The HISP/WA tool was used. In 2024, the NMP will try to enter the data in DHIS 2 with the help of the partner HISP/WA. This service will include planning, M&E, microplanning, stratification, etc. Discussions are underway with partners to explore the possibility of producing cards with integrated QR codes to avoid counting the same children twice as well as data entry errors. The application will be improved based on findings from the pilot project.

The NMP is also working to mobilise additional resources for data entry and for including vaccination campaigns. Trainings for community health workers will also be conducted and improved.

While there were no major issues in reaching hard-to-reach populations, security issues emerging from terrorism in the border area with Burkina Faso is forcing people to move to more secure areas. Threats of this were mitigated by engaging leaders of displaced populations to help identify and track displaced children.

Overall, there was good coordination between the various entities involved. Effective communication was also had with beneficiaries. Resources with other interventions were also integrated where possible.

THE GAMBIA
Dr. Olimatou Kolley

The rainy season in the Gambia starts in July while the malaria season starts in August; as such, the implementation of SMC commences in August. The country is divided into 3 strata according to the burden of malaria, no malaria, moderate and high burden. Some no malaria burden areas are however becoming moderate burden zones. SMC is being targeted in the high transmission areas.

Four cycles of SMC were implemented, and children aged 3–59 months in 23 districts were targeted. Coverage levels in 2023 was 53%.

Due to data quality issues as well as the immense work involved in collating data on paper, the NMP commenced digitization of SMC in 2015 based on previous experience from the 2014 LLIN campaign supported by CRS. In August 2022, the team moved from Commcare to DHIS2 Tracker for the 2023 SMC campaign as Commcare requires a subscription payment. DHIS2 is an opensource platform that is free to use.

Lessons learned

Realtime data collection was available and allowed for daily data analysis to identify areas that were not reached. Audit trails allowed for tracking of supervisors with issues. It also made monitoring easier. DHIS 2 is also used for COVID 19 tracking, and the ministry of health is also using it for monitoring other health data.

One of the main hurdles however is internet collectivity, which is a challenge for simulating data. Data can however be accessed offline. DHIS2 also has performance and functionality related issues. There are also server capacity issues due to the load of data. Support to IT teams on how to analyse the data is being provided by partners.

BENIN
Dr. William Houndjo

SMC was implemented for the first time in Benin in 2019. Four health areas were initially covered. By 2021, six health districts were covered. With the update of the WHO guidelines as well as the stratification of the districts, together with additional funding from USAID and the Global Fund, five additional districts were reached with SMC in 2024.

In Benin, 60% of malaria cases are recorded during a five-month period. As such in two districts, five cycles of SMC are implemented while in the others, four cycles are implemented. Door-to-door administration of SMC is carried out.

Community health policy

The NMP of Benin shared its experience of implementing the community-based health policy. A community health policy has been in place since 2011. However, coordination for the policy was lacking. A new policy was therefore adopted in 2020 based on WHO's guidelines. The main objective of the policy is that by 2030, Benin has a robust and resilient community health system.

Six municipalities have started implementing the policy. Two of these municipalities are also implementing SMC. In these two municipalities, the *relais communautaires* (community health workers) supervised SMC delivery during the distribution of the first dose which took place during the first week of distribution. In the second week, the second and third doses were administered by the caregivers.

A coverage survey was conducted and revealed that SMC coverage for the areas implementing the community health policy has increased across the first 3 course of SMC. Greater adherence by parents and caregivers was also observed. However, for the fourth course, lower coverage levels of SMC were observed. This can be explained by delayed payment of health workers.

Lessons learnt

In addition to the above, insufficient communication on the community health system delivers poor results. This was observed when comparing two districts where communication was improved in one district versus the other.

CHAD
Dr. Hassane Moussa

For 2023, SMC implementation in Chad commenced in July and ended in October. The same will be done in 2024. Four to five cycles of SMC were carried out across 77 districts in 2023. This will be expanded to 82 districts in 2024. The implementation of SMC in Chad is supported by The Global Fund, Malaria Consortium, UNICEF, and Médicins sans Frontières. Several community health workers were trained on the administration of SMC.

