WHO Malaria Policy Advisory Committee (MPAC) meeting

APRIL 2018

MEETING REPORT

SUMMARY

On 11–13 April 2018, the WHO Malaria Policy Advisory Committee (MPAC) convened to review updates and progress, and provide guidance with respect to specific thematic areas of work carried out by the Global Malaria Programme (GMP).

The meeting included eight sessions focused on 15 topics: (1) an update on the guidelines for malaria prevention through vector control; (2) an update on the Mekong malaria elimination programme; (3) an update on the Malaria Elimination Certification Panel and Oversight Committee; (4) a proposed Evidence Review Group on determining non-inferiority of insecticide-treated net and indoor residual spraying products within an established class; (5) an update on key developments associated with the evaluation process for vector control tools; (6) a proposed Technical Consultation on research requirements to support WHO policy on highly sensitive malaria diagnostic tests; (7) a proposed Evidence Review Group on malaria control in humanitarian emergencies; (8) a proposed Evidence Review Group on assessment of malarialogenic potential to inform elimination strategies and prevent re-establishment of transmission; (9) an update on the Evidence Review Group on malaria mortality estimates; (10) a proposed Evidence Review Group on mass drug administration in areas of moderate transmission and complex emergencies; (11) an update on the malaria capacity building initiative; (12) an update on the RTS,S malaria vaccine implementation programme and framework for decision-making; (13) an update on the Strategic Advisory Group on malaria eradication; (14) an update on a Technical Consultation on universal access to core malaria interventions in high-burden countries; and (15) a discussion on the "10 + 1" initiative among high-burden countries.

At the closing session, the key outcomes/recommendations of MPAC to GMP included:

- Vector control guidelines: MPAC appreciated the work of the team in consolidating the first edition of the guidelines for malaria prevention
through vector control, which draw on systematic reviews and grading of available evidence. MPAC provided significant feedback on the draft, commenting on some basic structural elements and offering suggestions for revision. The document will be submitted to the WHO Guidelines Review Committee in May 2018, with a view to publication in late 2018.

- **Elimination in the Greater Mekong Subregion**: MPAC appreciated the update on malaria elimination in the GMS, noting the granularity of the data presented. The overall progress in decreasing the number of cases and deaths in the subregion was noted, but MPAC expressed concern about the increase of cases in Cambodia.

- **Malaria Elimination Certification Panel and Oversight Committee**: MPAC was supportive of the newly established Committees: one to certify malaria elimination and the other to support elimination activities. MPAC approved the approach of an abbreviated process to certify countries that have reported zero cases for 15 or more years and agreed that it was important to continue monitoring the status of certified countries through the current practice of routine data reports.

- **ERG to develop methods to assess the non-inferiority of insecticide-treated net and indoor residual spraying products within an established class**: MPAC supported the proposed ERG and members of the Committee appreciated that this approach to enhancing programmatic guidance on new vector control products faces a number of challenges. MPAC raised a number of questions, including outcome indicators, for the ERG to consider.

- **Developments associated with the evaluation process for vector control tools**: MPAC appreciated the work that has been undertaken to simplify and bring clarity to the pathway for assessing the public health value of new vector control tools, as well as the clear explanation of the prequalification process and initiatives taken by WHO to enhance the functioning of the Vector Control Advisory Group.

- **Research requirements for policy on highly sensitive malaria diagnostic tests**: MPAC endorsed the proposed Technical Consultation with some suggestions for consideration.

- **Malaria control in humanitarian emergencies**: MPAC endorsed the proposed ERG pointing out the need to ensure consistent definitions of humanitarian emergencies and complex emergencies, and the need to ensure complementarity with the ERG for mass drug administration in areas of moderate transmission and complex emergencies and with previous WHO recommendations on MDA.

- **Maliariogenic potential to inform elimination strategies**: MPAC endorsed the convening of the ERG. MPAC felt that it was important to maintain the focus of the ERG on those countries nearing elimination and moving to prevent re-establishment of transmission at either the subnational or national level.

- **Malaria mortality estimates**: MPAC appreciated the work of the ERG and the progress made to improve the methodology for estimating malaria mortality. MPAC also highlighted the importance of a communication strategy that can ensure transparency on the uncertainties and complexities of estimates, effectively convey changes in estimates due to changing data and/or methods, and foster the involvement of country programmes.
• **Mass drug administration in areas of moderate transmission and complex emergencies:** MPAC endorsed the proposed ERG with several suggestions for areas to consider in the evidence review.

• **Malaria capacity building initiative:** MPAC strongly endorsed the development of the capacity building initiative and suggested that dedicated resources be identified to ensure that the work moves forward as a priority.

• **RTS,S malaria vaccine implementation programme:** MPAC was encouraged by the progress in the MVIP preparations, which are on track for launching vaccinations by the end of 2018, and in the development of the framework for policy decisions.

• **Strategic Advisory Group on malaria eradication (SAGme):** MPAC noted the substantial progress achieved by the SAGme. MPAC also noted that a Lancet Commission on malaria eradication was recently announced. MPAC expressed concern for the potential overlap of subjects and the declared goal of developing a roadmap for eradication.

• **Universal access to core malaria interventions in high-burden countries:** MPAC appreciated the report from the Technical Consultation and agreed with the conclusions. The discussion covered a range of issues including access to integrated community case management and seasonal malaria chemoprevention at the community level.

• **10 + 1 initiative:** MPAC endorsed the initiative to renew focus on support for high-burden countries and support’s WHO’s role as a catalyst for countries to renew their commitment and strengthen their programmes in response to recent data indicating that progress has slowed. MPAC emphasized the need to engage countries and key stakeholders to ensure that harmonized and complementary support is provided.

**BACKGROUND**

The WHO Global Malaria Programme (GMP) convened the Malaria Policy Advisory Committee (MPAC) for its 13th meeting in Geneva, Switzerland on 11–13 April 2018. MPAC convenes twice annually in Geneva to provide independent strategic advice to WHO on policy recommendations for malaria control and elimination. The Committee is supported by standing Technical Expert Groups (TEGs) and ad hoc Evidence Review Groups (ERGs), whose work focuses on thematic areas and specific research questions in order to generate sufficient evidence to provide guidance. Over the course of the two-day meeting’s open sessions, 20 MPAC members, seven national malaria control programme managers, the WHO Secretariat and over 50 observers discussed the updates and progress in the work areas presented. Recommendations were discussed in the final closed session of the Committee on day three. After the introductions, the meeting participants were reminded of the procedures governing WHO’s assessment of MPAC members’ declarations of interest. It was noted that the GMP Secretariat requested and received feedback from all the experts present at the meeting regarding their declarations of interest. The following members disclosed various interests – Dr Thomas Burkot, Professor Gabriel Carrasquilla, Dr Maureen Coetzee, Professor Umberto D’Alessandro, Professor Azra Ghani, Professor Brian Greenwood, Dr Caroline Jones, Professor Kevin Marsh, Dr Neena Valecha, and Dr Dyann Wirth. The GMP Secretariat reviewed the disclosures and determined that there were no conflicts of interest with respect to this meeting and the participating MPAC members.
UPDATES FROM THE GLOBAL MALARIA PROGRAMME

The GMP Director opened the meeting by providing a concise general update on the work of the WHO-GMP units organized according to five key roles: 1) to address key malaria control and elimination strategic questions; 2) to set, communicate and disseminate evidence-based normative guidance, policy advice and implementation guidance to support country action; 3) to coordinate WHO capacity building and technical support to Member States, jointly with regions and countries; 4) to help countries develop and implement robust surveillance systems to generate quality data and use those data to achieve greater impact; 5) to keep an independent score of global progress in malaria control and elimination, including drug and insecticide resistance.

