Report of the seventh meeting of the WHO Strategic and Technical Advisory Group of Experts for Maternal, Newborn, Child and Adolescent Health and Nutrition

15–17 May 2023
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## Abbreviations and acronyms

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<tr>
<th>Abbreviation</th>
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<tr>
<td>AMDD</td>
<td>Averting Maternal Death and Disability</td>
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<td>ATACH</td>
<td>Alliance for Transformative Action on Climate and Health</td>
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<td>EmONC</td>
<td>Emergency Obstetric and Newborn Care</td>
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<td>ENAP</td>
<td>Every Newborn Action Plan</td>
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<td>EPMM</td>
<td>ending preventable maternal mortality</td>
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<td>IMCI</td>
<td>integrated management of childhood illness</td>
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<td>KMC</td>
<td>kangaroo mother care</td>
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<td>LMIC</td>
<td>low- and middle-income country</td>
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<td>MCA</td>
<td>Maternal, Newborn, Child and Adolescent Health and Ageing (WHO department)</td>
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<td>MNCH</td>
<td>maternal, newborn and child health</td>
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<td>MNCAH</td>
<td>maternal, newborn, child and adolescent health</td>
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<td>MNCAHN</td>
<td>maternal, newborn, child and adolescent health and nutrition</td>
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<td>MNH</td>
<td>maternal and newborn health</td>
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<td>NFS</td>
<td>Nutrition and Food Safety (WHO department)</td>
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<td>PMNCH</td>
<td>Partnership for Maternal, Newborn and Child Health</td>
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<td>SBA</td>
<td>skilled birth attendee</td>
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<td>SRH</td>
<td>Sexual Reproductive Health and Research (WHO department)</td>
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<td>SSNC</td>
<td>small or sick newborn care</td>
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<td>STAGE</td>
<td>Strategic and Technical Advisory Group of Experts</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>WHO</td>
<td>World Health Organization</td>
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Executive summary

The seventh meeting of the Strategic and Technical Advisory Group of Experts (STAGE) was a virtual meeting on 15–17 May 2023, with 16 new STAGE members and 14 continuing members. The chair and three of the four co-chairs of the STAGE workstreams attended the meeting in person. They were joined by 67 WHO staff at headquarters and online from regional offices, and 33 observers from partner organizations.

STAGE Chair, Professor Caroline Homer, welcomed the STAGE members and invited Dr Anshu Banerjee, Director, Maternal, Newborn, Child and Adolescent Health and Ageing (MCA), to provide feedback on WHO activities in response to STAGE recommendations from the meetings convened in May and November 2022.

The meeting agenda included two new topics and detailed updates on various topics from the previous meetings. The WHO Secretariat had organized meetings either with existing working groups or small groups with the co-chairs of the two workstreams and select STAGE members. These provided inputs to the WHO technical teams for the preparation of background information and presentations to STAGE.

Updates were provided on the comprehensive framework for anaemia and next steps to operationalize it in countries; child and adolescent health well-being and plans to operationalize the new framework in countries; a framework for prioritizing maternal and newborn health (MNH) commodities; and the framework for transitioning to midwifery models of care. New topics for which STAGE guidance was sought included an MNH transition model and the related review of emergency obstetric and newborn care models. In addition, a webinar on kangaroo mother care (KMC) was organized to disseminate the global position paper and impetration framework. The sessions were open to partners and other observers.

In all sessions, WHO technical teams provided detailed presentations followed by discussions initially by STAGE members and then by WHO regional offices, followed by partners and other observers. The guidance or recommendations were further refined during the closed sessions for STAGE members and WHO technical teams, and next steps were discussed. At the closing session, Dr Laurence Grummer-Strawn on behalf of Dr Francesco Branca, Director, Nutrition and Food Safety (NFS), Dr Pascale Allotey, Director, Sexual Reproductive Health and Research (SRH), and Dr Anshu Banerjee, Director, MCA, thanked STAGE for their guidance and assured continued updates to STAGE on topics relevant to their departments. Professor Homer thanked everyone, especially all the STAGE members and partners for their continued support. The main recommendations of STAGE are summarized below. The full recommendations are given in the relevant sections of this report.

STAGE recommendations

Child and adolescent health well-being: operationalization of child and adolescent health and well-being programmes

Children and adolescents can provide the demographic dividend for the prosperity of current and future generations. Threats to suboptimal development in the first two decades of life lead to high levels of inequity and loss of human capital, with detrimental implications for health and productivity in adulthood and for healthy ageing.