Key areas of concern the NMP said it encounters include coverage of nomads, administration of the second and third doses of amodiaquine, coverage of all eligible districts, and electronic payments. is carried out.

Introduction of digital tools

The NMCP introduced digital tools for the collection of SMC data in 2023. Training of health and community workers took place before the introduction. Tablets were given to those carrying out the exercise.

Coverage results

There were wide differences in the coverage results across districts. This is because in rural areas, health workers found it difficult to use the digital tools. Moreover, in areas where SMC had not been previously implemented together with other interventions, this was a challenge. However, when digitization was introduced, it became easier to combine interventions.

The workload of workers at the district level continues to be a challenge. Perhaps this can be addressed by increasing the salary of workers. What is more, sufficient, and adequate digital tools are not available to carry out all the functions required. The NMP also intends to provide additional training to health workers especially on use of digital tools.

NIGERIA
Dr. Emmanuel Shekaru

In Nigeria, SMC was implemented from June to October 2023. Currently, there are 21 states that implement SMC in Nigeria. The NMEP of Nigeria implemented four cycles of SMC in 16 states and five cycles in 5 states. About 28.9 million children were covered with SMC in 2023. The NMP is targeting a similar number of children in 2024. Children aged 3-59 months were covered. 10 states are covered by Malaria Consortium while 2 states are covered by the President's Malaria Initiative PMI. Some state governments also support the implementation of SMC.

SMC digitization

The NMEP of Nigeria presented experiences from its SMC digitization project. Digitization in Nigeria is based on the "bring your own device" approach for the community volunteers. Digitization of the collection of SMC data was piloted in two states in 2021. By 2023, digitization had been scaled up in 12 states. In addition to supporting with data collection, cohort tracking, improving monitoring, and commodity tracking, the digitalization tool has helped to track the teams implementing SMC.

Essentially, the app sends an alert if one of the teams is not active so that alternative action can be taken. SMC cohort tracking has also been enhanced via the use of unique beneficiary IDs assigned to each child's profile on the ICT4D platform. The unique ID is used throughout all cycles and enables accurate cohort tracking and individual retention as well as adherence monitoring.

In the future, the NMEP would like to intensify education for caregivers on the importance of retaining the child's record card and unique IDs. It would also like to fully utilize the benefits of technology to improve the efficiency and quality of service delivery. Similarly, it would also be useful to integrate SMC & ITN campaigns to benefit from synergies such as health workers' time and use of technology.

Challenges encountered

The main challenges encountered include community drug distributors occasionally entering wrong beneficiary information or selecting the wrong profile of the child when administering SMC. Sometimes, information on previous beneficiary children is also entered anew.

These issues can be resolved by enhancing the overall capacity of community distributors and by tracking beneficiary children strictly with unique IDs. What is more, the generation of unique IDs during cycle 2 will be restricted.

Session VI:
Malaria Chemoprevention: other chemoprevention approaches

Malaria vaccine implementation update by GAVI
Dr. Stephen Sosler

On the whole, Gavi supports vaccines for 19 infectious diseases and works through WHO and UNICEF to roll out vaccines. The RTSS malaria vaccine was introduced in 2021. Only 2 million children in Ghana, Kenya, and Malawi were reached with the malaria vaccine. The vaccine brought about a 13% reduction in malaria case mortality, a 22% reduction in hospitalized cases, and reduction in hospitalization of cases with a positive malaria test. Currently two main types of malaria vaccines are available: RTS,S and R21.

Product Choice

There is no evidence that one vaccine performs better than the other. Country decisions on which vaccine to introduce should be made based on programmatic characteristics, such as affordability and supply considerations to allow for scale-up. There are however significant price differences between the two vaccines. Serum Institute of India can provide much larger doses of the R21 vaccine and the prices are much lower. As such, there is unlimited supply of the R21 vaccine.