The Director summarized key data from the World Malaria Report 2017, which indicates that, after a decade of significant progress, the fight against malaria has stalled and is at a crossroads. He highlighted the unfinished agenda of intervention coverage gaps and the challenges of insecticide and drug resistance, concluding that: 1) we are not on track to meet the 2020 morbidity and mortality targets set in the Global Technical Strategy for malaria, and 2) there are new challenges and opportunities in estimating the burden of disease. In order to get back on track to meet the 2020 and 2025 targets, there is a need to focus on the 11 countries that contribute ≈ 70% of the global malaria morbidity and mortality, as well as the 21 countries with the potential to eliminate malaria. Key activities under each of the five roles were highlighted, including progress towards elimination in the Greater Mekong Subregion; improvements to the normative guidance pathway for vector control and other guidance launched since the last meeting; the malaria response in complex situations, including Nigeria and South Sudan; the launch of the Malaria Surveillance, Monitoring & Evaluation reference manual; and the work of the Strategic Advisory Group on malaria eradication (SAGme) and the Malaria Vaccine Implementation Programme (MVIP). The GMP update closed with a moment of recognition for Dr Ruth Nussenzweig’s recent passing. Dr Nussenzweig provided the first evidence that protection against malaria pre-erythrocytic stages existed and could be effective in protecting against infection, a precursor to the research leading to the RTS,S vaccine. She published more than 200 scientific papers in her lifetime.

SUMMARY OF THE MPAC SESSIONS

Guidelines for malaria prevention through vector control

Background: The guidelines were developed to provide evidence-based recommendations for the effective implementation of each of the vector control options currently available; to inform and guide technical decisions on the appropriate choices of vector control options; and to support the development of evidence-based national malaria vector control policies and strategies. The guidelines will facilitate the use of WHO guidance by bringing together in one document a large number of existing guidance documents on vector control and will inform a research agenda to identify evidence gaps in support of the development of the second edition. The scope of the guidelines includes the core interventions of indoor residual spraying and insecticide-treated nets, supplementary interventions, and the settings and programmatic factors affecting the selection and deployment of vector control interventions.
**MPAC conclusions:** MPAC appreciated the work of the team in consolidating the first edition of the guidelines for malaria prevention through vector control, which draws on systematic reviews and grading of available evidence. Detailed thematic feedback was provided on the scope of the document, the evolution of updates to the guidelines, concurrent interventions, insecticide resistance management, the evidence base for recommendations, housing, ecotypes and vector control, consistency in messaging, terms, and the anticipated timeline for completion. It was clarified that many of the comments received will be addressed in the revision of the draft document prior to its publication as a first edition. Several major issues that require generation of additional evidence will be included in subsequent editions of the guidelines.

Key issues that were discussed include:

- A request for clarity on the evidence for interventions designed to work at population level compared to those that provide protection at a personal level where evidence of impact at population level is lacking;

- A request to provide detailed deployment scenarios, such as for vector control in humanitarian emergencies or in the prevention of reintroduction phase once malaria has been eliminated;

- The need for cost-effectiveness guidance that considers not just the interventions’ impact on cases, but their influence on other factors including insecticide resistance. Currently proposed strategies, such as rotation and sequential use of insecticides, have evidence from agriculture rather than from vector control; more data from vector control will be needed to provide evidence-based guidance for programmes;

- A proposed restructuring for recommendations to be based on vector behaviours rather than ecotypes. This will place the focus on the relationship between vector behaviours and intervention efficacy, recognizing that dominant vectors with very different behaviours co-exist in each ecotype. As vector behaviours are dynamic and change in response to effective interventions, such an approach is complex and will require updating;

- The need to more clearly state that there is currently no evidence on the efficacy of space spraying for malaria control, as some countries continue to implement this approach;

- A request to include a recommendation on factors to consider in the prioritization of implementation of IRS, LLINs or both (e.g. resource implications and cost-effectiveness).

The guidelines incorporating MPAC’s input will be submitted to the Guidelines Review Committee in May 2018, with view to publication of the first edition in late 2018. GMP is not planning to send the revised document back to MPAC before it is published. Updates to the online version of the guidelines will be conducted as new data become available. As mentioned in the Director’s update, there is a process underway within GMP, and across WHO more generally, to review and standardize the policy making process, including the development of guidelines.

**Update on the Mekong Malaria Elimination Programme**

**Background:** An update was provided on the progress towards malaria elimination in the Greater Mekong Subregion (GMS). Although the total number of cases in GMS declined in 2017, cases increased in Cambodia and Viet Nam compared to 2016. The
Mekong Malaria Elimination (MME) Programme has been established to help the six countries of the GMS – Cambodia, China (specifically Yunnan Province), the Lao People’s Democratic Republic, Myanmar, Thailand and Viet Nam – accelerate towards their goal of malaria elimination by 2030 at the latest. There are four major issues facing the MME Programme: ensuring sustainable funding, project implementation, monitoring and addressing multidrug resistance, and improving surveillance. Although significant investments have been made, domestic funding is less than 20% of the total funding contributions to malaria control programmes, and has declined in Cambodia and Viet Nam. An analysis of the economic impact of the interventions in the GMS may be useful to advocate for further investment, comparing the costs of investments in malaria elimination versus the benefits, such as decreases in malaria cases, hospitalization, early deaths, etc. Reaching high-risk populations remains a challenge to project implementation, as does the complex partner landscape. Major issues relating to drug quality assurance and management have been identified, including supply management, national regulatory authority capacity to accelerate introduction, updates and implementation of national guidelines, and quality assurance of drugs. In collaboration with other partners, WHO has developed a response to support the countries on each of the major issues identified. Key areas of work to support improving surveillance in the GMS include data collection and reporting, data use and regular validation of data.

The MME Programme has three areas of work to support GMS countries: the partnership forum, advocacy and communication, and support for cross-country projects. The MME Programme is supporting the Ministerial Call for Action to Eliminate Malaria in the Greater Mekong Subregion before 2030, which was adopted by GMS representatives at a high-level meeting held in December 2017. It is anticipated that the Call for Action will be signed during the World Health Assembly in 2018.