STAGE commends WHO’s efforts to operationalize programming to support child and adolescent health and well-being. The initiative is transformational and complex and will require new strategic thinking from within health systems and across organisations and sectors, commitment at all levels, planning that reflects community needs, a focus on inequalities, and an emphasis on evidence, high-quality data, and outcomes. Health services in collaboration with other services, especially in education and social sectors are the mainstay for identifying and caring for mothers, children, and adolescents who are at risk of suboptimal development.
STAGE recognizes that transformative action in health systems, embedded in primary health care, and multisectoral collaboration is needed to achieve the objectives of the initiative. Implementation will be context specific, and government led, and it needs to be supported by implementation research to develop models of care that are feasible and cost effective. The aim is to ensure delivery of holistic, family-centred, participatory and dignified care to families, children and adolescents that is anticipatory and has the potential to promote protective factors and to identify and address risks in a timely and appropriate manner.

Essential actions will include an assessment of the situation followed by capacity development of the workforce, including during preservice education, building a skilled health workforce, and strengthening data systems across programmes and sectors to monitor health and well-being. Within the health sector, the initiative strives for a platform to enable multiple programmatic areas to collaborate, including child and adolescent health, immunization, nutrition, mental health, sexual and/or reproductive health, violence prevention, environmental health, health promotion, and other communicable and noncommunicable conditions.

Recognizing the urgency to act and the full alignment with the objectives of the WHO General Programme of Work, the recommendation is to establish a STAGE working group that will focus on developing implementation tools, promoting dissemination, country adoption of successful evidence-based implementation, and continuous improvement strategies in preventive care. The working group with external experts and partners will also develop a position paper to advocate for and advance the realization of the health and well-being agenda.

STAGE also requests the Director-General to advocate with governments and partners to lead the transformation in health systems essential for the healthy growth, development and well-being of children and adolescents.

Anaemia framework

STAGE expressed appreciation of WHO’s consultative approach to developing the Comprehensive framework on anaemia, which was published and presented at the International Maternal and Newborn Health Conference in Cape Town. The framework presents five action areas that are all needed to drive success in addressing anaemia: (1) analyse data on causes and risk factors for anaemia; (2) prioritize preventive and therapeutic interventions; (3) optimize service delivery across platforms and sectors; (4) strengthen leadership, coordination and governance at all levels; and (5) expand research, learning and innovation.

STAGE emphasized the importance of developing companion tools to support country implementation of the framework, including implementation guidance, a monitoring framework (with inclusion of social determinants and consideration of process for guiding countries to develop realistic national targets based on local data), and the economic argument for investing in strategies to reduce anaemia through existing structures and programmes. WHO’s proposed approach to the development of companion tools is to have the WHO Interdepartmental Working Group on Anaemia serve as the steering committee overseeing their development, and to work with the Anaemia Action Alliance, and possibly the WHO/United Nations Children’s Fund (UNICEF) Technical Expert Advisory group on nutrition Monitoring (TEAM), and to engage with STAGE for feedback.

STAGE members advised WHO to engage with community-led, multisectoral efforts (such as the collective impact forum) and provide backbone support to facilitate implementation and strengthen collaboration. As several STAGE working groups have overlapping activities, the STAGE requested the Anaemia Working Group define linkages with other STAGE working groups (MNH Commodities, Climate Change, MNH Transition, Well Child).
WHO identified a few opportunities to disseminate the framework to global, regional and national-level audiences. It is anticipated that each will provide an opportunity to continue gathering input on the framework and, importantly, its uptake and implementation. The STAGE recommended starting to explore leadership and advocacy opportunities (such as the G7, G20) for the 2024 and 2025 agendas.

STAGE recommended exploring the extension of the WHA Global target for anaemia in women 15–49 years from 2025 to 2030. STAGE also recommended that the STAGE Anaemia Working Group collect and critically examine available data from countries and existing work on anaemia to explore targets for children and other critical population groups for the post-2030 agenda, underlining the importance of immediately addressing anaemia in these critical population groups.

**Midwifery models of care**

Midwifery models of care refers to the process through which countries move over time to well-functioning systems in which midwives are educated, regulated and working within an enabling policy and health system environment. As per STAGE recommendations, a STAGE Midwifery Working Group was created with three subgroups (midwife; health systems; and enabling policy regulation and environment). The primary output of the STAGE midwifery working group is an implementation guidance document targeted at ministries of health. This guidance document on transitioning to midwifery models of care will be about operationalizing midwifery care in countries, depending on their context. It will be a practical guide that intends to help countries consider implementing models that focus on midwifery care across the continuum from pre-conception to the postpartum period, including family planning, safe abortion care, and prevention of stillbirths. The guidance will strengthen the importance of midwives practising to their full scope of practice in collaboration and cooperation with health professionals and across primary, secondary and tertiary services. This work will be linked with STAGE work on the maternal and newborn transition framework and on emergency obstetric and newborn care (EmONC).