The malaria vaccine requires a four-dose schedule: three in the first year (starting around five months of age with a four-week interval between doses) and the fourth in the second year. The four-week schedule will mean the vaccine can only be administered outside of the normal EPI schedule. Despite this hurdle, the vaccine is being considered for use in routine EPI. The greatest impact of the vaccine can be achieved when it is used together with insecticide treated nets and SMC.

To get support from GAVI, countries must send a support application. The country has to clarify how the vaccine will be implemented within the national strategic plan. There is also need for strong planning and coordination between EPI and malaria programmes on how to implement the vaccine.

Every vaccine a country chooses to introduce has to be co-financed by the country. The amount to be paid by countries is dependent on their Gross National Income. The co-financing of the malaria vaccine is the same as for all other vaccines. The country must contribute at least 20% of the co-financing in the first year of introduction and increase its co-financing by 10 percentage points annually (20% first year, 30% second year and so on). As such, a country should reach 100% financing after 8 years. Malaria vaccine partners include US CDC, USAID, PATH, UNICEF, WHO, GAVI, among others.

Subnational tailoring of chemoprevention
Dr. Beatriz Galatas

This presentation discusses the conditions within which SMC is to be implemented as well as considerations to be made for expansion.

SMC is to be conducted in areas of seasonal malaria transmission. Seasonality means the period when peak malaria transmission is happening and the time of the peak itself. This is taken from the history of malaria transmission in the area.

SMC is intended for areas where there is a high risk of severe malaria in children during seasonal peaks. Areas with such a profile of seasonal severe disease in children tend to be areas of historically moderate and high levels of malaria transmission; where the adult population has acquired sufficient immunity to severe malaria; and where SMC will be most cost-effective.

Determining seasonality can be affected by low testing or reporting rates; periodicity and timing of reporting; as well as the impact of additional interventions deployed before the transmission season. Seasonality is defined as 60% of cases falling within four consecutive months of the year. However, it is also worth considering the lag between rainfall patterns and an understanding of the times. Rainfall may be used as a proxy for malaria cases where appropriate case data are not readily available. Severe malaria cases have been most abundant in children under 5 years of age.

In selecting the right medicine to be administered for SMC, sufficient data on the effect of the medicines used is important. What is more, the better the data available, the better the decision to choose a specific medicine. If there is a reduction in transmission, this has to be analyzed to understand the reasons for the reduction.

Is SMC still impactful?

For countries within which SMC is being implemented but no visible or no impact within the recorded data is being observed, the question is how is SMC being delivered and what other factors are affecting the lower-than-expected decrease in the recorded burden?

Mathematical models can also be used to evaluate the choice of different decisions and how these will impact how SMC should be implemented. There is no direct relation between transmission and disease burden. This is because in some areas, where appropriate interventions have been implemented, disease burden may be low although transmission may be high.

When can SMC be stopped?

SMC can be stopped or be scaled back in situations where there is a sustained reduction of transmission; a lack of evidence to support whether SMC has been impactful or not, as reflected in routine data collected. In situations where funding for SMC is reduced or unavailable, scaling down SMC should be based on the principle of “least harm”, de-prioritizing areas where incidence was lowest at the pre-SMC baseline level. In such cases, there must be a deployment of effective ITNs, expansion of case management options; and better surveillance – preparedness and response mechanisms should be prioritized in these cases.

To help countries make decisions on whether or not to stop SMC, mathematical models calibrated with local data can be used to evaluate the impact of different SMC-related decisions that NMCPs need to make. To add on to this, improving data availability and quality is key. Supporting national data repositories and surveillance assessments will be important to address this.

Integrated health campaign management
Varun Basu

DIGIT means digital infrastructure for convenience, impact, and transformation. DIGIT partners with governments to provide population-based scaled-up infrastructure tools. DIGIT has been awarded US$ 80 million to support countries in the setting up of infrastructure. The key issues that DIGIT attempts to solve with its infrastructure include low campaign effectiveness, logistical complexities, limited visibility, and a siloed approach as well as limited ownership.