**MPAC conclusions:** MPAC appreciated the update on malaria elimination in the GMS, noting the granularity of the data presented, as requested in previous MPAC meetings. MPAC noted the overall progress represented by the decrease in the number of cases and deaths in the subregion, but the Committee is concerned about the increase in cases in some areas of the GMS, especially in Cambodia. MPAC emphasized that it is important for GMS countries to ensure that preventive interventions and case management are available to the communities at risk, who often live in remote areas where malaria transmission continues. National programmes supported by WHO and partners should strengthen and focus technical support in these remaining endemic areas. The Committee is hopeful that the upcoming Call for Action to Eliminate Malaria in the GMS by Ministers of Health will enable countries to prioritize strengthening implementation of malaria interventions.

**Update on the Malaria Elimination Certification Panel and Oversight Committee**

**Background:** A brief history of the efforts to eradicate malaria, the numbers of countries that have been certified malaria-free and a review of the global targets were presented. WHO launched the E2020 initiative in 2017, including the 21 countries identified in a 2016 WHO report as having the potential to interrupt local malaria transmission by 2020. The objectives of the initiative are: to support countries along their last mile through certification and prevention of re-establishment; to foster networking to share experiences and problem-solving approaches; to strengthen national commitments and political will; and to generate momentum through friendly competition.
To support the E2020 countries, an independent Malaria Elimination Oversight Committee (MEOC) has been established, comprised of 10 members who have a mix of political and technical experience in public health, malaria or disease elimination. The MEOC provides independent operational and programmatic advice and oversight monitoring of global malaria elimination in five primary areas: monitoring and reporting on progress in countries; providing technical advice; identifying risks; sharing observations and recommendations; and questioning the status quo while helping countries to confront difficult issues. The inaugural meeting was held in April 2018 and a key discussion point was the definition of the achievement of the global E2020 target as having zero indigenous malaria cases in 2020.

WHO was given the mandate to certify countries as malaria-free by the World Health Assembly in 1960. Between 1955 and 2017, 28 countries, one subnational region and two territories were certified as malaria-free. The criteria for certification include the interruption of indigenous malaria transmission by *Anopheles* mosquitoes and the demonstration of an adequate and fully functional surveillance and response system for preventing re-establishment of transmission. In 2017, WHO established the Malaria Elimination Certification Panel (MECP), which recommends whether malaria elimination should be certified in applicant countries based on WHO’s criteria. The work plan for 2018–19 includes an assessment of four countries that have requested certification, namely, Paraguay, Uzbekistan, Algeria and Argentina. The MECP proposed two recommendations for endorsement by MPAC: 1) that countries reporting zero indigenous malaria cases for 15 or more years be granted certification after a desk review finds no reason to conduct an in-country evaluation mission; and 2) that the MECP annually review the status of certified countries in order to evaluate whether malaria-free status has been maintained. Certified countries reporting indigenous cases will be monitored to determine whether the minimum threshold for re-establishment of transmission has been met. If the minimum threshold (i.e. the occurrence of three or more indigenous malaria cases of the same species per year in the same focus for three consecutive years) appears to have been met, a review will be triggered, which could result in a country evaluation visit and, ultimately, a potential recommendation of withdrawal of certification to the WHO Director General through MPAC.

**MPAC conclusions:** MPAC was supportive of the newly established Committees, one to support elimination activities and the other to certify malaria elimination when achieved. MPAC highlighted the importance of maintaining independence between the two Committees and that this requirement should be reflected in both the selection of members and the formalization of rules governing the movement of members between the Committees. MPAC noted the development of more sensitive diagnostic methods for detecting submicroscopic infections and the potential future ability to differentiate between introduced and indigenous cases using molecular techniques. MPAC agreed that there should be a future discussion by the MECP on the criteria for certification based on new approaches to the diagnosis of malaria. The current criteria for certification are based on detection by microscopy and RDTs.

MPAC approved the approach of an abbreviated process to certify countries that have reported zero cases and transmission for 15 or more years. This approach would involve a detailed desk review without the need for a site visit. MPAC agreed that it was important to continue monitoring the status of certified countries through the current system of routine reports submitted to WHO, but felt that the MECP should provide more detail on the process that would be used to withdraw certification. It was agreed that the MECP should submit certification recommendations to MPAC rather than directly to the WHO Director General, and that MPAC would rapidly endorse the recommendations of the certification committee unless there was some obvious, major area of concern warranting further review.
Proposed Evidence Review Group on determining non-inferiority of insecticide-treated net (ITN) and indoor residual spraying (IRS) products within an established class

Background: Sponsors of new vector control products that are not covered by an existing policy recommendation need to generate epidemiological data to allow assessment of the product’s public health value. The first product in a new class for which public health value has been determined will become ‘first-in-class’. Sponsors of second and subsequent products in an established class are not required to generate epidemiological data, but need to demonstrate that the products are ‘as good as’ the first-in-class product. The term currently used in this context is that of demonstrating “non-inferiority”. MPAC has requested that WHO develop guidance to support the implementation of standardized and rigorous study design and analysis to determine non-inferiority. The most pressing need in this area is the comparison of pyrethroid-piperonyl butoxide (PBO) nets, which vary considerably in their design and specifications. The objective of the proposed ERG is to develop methods to assess the non-inferiority of second-in-class ITN and IRS products. For ITNs, the methodology needs to be suitable for the comparison of pyrethroid-PBO nets within their class, but ideally also applicable to the assessment of other ITN products within their respective classes.

The ERG will review data on laboratory and experimental hut studies conducted on pyrethroid-PBO nets, review draft methodologies proposed for the assessment of non-inferiority, and refine the study methodologies to support the generation of high-quality data to inform the development of WHO guidance on the deployment of second-in-class products. Anticipated outputs include: 1) a study protocol developed specifically for determining non-inferiority of pyrethroid-PBO nets; 2) a generic study protocol for determining non-inferiority of ITNs; and 3) a generic study protocol for determining non-inferiority of IRS products.

MPAC conclusions: MPAC supported the proposed ERG and appreciated that this approach to enhancing programmatic guidance on new vector control products faces a number of challenges. A number of questions were raised for the ERG to consider, including:

- What endpoint will be used in the evaluation? Members noted that firm entomological correlates of epidemiological protection have not yet been established, and hence this approach would need to consider non-inferiority criteria in relation to impact on entomological outcomes.
- What margin of non-inferiority in entomological outcomes would be acceptable, how does this translate to an acceptable margin in human endpoints and how would this be decided?
- Should there be a threshold level of efficacy above which any new product would be considered acceptable, even if it was proved inferior to the first-in-class product against which it was assessed?