**MNH commodities**

An established living guidelines system exists in WHO that monitors scientific literature in relation to the prevention and treatment of the main maternal health conditions. In relation to this, a comprehensive set of commodities has been recommended by WHO. Since the United Nations commission report on life-saving commodities for women and children in 2012, new commodities have been identified. WHO has mapped all WHO recommended maternal health commodities and is in the process of mapping WHO recommended newborn health commodities. The STAGE working group is starting the prioritization process based on standard criteria and will link with other experts as needed. It will be important to consider how the implementation guidance will be used and ensure that it links to the MNH Programmatic Transition Framework. STAGE highlighted the need to incorporate recommendations from the recent summit on postpartum haemorrhage and align with the resulting roadmap for addressing postpartum haemorrhage into the implementation guidance.

**MNH programmatic transition framework**

There have been various transition frameworks described in the literature, which outline transition or movement from high mortality to lower mortality scenarios. In 2014, the obstetric transition was published, which described the transition from higher to lower levels of maternal mortality. For newborn mortality, cut-offs for different levels of mortality have been used. The Exemplars project, led by the University of Manitoba, Johns Hopkins University, and the London School of Hygiene and Tropical Medicine, developed a comprehensive five-phase transition model (high to low mortality) for maternal, stillbirth and neonatal mortality. They considered multiple characteristics including mortality patterns, causes of death, fertility, abortion policies, health systems, socio-economic progress, health service coverage and inequalities. For each of the five phases of the high-to-low mortality transition, common characteristics for the multiple dimensions were identified, including the role of infectious diseases as a cause of death, overall and adolescent fertility levels, coverage of births by all health facilities and by hospitals, inequalities in service coverage and caesarean section.
There are several advantages to this type of framework at national and global levels, including (1) as a mechanism to help understand change over time and across different contexts; (2) as a benchmark status; (3) to inform priorities for strategy and programmes; (4) to improve data quality; and (5) to enable learning from subsequent stages. The aim is to accelerate progress and target specific contexts with priority actions, keeping in mind that the transition is not linear and multiple stages of transition can co-occur in the same country. There is a need to finalize the cut-offs for the stages and to refine the programmatic elements for each stage. Overall, members acknowledged the value of the framework for accelerating the every newborn action plan (ENAP) and ending preventable maternal mortality (EPMM) action, and to support advocacy efforts. Additionally, STAGE members were eager to see the other working groups, namely the anaemia framework, midwifery models, and the emergency obstetric and newborn care review, more intentionally leverage and apply the transitions framework to their efforts.

It is also essential to consider the transitions framework at subnational levels, including equity, community aspects/engagement and social determinants.

A STAGE working group was recommended to further develop and finalize the transition framework.

Emergency obstetric and newborn care review

The Emergency Obstetric and Newborn Care re-visioning project (EmONC), led by Averting Maternal Death and Disability (AMDD), presented an update of progress to date. The revisioning includes newborn health and of experience of care, with revised signal functions, levels of care, and indicators. Overall, STAGE expressed appreciation for the efforts made to update the EmONC framework. STAGE members welcomed the integration of maternal and newborn, and they encouraged continued deepening of this integration across the proposed framework and indicators. STAGE members acknowledged the new elements addressing human resources in relation to caseload, provider well-being, with particular attention to midwives and their role in both EmONC and routine care, and teamwork as critical components of an effective emergency response.

Several comments from STAGE members concerned the need to ensure EmONC is contextualized in the continuum of care, with a specific suggestion not to lose a focus on normal care, including the monitoring of routine labour with the new Labour Care Guide (the revised partogram). Other comments pointed out longstanding challenges, including that some countries have not authorized midwives to perform all the signal functions, and many countries have no mechanism to maintain or assure provider competency in performing signal functions, especially assisted vaginal birth. STAGE members suggested important areas for the EmONC framework to link to, including management and leadership, community engagement and cultural sensitivity, and immediate postpartum family planning. WHO is working on a maternal and newborn programmatic transition framework that will address interventions and strategies for MNH for both normal care and managing complications.
STAGE recommended the work of the EmONC re-visioning project to be part of the STAGE working group on the MNH programmatic transition framework, with a focus on management of maternal and newborn complications. This will include how it may contribute to or be applied to the transition framing and ensure linkages with other ongoing WHO initiatives.

**Webinar to launch kangaroo mother care (KMC) publications**

The STAGE working group for kangaroo mother care organized a webinar to launch the policy and programmatic guidance for KMC. The webinar started off with an overview of the KMC global position paper and implementation strategy, followed by implementation experiences from five countries and their plans for scale-up. Four partners and a parents organization provided their perspective and plans for supporting countries implement KMC.

Two publications were launched: kangaroo mother care global position paper and the kangaroo mother care implementation strategy for scale-up adaptable to different country contexts.