The tools can be adapted according to the complexity of the campaigns. Hundreds of campaigns can also be set up concurrently. DIGIT has no licensing cost, is scalable, and all elements are reuseable. The main difference between DIGIT and other existing digital tools is that DIGIT is a platform designed to enable use across multiple campaigns (e.g. SMC, net campaigns etc.).

Estimation of SMC campaigns – Malaria Atlas Project
Adam Saddler

The Malaria Atlas Project (MAP) works on global burden mapping and looks at how interventions are reducing the burden of malaria. The main coverage data types used by MAP include campaign administrative data; SMC household survey data, which covers number of children not receiving SMC; as well as DHS survey data. MAP is also exploring using programmatic data to identify geographic coverage, SMC surveys for target group coverage estimates, and to fill in the gaps not covered by existing surveys.

Results show that coverage in terms of the total number of children reached has been increasing over the years. The key discussion topics include whether there are any other surveys not covered either in the MAP model or elsewhere; what is driving the 100+% coverage results; as well as any future work. MAP is also working on seasonality data and has collected data for four macro-categories of incidence, prevalence, entomological and mortality from 47 countries in Africa. MAP is also conducting geospatial mapping and analysis on SMC impact and SMC planning.

Updates from PMC Community of practice
Dr. Charlotte Eddis

PMC is applicable in areas with moderate to high malaria transmission where transmission is not seasonal, antimalarials can be given at predefined intervals to reduce the burden of malaria. Moderate to high perennial malaria transmission settings are defined as areas with *P. falciparum* parasite prevalence greater than 10% or an annual parasite incidence greater than 250 per 1000. These thresholds are indicative and should not be regarded as absolutes for determining the applicability of the PMC recommendation.

PMC was previously referred to as intermittent preventive treatment of malaria in infants or either IPTi or IPT in infants. Since the initial recommendation, new data have documented the value of malaria chemoprevention in children aged 12 to 24 months. PMC is therefore now being explored during the second year of life to be administered when children come for vaccines. SP has been widely used for chemoprevention in Africa, including for PMC. ACTs have been effective when used for PMC, but there is limited evidence on their safety, efficacy, adherence to multi-day regimens, and cost-effectiveness within the context of PMC. The EPI platform remains

important for delivering PMC. Other methods of delivery can be explored to optimize access to PMC and integration with other health interventions. There is no field manual for PMC. There is a manual for IPTi but nothing for PMC.

PMC is implemented through the routine health system delivery in Benin, Cameroon, Côte d'Ivoire, Mozambique, and DRC. Sierra Leone is the only country to implement IPTi. PMC is implemented in a research context in Nigeria and Togo. The intervention has also been included in the National Malaria Strategic Plans of Cameroon, Côte d'Ivoire, DRC, Mozambique, and Sierra Leone. Burundi has included PMC in their draft Strategic Plan. Key funders and supporters for PMC include Unitaid (Plus project), the Global Fund, ISGlobal (with EDCTP funds), PATH (with funds from GiveWell) and Malaria Consortium.

Challenges

There are a number of challenges to increasing the coverage of PMC. These include for instance fewer EPI visits during the second year of life. To mitigate this, countries are for instance looking at combining PMC with Vit A supplementation; however, this is not a huge attraction to bring back caregivers to EPI centers. Other options are PMC plus malaria vaccine plus bednets. Community distribution of EPI has also been suggested. There is also a challenge with the simultaneous roll-out of the malaria vaccine and PMC in some places; as well as the threat of SP resistance. The community of practice proposes real-time monitoring of combining interventions to understand what works and how to increase demand and compliance.

Community of practice

The PMC Community of practice convenes countries implementing PMC. The group works on research for policy adoption, process evaluation, impact evaluation, economic evaluation, and SP suitability evaluation.

Co-chairs of the group are Dr. Junior Voundi Voundi (Cameroon) and Dr. William Houndjo (Benin) while the secretariats include representatives of ISGlobal. The community of practice secretariat meets every two weeks while the community will meet on a quarterly basis, starting in 2024.