MPAC cautioned that if experimental huts are used to compare products, it will be important to ensure that huts are comparable in size and construction to houses in the study area. MPAC suggested that the issue of bioavailability of PBO comparisons be included in the ERG discussion. Finally, it will be important to communicate clearly what non-inferiority means, emphasizing that demonstrating non-inferiority based on entomological endpoints is not the same as demonstrating epidemiological impact.
**Update on key developments associated with the evaluation process for vector control tools**

**Background:** At the October 2017 meeting, MPAC requested that the Vector Control Advisory Group (VCAG) explore ways to further simplify processes and definitions in the assessment of the public health value of new tools and recommended that the guidance for insecticide resistance management be updated. VCAG is committed to supporting guidance revisions. A process for updating the pathway documentation has been defined and will commence as part of a larger review led by WHO that focuses on the malaria policy making process across the different interventions. Regarding resistance management guidance, a table was developed for incorporation into the vector control guidelines. Work has also been conducted to assess sustainability models for VCAG, which has included stakeholder feedback on process and performance to date. The model recommended by the Boston Consulting Group to WHO for generating funds to support VCAG’s work was to seek 60% reimbursement of costs from procurers, 20% from applicants and 20% from WHO. Further work will be required to develop a sustainability model so that it caters to the sustainability of the evaluation pathway as a whole rather than just the VCAG–supported pathway. Based on the feedback from stakeholders, an improvement plan for VCAG is being developed. Since late 2017, the Prequalification Team for vector control products has been an active stakeholder in the VCAG secretariat.

An overview of the WHO prequalification process for vector control was also provided. The mandate is to increase access to safe, high-quality, efficacious vector control products through the publication of a list of prequalified products; ensure validity of products throughout their life-cycle; and contribute to building the assessment capacity of Member States. Priorities for vector control include the establishment of roles, responsibilities and relationships with partners; conversion of products from WHOPES recommendation to prequalification listing; development of requirements guidance and operational policy; initiation of the process for product applications; focused engagement with stakeholders; staffing and assessors group sessions. The prequalification framework for vector control is supported by guidance on regulatory approaches to pesticides for public health and agriculture, utilization of established best practices, and experience from country regulatory authorities. The Prequalification Team for vector control products is the single point of entry for applicants requesting WHO to evaluate their product.

**MPAC conclusions:** MPAC appreciated the work that had been done to simplify and bring clarity to the pathway for assessing the public health value of new vector control tools, and the clear explanation of the prequalification process. Clarification was sought on: the timeline for the prequalification process, which is a maximum of 12 months once the complete dossier has been submitted; that countries and their national regulatory authorities are not bound to adhere to WHO prequalified products and can use their own discretion regarding the level of evidence required to register products; the pre-submission process to encourage manufacturers to communicate with the Prequalification Team; and the progress to inform regulatory authorities on new processes for new products. It was suggested that the Prequalification Team attend relevant meetings to communicate with stakeholders on the new processes.

MPAC raised a few points for discussion, including a concern that the public health sector pushing manufacturers to reduce prices of insecticides while also expecting the manufacturers to pay for a percentage of VCAG activities may be seen as a disincentive to innovation. WHO clarified that payment for evaluation by national regulatory authorities is the norm for pharmaceutical products and that WHO’s services in this area will need to become similarly sustainable in the medium-term. The resource
mobilization plan, however, is in an early stage of development and will require stakeholder consultation. Further development and adoption of this plan will not involve MPAC. Another area of discussion was the question of how manufacturers will have their intellectual property rights protected once their dossiers have been submitted to WHO prequalification and therefore are in the public domain. WHO recognizes that with the transition to the prequalification system wherein manufacturers are now responsible for generating their own data, the issues of data protection and intellectual property need to be addressed to ensure that innovation is not being discouraged.

Proposed Technical Consultation on research requirements to support WHO policy on highly sensitive malaria diagnostic tests

**Background:** In May 2017, WHO convened an Evidence Review Group (ERG) on low-density malaria infections with the aim of revising recommendations on the use of malaria diagnostics in low transmission settings based on recent data on the natural history, prevalence and contribution to transmission of low-density infections. In October 2017, MPAC endorsed the ERG’s conclusions, which recommended the use of quality-assured conventional RDTs and microscopy for case management and surveillance. In addition, the ERG recommended that highly sensitive tests be used only for research until sufficient evidence on their impact on transmission is available. The ERG also recommended that additional research be conducted to understand the contribution of low-density infections to transmission and to define the public health impact of strategies incorporating highly sensitive diagnostic tests in different epidemiological settings. Several basic epidemiological research questions were defined, but participants agreed that many are unlikely to be answered in the near future. Therefore, critical questions with programmatic application were identified and highlighted.

The objectives of the proposed new Technical Consultation are: 1) to define the research needed to determine if strategies incorporating highly sensitive diagnostic tests will have a significant impact on malaria transmission in areas moving towards elimination, prevent re-establishment of transmission, and prevent adverse effects of malaria in pregnancy; 2) to propose feasible study designs to demonstrate that strategies incorporating highly sensitive diagnostics will have an impact on transmission; 3) to review the current landscape of research on the use of highly sensitive diagnostic tests; and 4) to develop a realistic timeline for generating evidence on the impact of using highly sensitive diagnostics in a range of transmission settings and use scenarios.

**MPAC conclusions:** MPAC endorsed the proposed Technical Consultation with some suggestions for consideration. In terms of proposing appropriate study designs, MPAC suggested that it may be useful to identify existing study protocols for modification or adaptation during the planned consultation, rather than to start by developing completely new protocols. MPAC also stressed the importance of defining a use case scenario based on programmatic needs and elaborating the specific questions to be addressed or hypotheses to be tested. There was a suggestion that the ERG should consider nucleic acid detection in addition to highly sensitive RDTs as this enables species determination and parasite genotyping, which may be important for classifying imported cases in low transmission settings. Several references were made to unpublished data and it was recommended that these datasets be included in the evidence reviews for policy making. MPAC noted that one of the key objectives of the Technical Consultation was focused on malaria in pregnancy and therefore recommended that the Technical Consultation group should include expertise in this area.
Proposed Evidence Review Group on malaria control in humanitarian emergencies

Background: In the aftermath of the Ebola outbreaks in 2014 and 2015, Member States tasked WHO to play a central coordinating role in all matters concerning health as part of a broader change in the way the international community prevents, prepares for and responds to crises. WHO published the first edition of the *Handbook for malaria control in humanitarian emergencies* with the support of many partners in 2005 and a second edition in 2013. WHO proposes to convene an ERG on malaria control in humanitarian emergencies to take into account the guidelines issued by GMP and the WHO Health Emergencies team since 2013, as well as current evidence, practical experience and lessons learned since the previous edition. Several analyses, evidence reviews and background papers are being prepared for the ERG, planned for September 2018.

MPAC conclusions: MPAC endorsed the proposed ERG for malaria control in humanitarian emergencies, pointing out the need to ensure consistent definitions of humanitarian emergencies and complex emergencies, and the need to ensure complementarity with the ERG for mass drug administration in areas of moderate transmission and complex emergencies. MPAC suggested considering the inclusion of a section on the transition out of an emergency setting that details what processes and systems should be put in place in this situation.