In addition, a Lancet comment on WHO Global Position Paper and Implementation Strategy on kangaroo mother care call for fundamental reorganisation of maternal–infant care was also published.
The seventh meeting of STAGE was convened as a virtual meeting from 15 to 17 May 2023 by WHO departments of Maternal, Newborn, Child and Adolescent Health and Ageing (MCA), Nutrition and Food Safety (NFS) and Sexual and Reproductive Health and Research (SRH). The agenda items for the meeting were finalized in discussion with the STAGE Chair (Annex 1). This meeting was the first meeting for 17 new STAGE members who joined STAGE in April 2023 as part of its three-year rotation process. Sixteen of the new members and 14 continuing members participated in the meeting. The chair and three of the four co-chairs of two workstreams – Evidence and Guidelines for Impact and Health Systems for Impact – joined in person along with WHO staff at headquarters, while WHO staff from the regions and 33 observers from partner organizations joined online (Annex 2).

The preparatory work for the STAGE meeting was done through working groups that were already formed or through smaller groups of STAGE members with topic expertise. The working groups with external experts and STAGE members for anaemia, MNH commodities and innovations, and midwifery had one or more meetings to discuss the progress and next steps for these areas of work. One or two meetings were dedicated to presentations to be made to STAGE, at which working group members provided inputs to WHO technical leads. For other agenda items (MNH transition, EmONC review, child and adolescent well-being) the WHO Secretariat organized meetings across the two workstreams with each subgroup that included the co-chairs of the respective workstreams and a few STAGE members who were co-opted based on their topic expertise. At these meetings, the technical teams presented their concept notes and identified specific questions for STAGE. These subgroups provided detailed comments to WHO technical leads to enable them to clarify their presentations to STAGE.

WHO technical leads prepared the background documents, and these were provided to STAGE members 10 days prior to the meeting. During the open sessions, WHO technical leads made presentations that included the specific questions for guidance from STAGE. The floor was then opened for discussion with STAGE members, representatives of WHO regional offices, United Nations (UN) partners and participants. The discussions focused on next steps or on guidance for these various topics. These were then further revised and refined during discussions at the two closed sessions of STAGE members on day one and day three.

All 30 STAGE members attending the meeting had provided their declaration of interest, which was reviewed by the WHO Secretariat. Eleven members had identified conflicts, mainly related to grants received by their institutions for doing research in their area of expertise. None of the reported conflicts were perceived to have any impact on the members’ ability to join the meeting or to provide objective and impartial contribution to any of the sessions.
Opening session

Professor Caroline Homer, STAGE Chair, reiterated her welcome to the new STAGE members, and her appreciation of STAGE members, many of whom had attended subgroup meetings in the past month in preparation for STAGE. She thanked the WHO technical teams who had worked hard to provide the information at these sessions and the WHO Secretariat for organizing the sessions. She then provided a brief on the planned agenda for the three days, including the KMC webinar on day two of the meeting (through a separate zoom link).

She then invited the Director of MCA, Dr Anshu Banerjee, to provide an update on the recommendations made by STAGE at its previous meetings.

Dr Banerjee also welcomed the new STAGE members and added his appreciation for the continued support from STAGE to move the maternal, newborn, child and adolescent health and nutrition (MNCAHN) agenda forward. He added that he looked forward to meeting the new members in person at the next STAGE meeting in November. He then informed the group that 30 out of the 31 members had provided their declarations of interest and 11 members reported some conflict; however, none had any conflicts that would restrict them from participating in any of the sessions. He reminded the group that, as always, the detailed progress report is attached to the STAGE report (Annex 3). He then moved on to provide a brief update on the recommendations from the previous meeting in November 2022.

1. Small or sick newborn care (SSNC): Dr Banerjee highlighted that the Norms project is underway to establish benchmarks for essential components of level-2 care of small or sick newborn in low- and middle-income countries (LMICs). Benchmarks include the number of beds per population of live births, time to travel to level-2 facilities, human resources, and the space and design required in SSNC units. Some of the relevant indicators were to be discussed as part of the EmONC review presentation on day three.

2. Impact of climate change on MNCAHN: Dr Banerjee mentioned that discussions were underway across various departments of WHO (MCA, SRH, NFS and Climate Change and Health) to collaborate as per the Alliance for Transformative Action on Climate and Health (ATACH). A meeting with external experts and UN partners to scope the indicator prioritization exercise was held in April 2023, which focused on identifying gaps in literature and research with special attention to identifying priority indicators. A WHO call to action on climate change and MNCH is underway to be signed by UN partners and other implementing partners.

In addition, WHO has commissioned scoping reviews of the impact of climate change on MNCAHN, especially impacts of extreme heat and outdoor pollution. A policy brief is also being developed as part of the Initiative on Climate Action and Nutrition (I-CAN). The STAGE working group is yet to be formed.

3. Comprehensive framework for integrated action on the prevention, diagnosis and management of anaemia: a detailed update was provided at this meeting, which, along with the discussions, is reported in that section.