Intermittent preventive treatment in school-aged children (IPTSc)
Dr. Lauren Cohee

The intermittent preventive treatment of malaria in school-aged children is the administration of a full-treatment course of an antimalarial medicine at regular intervals to treat and prevent malaria infections in children who are old enough to go to school. It is administered to school-aged children living in areas with moderate to high perennial or seasonal malaria transmission.

An IPTSc working group is being developed and its main mandate is to help decrease the burden of malaria in school-age children by supporting multi-sectoral approaches to evidence-generation, implementation, and sustainable financing of interventions. The group will convene countries interested in implementing IPTSc, and engage stakeholders in malaria control, school health, and education in these countries.

The group will also explore conducting research on IPTSc to promote health and education and in terms of intervention delivery, it will identify key stakeholders from other school-based health programs to develop lessons learned and explore opportunities for integrated delivery of school health programs.

Currently, a steering committee is being established. A website is also being created and funding being sought for the first IPTSc cross-country project across Uganda, Tanzania, Kenya, and Malawi. Additional reviews and an economic framework are also being developed to understand what could be the potential impact of implementing IPTSc.

OPT-SMC project
Prof. Jean-Louis Ndiaye

The OPT-SMC project was created to optimize the delivery of SMC to maximize the impact of the intervention. The project is funded by the EDCTP and consists of various partners such as University of Thiès, LSHTM, WHO TDR, MMV, among others. The main objective is to build the capacity of national malaria control programmes. Sub-objectives of the project include strengthening the capacities of the NMPs to implement SMC; defining research priorities for optimizing SMC effectiveness; conducting IR/OR projects for improving SMC effectiveness; interpreting and making use of malaria surveillance data; effectively targeting high risk populations and periods of the year; monitoring delivery, uptake, and effectiveness of SMC; and promoting inter-country collaboration, sharing of information and expertise.

The project, which was initially for four years has now received an extension for an additional year. In selecting research projects, the project team, on discussing with countries, identified various SMC implementation issues and barriers that could be optimized. Based on these, research projects were organized. The project team has also organized several country-based workshops to train countries on household surveys, combining SMC with the vaccine, coverage surveys, among others. Six countries have finished their studies; five countries are collecting and analyzing the data; while two countries will start this year.

Several newsletters and media pieces have also been developed to help disseminate information on the project. A grant from WHO to the project will help introduce vaccines in areas where SMC is being implemented as well as optimize data.

SMC Impact
Dr. André-Marie Tchouatieu

The SMC Impact project aims to contribute to the body of evidence about: the efficacy and cost effectiveness of expanding SMC to children aged 5–10 years (Niger and The Gambia); the additional impact of adding one month of SMC coverage during the transmission season and relative cost of the increment (Guinea and Mali); the development of a new strength of SPAQ for 5–10 years old; and contribute to increasing knowledge about Pyramax® as well as its introduction in malaria endemic countries as an alternative therapeutic solution (Guinea and The Gambia). The project will also contribute to covering the remaining gaps in SMC coverage for currently eligible target children (Nigeria).

Countries involved in the project include The Gambia, Guinea, Mali, Niger, Nigeria, and Guinea. SMC Impact has received an administrative extension. As a result of the project, nearly 200,000 children have been reached with SMC in the Gambia. As part of the project, LSHTM together with local partners conducted an economic evaluation in Mali, Niger, and Guinea. Preliminary results from the project were presented at ASTMH 2023. Quantitative and qualitative analyses were also conducted. Ongoing research is equally being conducted on the benefits of adding one more cycle of SMC and its associated cost. What is more, health workers are being trained on the use of Pyramax as treatment for uncomplicated malaria in children in the Gambia and Guinea.

Another objective was to understand the willingness or demand from countries to cover children aged 5–10 years using different drug dosing. As such a SPAQ dosing suitable for that age group was developed and made available on the market. The project team is awaiting recommendation from WHO on the new dosing of SPAQ for older children. There is also discussion with the SMC Alliance to implement a cross-sectional study to review data and determine the burden of malaria within 5–10 years old.