Proposed Evidence Review Group on assessment of maliariogenic potential to inform elimination strategies and prevent re-establishment of transmission

Background: Understanding malaria transmission risk in a given geographical area provides the foundation for the design of cost-effective intervention programmes to decrease malaria burden, eliminate transmission and prevent re-establishment. Malaria transmission risk is the product of receptivity, vulnerability and infectivity, and is referred to as the maliariogenic potential. The receptivity of an ecosystem to malaria transmission is determined by the presence of competent vectors, a suitable climate and a susceptible population. Vulnerability refers to the rate of importation of parasites through the movement of infected individuals or, occasionally, infected anopheline vectors. Infectivity, or vector susceptibility, depends on the compatibility between the anopheline vector and the infecting strain of *Plasmodium*. The WHO Framework for malaria elimination recommends that transmission intensity, receptivity and vulnerability underpin subnational stratification to inform the selection of interventions for eliminating malaria transmission.

Recognizing the increasing demand for guidance on the assessment of receptivity and vulnerability, especially in countries that are working to prevent re-establishment of transmission either at the subnational or national level, WHO proposes to convene an ERG with the following objectives:

1. To review current definitions of receptivity, vulnerability and maliariogenic potential contained in the WHO glossary and, if required, recommend improvements to ensure that the definitions are valid and appropriate;

2. To review available methodologies for assessing receptivity and recommend appropriate and valid methodological approaches, including data requirements, for national malaria programmes to use to measure receptivity in their respective countries;
3. To advise WHO on options for classifying receptivity according to programmatically relevant categories aimed at guiding interventions to prevent re-establishment of transmission;

4. To review the validity and practicality of available methods for assessing vulnerability and recommend appropriate and valid methodological approaches, including data requirements, for national malaria programmes to use to assess vulnerability in their respective countries;

5. To review data on the regional receptivity of endemic anophelines to exotic strains of human malaria;

6. To advise WHO on approaches to combining measures of receptivity, vulnerability and infectivity in order to guide national malaria programmes.

**MPAC conclusions:** MPAC endorsed the convening of the ERG. The Committee highlighted the need to use the ERG to standardize terminology to avoid confusion. MPAC felt that it was important to maintain the focus of the ERG on those countries nearing elimination and moving to prevent re-establishment of transmission at either the subnational or national level, and to acknowledge the impact on vulnerability and receptivity that has already occurred. Finally, MPAC emphasized the importance of the final objective (6) that will provide national programmes with the guidance needed.

**Update on the Evidence Review Group on malaria mortality estimates**

**Background:** During the October 2017 meeting, MPAC endorsed the convening of an ERG on methods for malaria burden estimation with four main challenges identified for discussion:

1. As malaria parasitological diagnosis and routine reporting have improved considerably in sub-Saharan Africa, several countries have reported, from the public health sector alone, more confirmed malaria cases than the population estimates generated by the parasite prevalence-to-incidence model. The implication is that in many of the very high burden countries, the burden of malaria morbidity is probably being underestimated;

2. The use of parasite prevalence as a covariate in the quantification of the malaria cause of death fraction means that the effect it has on morbidity trends may be replicated in the mortality results;

3. Where routine information data are used, not all cases are tested and confirmation rates are sometimes far below 100%. Available data are often reported only from the public health sector, even though the private sector plays an important role. A substantial proportion of patients may not seek care and therefore will be missed by both public and private sector surveillance. Adjustments for confirmation, private sector reporting and non-treatment-seeking should therefore be made on the routine data.

4. The case fatality rates for *Plasmodium falciparum* and *P. vivax* are computed using data from old studies. This approach fails to account for the substantial changes in malaria case management and the obvious variability between countries.

In March 2018, the ERG was convened with the following terms of reference: Review existing methods for morbidity and mortality estimation; focus on addressing
issues related to the use of routine data, temporal trends in case fatality rate, age attribution of malaria mortality, and the role of geospatial approaches to modelling mortality estimation; revisit the pending recommendations from the ERG 2012–2013 in light of any new data, and develop proposals for best approaches to ensure those recommendations are fulfilled; and re-focus on the indirect burden of malaria infection.

Conclusions and recommendations were broken down into those that should be addressed within the next nine months and longer-term actions. Immediate actions regarding case incidence, malaria mortality and indirect burden include: 1) clearly articulating the definition and purpose of metrics including parasite prevalence, fever with infection and fever attributable to infection; 2) improving \textit{P. falciparum} prevalence models; 3) improving the \textit{P. falciparum} prevalence-to-incidence model; 4) assessing biases in routine data; 5) improving assumptions and methods for mortality estimation; and 6) assessing the relationship between anaemia and malaria morbidity and mortality. Medium- to long-term activities include the need for comparative clinical and prevalence studies across different transmission settings, pathways of seeking treatment, risk factor analysis in relation to malaria mortality for future World Malaria Reports, the potential to incorporate emerging tissue sample autopsy data from moderate to high transmission countries into cause of death estimates, and a quantification of severe disease due to malaria. The ERG discussion concluded with emphasis of the need for a roadmap and resources to implement the recommendations, and the need for a communication strategy to explain to stakeholders the uncertainties and complexities of the estimation methods. The ERG is anticipated to meet again in September 2018.

\textbf{MPAC conclusions:} MPAC appreciated the work of the ERG and the progress made to improve the methods for estimating malaria mortality. It was noted that routine data are produced within the health system and improvements must be made to the integrated system, not just to malaria data. Key areas of discussion included that it is important for countries to see that routinely collected health facility data are being used, that subnational estimates are needed for stratification, and that a roadmap needs to be developed for improving surveillance and routine data collection. MPAC highlighted the importance of a communication strategy that can ensure transparency on the uncertainties and complexities of estimates, effectively convey changes in estimates due to changing data and/or methods, and foster the involvement of country malaria programmes. The outcomes of the ERG should be published and a staged approach might be useful for keeping stakeholders engaged; experiences from other diseases adjusting their estimates might also be useful.

Case fatality rates need to be updated as the data sources are out-dated and the denominator is ill-defined. New estimates should be country-specific, factoring in the quality of case management and changes in endemicity. Additional data sources suggested for case fatality rates included the RTS,S trial for contemporary data on clinical incidence in different settings, previous studies with data on clinical presentation associated with parasite densities (which relate to the parasite density threshold used in the prevalence-to-incidence model), and other research data, including data from INDEPTH sites. Where the routine data from moderate to high transmission settings in Africa are reliable and proper documentation of the biases is possible, the application of the case fatality rate to compute malaria mortality should be considered instead of the current verbal-autopsy-based approach. MPAC suggested an additional analysis of changing endemicity and all-cause under-5 mortality. MPAC recommended the inclusion of the burden of malaria in pregnancy and its indirect effect on neonatal mortality, in addition to the consequences of malaria-related anaemia.