4. MNH innovations: a detailed update was presented at this meeting and is reported later in this report.

5. School health and well-being: WHO and the United Nations Educational, Scientific and Cultural Organization (UNESCO) have developed a provisional list of indicators to monitor school health and a web platform to collect data and calculate indicator values. Dr Banerjee informed the group that MCA is leading an adolescent health data project in over 100 schools to generate health information through school surveys.
6. Risk stratification analysis to identify infants and children at high risk of mortality: a research consultation is planned for later this year to develop intervention strategies to reduce mortality in high-risk infants and children, while the team is seeking additional funding for the formal evaluation of programmatic approaches. A review of specific elements of the integrated management of childhood illness (IMCI)/Hospital pocketbook is underway to consider revisions that will reflect risk-differentiated clinical care approaches.

Dr Banerjee then provided a summary of the WHO responses to earlier recommendations and reminded the group that detailed updates are provided for maternal health commodities, child and adolescent health well-being check-ups, and midwifery models of care. For assessing the impact of preventive adolescent health interventions, as a response to STAGE recommendations, a systematic review of impact measures used in preventive screening programmes and an investment case is underway, which are expected to be completed by end 2023. The work related to mitigating the marketing of breast-milk substitutes continues, with WHO organizing a global congress of national stakeholders in June 2023 to advance Code legislation and enforcement, while the Lancet series was launched on 8 February 2023. WHO guidance to Member States on interventions to regulate and mitigate the effects of digital marketing of breast-milk substitutes is expected to be presented to the World Health Assembly in May 2024.

He reminded the group about the KMC webinar planned for day two of this meeting, during which two STAGE outputs – the global position paper and the implementation framework – will be disseminated.

STAGE members were appreciative of the work being done as a response to STAGE recommendations. The discussion that followed included queries on the intersectionality of adolescent well-being work with sexual and reproductive health, and how and if the climate change work factored in various issues like adolescent mental health, food and nutrition. The WHO team clarified that the school health and adolescent health work is done in collaboration with the SRH department along with other departments in WHO and with other UN agencies. Guidance on well-being is also being updated to include the new evidence and thinking. The WHO team also clarified that climate change work is uses a life-course approach and is done in collaboration with the SRH and NFS departments.
Updates from previous STAGE recommendations

The comprehensive framework for integrated action on the prevention, diagnosis and management of anaemia: update and next steps

Background

Dr Lisa Rogers, NFS/WHO, presenting on behalf of the WHO Interdepartmental Working Group on Anaemia (WHO departments of Nutrition and Food Safety; Maternal, Newborn, Child and Adolescent Health and Ageing; Sexual and Reproductive Health and Research; Global Malaria Programme; and Global Neglected Tropical Diseases Control Programme) started the session by briefly describing the rationale to address anaemia from a holistic viewpoint rather than only as a nutritional issue. She expressed appreciation for inputs from WHO regional offices, partners and the STAGE Working Group on Anaemia during the development of WHO’s Accelerating anaemia reduction: a comprehensive framework for action (comprehensive framework), which was published and presented on 11 May at the International Maternal and Newborn Health Conference in Cape Town.

Using WHO estimates for the year 2019, Dr Rogers described the burden of anaemia: 40% of infants and young children, 37% of pregnant women, and 30% of women 15–49 years of age suffer from anaemia – this amounts to over 500 million women and 250 million children affected by anaemia. She presented trends in the prevalence of anaemia, noting that most declines in anaemia prevalence were in children and pregnant women from 2000 to about 2013, after which virtually no progress has been made. Most countries are not on track for reaching the World Health Assembly global target on anaemia, which calls for a 50% reduction in anaemia in women of reproductive age, from 2012 to 2025. Anaemia can have serious health, economic and developmental consequences and impacts not just an individual, but also their family, their community and the population.

For these reasons, WHO set up the Interdepartmental Working Group on Anaemia, agreeing to develop the comprehensive framework. WHO first identified priority topics to address anaemia, and background papers were commissioned on four of these priority topics to help inform the comprehensive framework. These four papers and an introduction are being published in a special virtual issue of Annals of the New York Academy of Sciences. The first paper of the special issue reviews the main determinants of anaemia. The second paper explores the challenges in the diagnosis of anaemia – the methods, equipment, sample types and quality control aspects of haemoglobin measurement for anaemia diagnosis. The third paper focuses on interventions for the prevention and management of anaemia. The last paper (submitted) focuses on how we can deliver these interventions within programmes across sectors. Each paper summarizes the existing literature on the topic and contains perspectives felt to be essential for driving country impact and activities that are actionable for reducing anaemia within a multisectoral approach.