Update on SMC achievements in 2023
Dr. Celine Audibert

This presentation featured data on SMC achievements for 2023. In 2023, 53 million children were reached with SMC. Cumulatively 1,078 million treatments have been delivered since 2012. In comparison to 2012, where 2 countries started SMC, by 2023, 18 countries were implementing SMC in about 900 districts.

Children aged 3–59 months still represent the largest block of children targeted while children aged 60 to 120 months are less targeted. The first and fourth cycle also show the lowest coverage levels.

Research sub-group
Prof. Jean-Louis Ndiaye

The sub-group was set up in 2021 to share best practices, lessons learnt, and challenges associated with SMC research. The sub-group meets monthly and has 80 members with 35 joining calls regularly. The sub-group is co-chaired by Susana Scott and Jean-Louis Ndiaye. Nine virtual meetings were held in 2023. Research priorities and achievements for the group include completing an e-delphi process with over 40 experts with the results being shared in London.

The research priorities were to understand the main SMC research priorities that those working on SMC research are interested in conducting. A workshop was also held by Malaria Consortium to streamline the list, which was sent out to the wider SMC community (including all SMC Alliance members) to rate and rank the research questions. After several shortlisting exercises, the 10 top priorities were selected. The top three questions included the following: evaluating the duration of prophylactic protection offered by SPAQ and other SMC medicines; evaluating the effect of integrating SMC with other malaria prevention interventions (e.g. vaccines) on the development of parasite resistance; and investigating the potential rebound effect in malaria incidence in older children as a result of SMC campaigns. The team is investigating how they can use these global research priorities at national level.

Some of the key points that came out of the discussion are that there is a lot of evidence already existing on some of the questions that were identified as research priorities, suggesting that there is a need to strengthen efforts to disseminate and discuss research findings among the wider community. What is more, more effort must be invested in presenting research findings in an easier-to-understand manner. A barrier identified is that research is commonly published in English only, whereas there are several countries for which English is not the official language.

In terms of activities, a symposium on chemoprevention was held at ASTMH in Chicago in October 2023. A hybrid meeting was also held at ASTMH to present the initial findings of the SMC research priorities. These research priorities were similarly presented as an oral presentation at the Royal Society of Tropical Medicine and Hygiene Annual Meeting (RSTMH) in December 2023 in London. For 2024, symposium and oral presentation abstracts have been sent to MIM and ASTMH. Several articles have also been sent to journals based on the research topic.

The advocacy and communication subgroup
Mohammad Bala

The SMC Alliance sub-group on communications and advocacy was formed to serve as a platform for the SMC community to share best practices, lessons learnt, and challenges in communicating about and advocating for SMC. Main tasks the group has supported include providing communication and advocacy support for upcoming events; communications support to the other subgroups and maintaining the SMC Alliance website.

In 2023, key achievements for the subgroup included developing 10 years of SMC report and infographic, organizing the annual meeting's media coverage, and compiling SMC-related activities for conferences such as ASTMH and support with SMC-related messaging for international women's day and international day of the African Child.

In 2024, the subgroup is happy to support the other subgroups by advertising in person and virtual SMC-related activities, as well as posting videos and event takeaways on the website and on social media.

M&E subgroup
Dr. Suzanne Van Hulle

The M&E subgroup provides a platform where members of the SMC community can share challenges and best practices in M&E, discuss, and collectively develop and harmonize tools.

In 2023, the subgroup was quite active and organized three webinars. The first webinar is on sub-national processes and contexts for modelling; the second on M&E approaches to SMC campaigns; and the third on decoding the impact of SMC. The subgroup also contributed to Chapter 5 (M&E) of WHO's SMC Field Guide.

In 2024, the subgroup will continue organizing webinars and has a number of thematic areas they would like to explore. Ideas for more thematic areas would be very welcome. They would also like to understand how countries are using the SMC indicators in the M&E toolkit and challenges they may have faced or are facing. They will also continue developing the SMC section (s) of the World Malaria Report.

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