MPAC recognized the important opportunity to work and develop consensus with country programmes to improve malaria case reporting based on better data from
the countries that are appropriately adjusted to reflect best estimates. There is an ongoing challenge with the estimates of malaria deaths and child malaria deaths as they are established within the envelope of global estimates of all-cause child mortality. Improvements in case reporting may increase the case estimates, but the envelope of child malaria deaths is fixed. As a result, the case fatality rates will need to be reassessed and the communication strategy will need to articulate a difference between direct malaria child deaths and malaria’s contribution to a substantial portion of additional child deaths that may be attributed to other specific causes. MPAC suggested that the consequences of malaria in pregnancy should be added to the indirect malaria burden estimation section. A major effort will be required to communicate the reasons for the variability of estimates. Efforts should be made to focus both on changing trends over time as well as the magnitude of burden of disease in a given year. Lessons learned in communicating changed estimates of mortality and morbidity for HIV and tuberculosis may be helpful.

Proposed Evidence Review Group on mass drug administration in areas of moderate transmission and complex emergencies

Background: WHO currently recommends mass drug administration (MDA) to interrupt *P. falciparum* malaria transmission in areas approaching elimination, to reduce the risk of spread of multidrug resistance in the Greater Mekong Subregion, during malaria epidemics, and in exceptional complex emergencies. Since the last evidence review on MDA, several large-scale trials have been implemented to evaluate the role of MDA combined with other core interventions in accelerating progress towards malaria elimination in areas of moderate transmission. In addition, data are being analysed on the successful implementation of MDA in Nigeria’s Borno State – an area of declared public health emergency – in children under 5 to rapidly reduce malaria mortality.

To incorporate new evidence into current guidance, WHO proposed to convene an ERG with the following objectives:

1. To determine the effectiveness of MDA combined with other core interventions in reducing malaria incidence and prevalence in areas of moderate transmission, with particular attention to the effects of vector control, case management and intensified surveillance on the effectiveness of MDA, and the length of time over which any reduction in malaria transmission is sustained post-MDA;

2. To review new evidence on the impact of MDA in areas of low to very low transmission for interrupting *P. falciparum* malaria transmission in areas approaching elimination and reducing the risk of spread of multidrug resistance in the Greater Mekong Subregion; and

3. To review evidence on age-targeted MDA as an intervention to reduce malaria mortality in children exposed to intense malaria transmission and complex emergencies.

MPAC conclusions: MPAC endorsed the proposed ERG and provided several suggestions for consideration in the evidence review. It was highlighted that there are many different transmission dynamics in areas with moderate transmission that need to be more fully described, especially in relation to the seasonality of malaria. In planning any implementation of MDA, it is important to specify the purpose, timeframe, and follow-up measures, and consider the risk of adverse events before initiating the programme. Ensuring high uptake and coverage of MDA is very important and the inclusion of a social scientist in the ERG was suggested. There was a discussion that seasonal malaria chemoprevention and intermittent preventive treatment in pregnant women and infants are preventive chemotherapy strategies used primarily to reduce
morbidity and mortality. The risks of adverse drug reactions and development of drug resistance should also be considered by the ERG. MPAC noted that it would be helpful to review the terminology in use for different types of chemoprevention as they might relate to MDA or SMC. The potential role in elimination of highly sensitive diagnostic tests to target treatment to only positive cases (as an alternative to MDA) has not been established, and MPAC noted the importance of linking with the planned work of the Technical Consultation group on research requirements to support WHO policy on highly sensitive malaria diagnostic tests. Finally, MPAC suggested an analysis of multiple indicators of impact in the field to ensure that an effect on transmission reduction at the population level is not missed.

**Update on the informal consultation on the development of a capacity building strategy for malaria control and elimination**

**Background:** Effective malaria control requires a variety of actors, each with adequate technical knowledge and the ability to use that knowledge to implement recommended strategies in locally appropriate ways. This requires malaria-specific know-how related to vector control, malaria chemoprevention, diagnosis, case management and surveillance. However, effective control also requires an appreciation of the broader health system – procurement and supply chain, health information systems and supervision. Technical staff need relevant cross-cutting skills; for example, the planning and management of malaria programmes requires skills in finance, human resources, leadership and resource mobilization. In addition to the training courses and materials developed by WHO, a number of other malaria courses and training activities exist, but these are uncoordinated, of varying quality and with no mechanism to ensure that course content is consistent with current policies or recommended practices.

WHO is developing a strategy for the sustainable development of human capacity to address malaria in the short, medium and long term. The focus is on building the capacity to control malaria at all levels of the health system and in varying transmission settings within malaria endemic countries. This informal consultation brought together people with technical malaria expertise and pedagogical skills from some of the key players involved in capacity building relevant to malaria and drew on the experiences of national malaria control programmes and other implementers. The meeting objectives were:

1. To identify key technical and cross-cutting areas and the target groups where capacity building is needed to achieve global malaria targets and sustain the gains thereafter;

2. To discuss approaches to ensure that courses and their delivery are of high quality at all levels and that course curricula are in line with the latest WHO policies;

3. To review lessons learned from previous successful capacity building efforts not limited to malaria;

4. To consider the potential development of career pathways in malaria control;

5. To identify sustainable and cost-effective models for delivering quality-assured courses at national, regional and global levels;

6. To understand the landscape of existing malaria training activities, identify key partners, and discuss how to develop and implement the capacity strengthening strategy.
The discussion captured the perspectives of participants from regions and countries, reviewed the training and capacity strengthening models currently in place, and highlighted some emerging themes including the need to focus on competencies, problem-solving skills, quality assurance, blended learning approaches, adaptation of generic training modules for use at country and subnational levels, resource needs and the need to ensure adequate capacity to run the necessary trainings. The next steps for this important initiative are the completion of a landscape analysis of available courses and an assessment of training needs, the development of a competency framework and training matrix, and the development of a strategy document for review by a broader coalition of partners. The ultimate aim is to develop a coalition of partners who, working together, can deliver quality-assured training as part of the broader effort to strengthen capacity for malaria control and elimination.

**MPAC conclusions:** MPAC strongly endorsed the development of the capacity building initiative and suggested that dedicated resources be identified to ensure that the work moves forward as a priority. There was a suggestion that capacity strengthening should be considered an intervention and treated with a scientific approach similar to other interventions. This should include the development and use of clear metrics to assess the effectiveness of training and use of evidence to improve the impact. MPAC emphasized the need for a high-quality standardized curriculum at all levels that focuses on competencies including management. Many challenges were identified, including human resource constraints, identification of resources, turnover of trained staff, and the lack of a career structure at country level.

A particular emphasis was put on the need to develop training materials for surveillance and vector surveillance for programmes transitioning to elimination and those working to prevent re-establishment. It was further proposed that it would be useful for countries to have guidance from WHO on the minimum workforce needed for effective programmes, as well as standardized assessment tools to identify human resource gaps. The Committee highlighted the need to consider existing national and subnational capacity building efforts that could be leveraged to include priority malaria components. MPAC requested that more time be devoted to an update and discussion on capacity building at the next meeting and agreed that a standing committee on capacity building would be useful.