The objective of the comprehensive framework is to help translate current evidence to inform multisectoral strategies to reduce anaemia and accelerate progress towards 2025 and 2030 targets and optimize health and well-being. The value this framework brings is that it is based on the core principles of primary health care; it addresses all forms of anaemia, consolidating available evidence and addressing coverage and equity; and it was co-designed by stakeholders across disciplines and geographies.
The comprehensive framework provides five action areas for addressing anaemia:
1. Analyse data on causes and risk factors for anaemia.
2. Prioritize key preventive and therapeutic interventions.
3. Optimize service delivery across platforms and sectors.
4. Strengthen leadership, coordination and governance at all levels.
5. Expand research, learning and innovation.

Using this comprehensive approach, WHO seeks to improve coverage and uptake of priority interventions or actions that lead to improvements in four outcomes, which are based on the direct causes of anaemia: improved micronutrient status; reduced infections, inflammation and chronic diseases; reduced gynaecological and obstetric conditions; and better screening and management of inherited red blood cell disorders where prevalent.

To facilitate implementation of the comprehensive framework, three companion documents or tools are being proposed for development, including implementation guidance, a monitoring framework, and the economic argument for investing in strategies to reduce anaemia. WHO’s proposed approach to their development is to have the WHO Interdepartmental Working Group on Anaemia serve as the steering committee overseeing their development and work with the Anaemia Action Alliance and possibly the WHO/UNICEF Technical Expert Advisory group on nutrition Monitoring (TEAM) and engage with STAGE for feedback. At the same time, WHO needs to expand partnerships, particularly through the Anaemia Action Alliance, to ensure engagement with multiple sectors. WHO will also need to support countries and regions to adapt and implement the framework and ensure synergy with other activities on anaemia.

WHO identified a few opportunities to disseminate the framework to global, regional and national-level audiences. It is anticipated that each will provide an opportunity to continue gathering input on the framework and, importantly, the uptake and implementation of the framework. WHO expressed appreciation for the suggestions from the STAGE working group, including a recommendation to look beyond 2023 for dissemination events.

Priorities for next year include continued learning and collaboration among frontrunner or pathfinder countries; publishing companion documents, updates and additions to evidence-based resources from WHO; conducting a baseline assessment of national actions towards anaemia reduction (score card); and deciding whether the global target is extended from 2025 to 2030.

Questions to STAGE

WHO requested STAGE inputs to: (1) opportunities to disseminate (globally, regionally, nationally) the comprehensive framework on anaemia; (2) implementation in countries while working with partners across sectors; and (3) the development of companion documents or tools with additional input from those with expertise in financing, health systems and monitoring.

Discussion

Dr Narendra Arora, Chair of the STAGE Working Group on Anaemia, expressed appreciation of the team’s work to develop the framework through a series of consultations with several experts, not only through the working group but outside as well. Dr Arora emphasized the importance of developing the companion documents to support implementation, monitoring and building the investment case. He requested that STAGE members comment on those overall and on two specific issues for implementation, such as communication and behaviour change for dietary diversification to ensure it becomes integral to the framework, and the challenge of getting multiple sectors to work together with convergence in activities to improve the status of anaemia.

Implementation and monitoring of multisectoral engagement

STAGE members suggested collaborations with, and offered to facilitate introductions to, professional associations and organizations, such as the International Federation of Gynaecology and Obstetrics and the International Paediatric Association at global, regional and local levels, to advance advocacy for anaemia reduction.
STAGE members emphasized the importance of the pre-conception care intervention period (for example, the reduction of early/child marriages) and suggested this be included as a key message separate from the messages on menstrual hygiene to menstruating adolescents and women. There was a suggestion to ensure the framework addresses strategies that improve micronutrient bioavailability, with consideration of iron inhibitors and iron enhancers. The role of the private sector in optimizing service delivery across platforms and sectors was acknowledged.

STAGE members emphasized looking at issues concerning tobacco control, food insecurity and hunger, adequacy of nutritional intake, and chronic inflammation, which will be important considerations for implementing interventions that require health system components. The WHO Nurturing Care brief, Tobacco control to improve child health and development (https://nurturing-care.org/tobacco-control/), was recommended for its content on the impact of tobacco, food insecurity and inflammation. STAGE members inquired whether there is an analysis of the relationship between anaemia, food security and humanitarian contexts. STAGE members also felt that it would be useful to look at and learn from the strategies for collective impact (for example, the Collective Impact Forum).

Targets

STAGE members inquired about the possibility of revising the existing World Health Assembly global nutrition targets for 2025 if they are extended to 2030. They should still be aspirational but more realistic and feasible and should consider a target for anaemia in young children. A number of STAGE members reiterated that a global target for children is important and should not wait until the post-2030 agenda, noting that the global prevalence of anaemia in children aged 6–59 months is comparable to that seen in pregnant women. It was noted that anaemia in women beyond age 49 years should also be addressed in global targets for anaemia within a life-course approach.

Dr Francesco Branca, Director, NFS, responded that the targets are useful in fundraising and advocacy, but that WHO will need to go back to the Health Assembly to consider alignment with the SDGs, noting there is a paper exploring that possibility, and extending with some adjustment of the target. WHO would like to prepare the new generation of targets and will need to hear from multiple constituents. When crafting the Health Assembly targets for 2025, WHO was considering the main challenges in epidemiology, the available data, and the interest of Member States to act. Now there are other action plans, including one on child wasting and one on obesity.

Professor Homer thanked all the STAGE members and the STAGE working group.

At the closed session the discussion about targets continued, and Dr Larry Grummer-Strawn explained the anticipated challenge of getting countries to take on a new agenda and resolve it in a very short time frame for the Health Assembly. He also noted that STAGE is not the only group that recommends re-examining the targets, and said the conversations need to be had ahead of the Health Assembly in 2028 and 2029. The chair reminded all that the objective is to explore, not determine, an expanded set of targets and expressed appreciation of the complexity.

STAGE members agreed that, rather than presenting a new target in 2030, it would be useful to have a discussion of what the new target should be for 2030 and see movement on how to assess the situation so that, by 2030, countries have committed to gather data and decide what they want to support as new targets. STAGE members expressed a sense of urgency to start some work that addresses anaemia in children.

There was a specific suggestion to move the recommendation on “guiding countries to develop realistic targets based on local data” to the bullet on Health Assembly global nutrition targets.
Based on the discussions in the closed session, the STAGE guidance was revised to:

- WHO to develop **companion tools** to support country implementation of the framework
  - Implementation guidance (with inclusion of behaviour change communication and approaches to collate lessons on why progress has not occurred in the last 10 years and use them to build implementation plans)
  - Monitoring framework (with inclusion of social determinants and consideration of process for guiding countries to develop realistic national targets based on local data)
  - Investment framework and costing of package of interventions
- Engage with **community-led, multisectoral efforts** (such as the Collective Impact Forum) with backbone support to facilitate implementation and strengthen collaboration
- Define linkages with other STAGE **working groups** (for example, the Commodities and Climate Change Working Group)
- Start exploring **leadership and advocacy opportunities** (such as G7, G20) for the 2024 and 2025 agendas
- STAGE recommended exploring the **extension of the WHA Global target for anaemia in women 15–49 years** from 2025 to 2030. STAGE also recommended that the STAGE Anaemia Working Group collect and critically examine available data from countries and existing work on anaemia to **explore targets for children and other critical population groups for the post-2030 agenda**, underlining the importance of immediately addressing anaemia in these critical population groups.

### Implementation of new MNH commodities

#### Background

Dr Allisyn Moran, MCA/WHO, gave an overview of how WHO works to improve maternal health within the ambit of new commodities. An established living guidelines system exists that monitors scientific literature in relation to the prevention and treatment of the main maternal health conditions. In relation to this, a comprehensive set of commodities has been recommended by WHO. In 2012 a UN commission report on life-saving commodities for women and children was launched, which has resulted in significant improvements in availability of these at country level; however, gaps still exist. Additional commodities have been identified since 2012 and there is a need to prioritize all WHO recommended commodities. This is also included as a milestone in the every newborn action plan (ENAP) and ending preventable maternal mortality (EPMM) framework. In addition, there are many commodities that are not WHO recommended but still have potential for great impact. However, implementation challenges need to be addressed first.

During its previous deliberations, STAGE recommended the formation of a working group to move this further along, with WHO providing further updates. As a response to this, Dr Moran mentioned that an exercise, including stakeholder analysis, was done to map all WHO recommended commodities and to set up a prioritized list of these commodities. The stakeholder analysis included 42 potential stakeholders from various regions, of which five stakeholders joined this working group. A total of 121 strongly recommended commodities were selected (88 medicines, 9 medical devices, 24 diagnostics), which span the whole spectrum of maternal and newborn care. The STAGE working group met in April 2023 to initiate discussions on the set of components and dimensions for the prioritization tool. Neonatal commodity mapping is also underway. The group plans to use the combined approach matrix structured as a double entry table, which considers three dimensions and four components for prioritization. Dimensions include determinants and knowledge of commodities’ effects/precision on relevant
outcomes, acceptability (both by providers and users) and equity, and feasibility (including the need for additional resources and costs). The components against which each dimension will be weighed include the user (as well as family/community), the health sector, other extra-sectorial stakeholder, and country policy (including finance).

Dr Moran requested STAGE inputs for the following questions:

Questions to STAGE

1. What is the best process for prioritizing WHO recommended life-saving maternal and neonatal commodities?

2. How can WHO advise and guide the development of implementation strategies for scaling up across different country contexts? Should it be a broad or tailored approach?

Discussion

STAGE members opined that regarding the selection criteria, a focus on disease burden may be useful, with considerations for equity, feasibility to deliver, delivery platforms etc. It would also be important to link new commodities with the guidelines and focusing on how these commodities can improve quality of care would be important. Stakeholders and users need to understand the benefits of these commodities.