**Update on the RTS,S malaria vaccine implementation programme and framework for decision-making**

**Background:** The Malaria Vaccine Implementation Programme (MVIP) has been developed to support the introduction of the malaria vaccine in selected areas of three pilot countries (Ghana, Kenya and Malawi) with rigorous evaluation of the programmatic feasibility of administering the required four doses; the vaccine’s impact on mortality; and its safety in the context of routine use. The MVIP is jointly coordinated by the GMP, the Immunization, Vaccines & Biologicals department and the WHO Regional Office for Africa, collaborating closely with other WHO departments and country offices, the Ministries of Health in pilot countries, PATH and other partners. The malaria vaccine introduction is country-led.

The critical elements of the MVIP are in place to move the malaria vaccine implementation forward and the first vaccination is anticipated later in 2018. All pilot countries have submitted vaccine introduction plans and initiated preparatory activities related to communications, supply planning, and the strengthening of routine pharmacovigilance. Use of RTS,S/AS01 in the MVIP will require approval from the national regulatory authorities (NRAs) of the three pilot countries prior to vaccine
introduction. A joint regulatory review was held in February 2018, under the African Vaccine Regulatory Forum, to facilitate subsequent in-country review and decision-making by NRAs. Following a request for proposals, consortia of partners have been identified to conduct the pilot evaluations in each country. Two key advisory bodies have been established; in March 2018 the Programme Advisory Group, the highest-level advisory body on the MVIP was convened for the second time, and the MVIP Data Safety and Monitoring Board, responsible for safeguarding the well-being of children vaccinated in the pilot, has also met.

MPAC and the Strategic Advisory Group of Experts (SAGE) on Immunization requested that data be collected through the pilot implementations to answer questions on feasibility, safety and impact in order to inform a policy decision on the appropriateness of wider scale use of RTS,S. MPAC and SAGE endorsed a proposal to develop a framework for policy decision-making that would describe how data will inform policy decisions on the use of the vaccine. The MVIP has engaged modellers to estimate the thresholds of vaccine coverage that predict impact and this information was presented to the WHO Immunization and Vaccine-related Implementation Research Advisory Committee in March 2018. Two sets of scenarios for vaccine impact and cost-effectiveness estimates will be considered: one to inform possible roll-out of the vaccine in countries participating in the pilot programme and the other to consider the potential introduction of the vaccine in other countries. Outcome metrics have been identified and work is ongoing. A timeline was proposed and MPAC was asked to comment on the approach, the suggested outcome metrics and the next steps.

MPAC conclusions: MPAC was encouraged by the progress in the MVIP preparations, which are on track for launching vaccinations by the end of 2018, and the development of the framework for policy decisions. The importance of understanding the modelled potential impact of the RTS,S vaccine and how it might be used in the context of other malaria interventions was emphasized. The potential for heterogeneity in key outcomes among the three countries was highlighted as an area of potential concern that requires further consideration within the decision-making framework. Key issues included the need to consider carefully the thresholds for stopping the programme due to safety signals, and the processes for reaching such a decision. If data are favourable, it will be critical to establish a timeline for a decision on expanding vaccine availability to control areas, especially with respect to demand forecasting and ensuring an adequate vaccine supply.

MPAC agreed to identify two members to participate in a working group with selected SAGE members and the Partner Advisory Group to further consider the policy framework questions. The working group will develop a report and recommendations for MPAC to consider.

Update on the Strategic Advisory Group on malaria eradication

Background: WHO’s Strategic Advisory Group on malaria eradication (SAGme) convened for its third meeting in New Delhi, India in November 2017. The SAGme was convened to analyse future scenarios for malaria, including biological, technical, socioeconomic, political and environmental determinants and potential products of innovation, in order to advise WHO on the feasibility, expected cost and potential strategies for achieving malaria eradication over the ensuing decades. The meeting’s objectives included reviewing progress on the work packages, providing guidance and course corrections, and determining next steps. Major discussion points included i) understanding key determinants that will lead to malaria eradication; ii) learning from past and present models to improve estimates of the costs of eradication and how to
finance the effort; and iii) identifying the components of community engagement and health systems necessary to form the basis of an eradication effort.

The SAGme reviewed progress on seven work packages: Evaluating the economics and financing of malaria eradication; health systems readiness to support eradication; elimination in high-burden areas; potential risks that could threaten or delay eradication; megatrends and populations at risk of malaria in the future; community engagement; and lessons learned from previous eradication efforts. There was agreement on the need to map out the various pathways that could be taken to support an eradication campaign, including political mapping. WHO will map out the potential timing of regional resolutions in conjunction with the Regional Offices and organize a task force meeting with several work package leaders to present and discuss close-to-final products in June 2018.

MPAC conclusions: MPAC noted the substantial progress achieved by the SAGme. Key points raised during discussion for additional consideration by the SAGme included the need to take into account the potential future complex and unstable dynamics of malaria if transmission is reduced but eradication is not achieved. The discussion also highlighted that the political will to launch a malaria eradication effort may be dependent on the achievement of eradication of polio and/or guinea worm. MPAC highlighted the importance of meaningful community engagement in malaria control and elimination activities for an eradication effort to succeed and the important differentiation from community participation. MPAC noted that the economic and financing work stream has included the counterfactual to not achieving eradication, which is indefinite control. Finally, it was noted that a Lancet Commission on malaria eradication was recently announced. MPAC felt it would be important for the Commission to coordinate with the SAGme to avoid confusion and duplication of work already undertaken.

Update on a Technical Consultation on universal access to core malaria interventions in high-burden countries

Background: Significant progress in reducing the burden of malaria was made between 2000 and 2015, and approximately 6.2 million lives were saved by improving access to core interventions – vector control, preventive therapies, diagnostic testing and effective treatment. Since 2015, progress has stalled, with the number of deaths due to malaria remaining at 445,000 and the number of cases increasing to 216 million in 2016. With the current levels of investment and intervention coverage, it is unlikely that the WHO Global Technical Strategy for malaria’s milestones of reducing case incidence and mortality rates by 40% by 2020 will be achieved. Large gaps in the coverage of the core interventions remain due to health system weaknesses as well as financial and programmatic factors. In order to “bend the curve” of malaria deaths, there is the need to develop new and more focused strategies, and to ensure that current strategies are better implemented. The Technical Consultation on universal access to core malaria interventions in high-burden countries was convened to review the current situation and to make recommendations on steps to improve access to core interventions for those at the highest risk of malaria mortality. The Technical Consultation reviewed the situation in the 15 highest burden countries.

Key recommendations from the Technical Consultation were:

1. To address the significant gap in the estimated funding needed to achieve global targets, higher levels of funding are required from multilateral
and bilateral agencies, development banks and foundations, and other nongovernmental organizations, along with significant increases in domestic and innovative funding.

2. Malaria control programmes should promote access of the entire population at risk to the core interventions, namely, malaria diagnosis, treatment and vector control and, where appropriate, intermittent preventive treatment of infants and pregnant women and seasonal malaria chemoprevention. High-risk areas should be prioritized based on stratification of the risk in each country. Interventions should be selected based on their relative cost-effectiveness and, in Sahelian countries where transmission is highly seasonal, the large-scale implementation of seasonal malaria chemoprevention should be extended to all suitable areas, aiming at full coverage. More investments are needed to strengthen surveillance and data-gathering systems, deployment of new technologies and improved planning systems.

3. Strengthened collaboration between malaria and other programmes will improve synergies, optimize the use of resources, and strengthen health services. Malaria service delivery and integration with other programme interventions can pave the way for strengthened overall national health services, which will be required to deal with imported and introduced malaria cases once elimination has been achieved.

4. Access to care should be brought closer to the patient in order to reduce mortality. Community health workers providing integrated community case management of malaria, pneumonia and diarrhoea for children under 5 can be an effective health workforce, extending the reach of health services to remote rural areas. Malaria programmes should support the role of community health workers as an extension of primary health care services.

5. The private sector plays an important role in delivering malaria care in many high-burden countries, both in urban areas and in remote rural areas underserved by formal health care facilities. Guidance on effective strategies for engaging the private sector in delivering quality malaria care needs to be documented, shared and promoted.

6. Political leadership and support at global, regional, national and local levels are vital to reduce the burden of malaria and overcome the current slowdown in the reduction of malaria. Political commitment to regulatory change is needed to provide an enabling environment for access to core interventions. Increased investment is needed in economic analysis, comparative cost-effectiveness, adaptation of intervention mixes to local situations, and development of decision support tools for policy makers at national and local levels.

MPAC conclusions: MPAC appreciated the report from the Technical Consultation and agreed with the conclusions. It was acknowledged that a key factor in high-burden countries was a funding shortfall, including a shortfall in domestic funding, but the need to improve efficiencies in the use of existing resources and potential problems in the absorption of funds received were noted. MPAC supported the clear need for a prioritization framework through policy guidance. Developing guidance for the sequencing and combining of multiple interventions was identified as a key gap. In addition, the relative cost-effectiveness, programmatic suitability and acceptability, and anticipated impact on mortality should be major drivers for selecting priority interventions. Where indicated, several chemoprevention interventions, e.g. seasonal malaria chemoprevention, intermittent preventive treatment of pregnant women and of infants, should be given full consideration by countries. There was a consensus on the importance of malaria programmes supporting universal health coverage, with investments (when feasible) in community health worker programmes that deliver
integrated services in remote communities beyond the reach of current facility-based services. There is an opportunity to use malaria as a driver for improving access to and delivery of health services.

In producing a significant impact on malaria morbidity and mortality in a short period with support from multiple donors, seasonal malaria chemoprevention in the sub-Saharan is considered a successful example of rapid policy uptake from which to learn. MPAC endorsed the recommendation of national malaria control programmes working with other health care delivery programmes, such as the Expanded Programme on Immunization, polio, neglected tropical diseases, and integrated community case management. Integrated community case management of malaria, pneumonia and diarrhoea in children under 5 was also cited as an example of successful integration that can produce a significant impact on child mortality.

Several issues were raised regarding the high proportion of malaria cases being seen by the private sector in some settings, including the need for regulatory changes on who can prescribe malaria drugs and administer malaria tests in order to enable the private sector to provide quality diagnosis and treatment. MPAC felt that it is important to engage the private sector in improving access to malaria case management.

The 10 + 1 initiative: an intensified effort to reduce malaria cases and deaths

Background: In response to the data shared in the World Malaria Report 2017, which indicates that global progress against malaria has stalled, WHO is developing an initiative to provide intensified support to the 11 countries that account for an estimated ≈70% of all malaria cases and deaths globally: Nigeria, Democratic Republic of the Congo, Burkina Faso, India, Mali, United Republic of Tanzania, Niger, Mozambique, Ghana, Uganda and Cameroon. All 10 countries in sub-Saharan Africa reported an increase in the estimated case incidence in 2016 compared to 2015. The goal of this initiative is to get the world back on track to achieve the milestones of the Global Technical Strategy by 2025 and sustain the gains to reach the 2030 target. The initial focus will accelerate the reduction of malaria deaths while reducing case incidence. The lessons learned in this first phase will be expanded to include other high-burden countries.

Guiding principles for the initiative are country ownership and leadership, impact at country level in alignment with WHO’s strategic priorities for universal health coverage, tailored and intensified action, integration and multisectoral engagement. Four tiers of response elements have been identified: 1) political and financial dialogue, advocacy and resource mobilization; 2) technical guidance on policies and strategies adaptable to country situations; 3) intensified technical support to countries to prioritize actions and interventions for impact; and 4) country action. Country progress will be tracked through multiple mechanisms: routine surveillance using DHIS2 and other platforms; national taskforces on surveillance, monitoring and evaluation; web-based tracking system; and annual review supported by WHO and partners to guide operational planning. Communication will be an important element of the initiative and a broad timeline of activities was outlined.

MPAC conclusions: MPAC endorsed the initiative to renew focus on support for high-burden countries and supports WHO’s role as a catalyst for countries to renew their commitment and strengthen their programmes in response to recent data indicating that progress has slowed. MPAC recognized the need to focus on countries with a higher number of malaria deaths, as they contribute the largest share of the global
burden of malaria deaths, partly related to malaria transmission and population size. MPAC recommended rapidly expanding the focus of the initiative to countries with the highest mortality rates of malaria, as gains in reducing malaria death could be even higher with the implementation of life-saving malaria interventions in these countries. MPAC emphasized the need to engage countries and key stakeholders including the Global Fund, the President’s Malaria Initiative, the UK Department for International Development and others to ensure harmonized and complementary support is provided. MPAC recognized that the initiative is still in an early stage of development and offered suggestions to strengthen the initiative, including a better definition of concrete actions by WHO and a clear delineation of WHO’s role versus that of country leadership and other stakeholders. MPAC strongly endorsed the need for providing the evidence-based technical guidance to enable countries to prioritize and combine interventions with consideration for cost-effectiveness and an emphasis on the reduction of mortality and disease burden. It will also be necessary to identify the existing barriers to implementing highly cost-effective strategies and address them. MPAC emphasized the importance of a focus on health systems strengthening and on coordination with other programmes, in particular supporting countries to establish a network of community health workers as an integral component of the paid health workforce. Special attention should be devoted to the most marginalized populations that often do not have access to services and interventions. It will be important for the policy guidance and analytical framework developed for this initiative to also be used to support countries with a moderate burden. MPAC suggested the development of an integrated communication and advocacy strategy that identifies key priorities for each stakeholder and focuses on the mobilization of political and thought leaders to engage in a renewed effort for the reduction of malaria disease burden.

All documentation related to this meeting can be found at: http://www.who.int/malaria/mpac/apr2018/en/

All previous MPAC meeting reports can be found here: http://www.who.int/malaria/mpac/meeting_reports/en/

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