Some members suggested that the essential list should be periodically reviewed and WHO needs to make sure that countries are prioritizing the essential commodities. This would also ensure that commodities that have been proven not effective or harmful need to be removed from lists in many countries. It is at subnational level that decisions on the essential commodity list is done, and that needs to be taken into consideration too. Others highlighted the importance of stock availability, which is still a huge issue in many countries; hence it is more appropriate to have a tailored approach to this as context differs between countries. Another member highlighted the need to consider prevention issues and the need to ensure the availability of basic infrastructure when prioritizing new commodities.

WHO regional colleagues provided some inputs relevant to their regions and highlighted that, in the Western Pacific Region, essential medicines and supplies have been included in health facility assessment tools. Essential medicines are incorporated in all the regional tools to support countries, especially to improve quality of care. The colleague from South-East Asia Region mentioned the importance of scaling up reagents, maintaining machines etc., which is critical for sustainability.

The WHO teams clarified that newborn commodities will also be included, and they would ensure that this work is part of the maternal newborn transitional framework. And this will move forward in discussion with the STAGE working group and link in with other experts as per need.

During the closed session, STAGE members reiterated the need to carefully manage the prioritization process, giving consideration to implementation issues and highlighted the need to incorporate recommendations from the recent summit on postpartum haemorrhage and align with the resulting roadmap for addressing postpartum haemorrhage into the implementation guidance.

Child and adolescent health well-being programming

Background

Dr Bernadette Daelmans, MCA/WHO, summarised the progress of the child health redesign to date. Following an introduction of the rationale for well care for children and adolescents, the proposed minimum schedule, sequencing and content, she then introduced an outline of the operational guidance and requested STAGE inputs and feedback.

Operationalizing well care programmes for children and adolescents is a transformational agenda. It was noted that countries will be at different stages in their journey; however, progress will require:

• new thinking from within health systems and across sectors and organisations
• strategic thinking and commitment at all levels
• planning that reflects community needs, with a focus on inequalities
• a focus on evidence, high-quality data and outcomes.
Countries may do this by building on existing guidance and approaches, bringing systems and services together to holistically support children and families, and by building on practical experiences and learning. It is critical that operationalization will not only be limited to the various programmes within the health sector but will also involve multisectoral coordination.

Provision of well-being care would need to consider service delivery components, the cost of delivering these services, and the planning, management and monitoring of these services from different/multisectoral platforms. It would be equally important to create demand and facilitate utilization of these services, while also focusing on a governance structure that will be acceptable and feasible across sectors. Dr Daelmans also provided some examples of high impact areas that could be a focus, such as ensuring healthy pregnancy, supporting mental health, ensuring school readiness, inclusion of children with disabilities, and addressing cultural and intergenerational barriers while tackling inequalities. Thus, health services in collaboration with other services, especially in the education and social sectors, are the mainstay for identifying and caring for families, children and adolescents who are at risk of or most vulnerable to suboptimal development.

Questions to STAGE
1. Are governments ready to embrace a transformational agenda?
2. Can a minimum schedule of contacts in health services be a foundation?
3. What are key questions to be addressed in planning?
4. Will a focus on high impact areas be helpful?
5. How can community partnerships and the involvement of other sectors be built?

Discussion

Overall, STAGE members appreciated the progress made so far. They noted that countries can start implementation based on the maturity level of their health systems and multisectoral programming, noting that progressive realization of implementation would be driven by each country’s needs, resources and political will. Given the complexity of implementation, members reiterated the need for more evidence on implementation in different contexts (including refugee situations, war, high-income vs low-income countries etc.). The operational guide should answer when, where, how and by whom will delivery for each age group be made, and it should identify indicators to monitor the process. A number of members highlighted the issue of measuring impact, as outcomes will be along the life course and some may not be immediately measurable; this time lag will need to well understood and taken into consideration. Members also stated the need for a closer relationship or a link with maternal health, specially addressing the care of well women and girls as a whole and the skill sets required to provide this. Adolescents need more attention in terms of sexual reproductive health and violence, and in preparing them for the transition into adulthood. This requires a multidisciplinary approach and person-centred care, including the use of social and community networks and digital technology.

The multisectoral nature of the implementation makes it important to recognize that different sectors may have to step up in leadership for different age groups and for different public health issues while ensuring coordination and avoiding duplication of services. An example is the role of the education sector to promote the health and well-being of school-aged children. It was proposed that the framing be about “what every child and adolescent needs”, and that governments use all platforms, not only health, to meet these needs. An investment case to support advocacy and buy-in would be useful.
In addition to the proposed high impact areas, members suggested including physical activities and healthy eating for adolescents, a focus on non-schooling children and adolescents, social trajectory such as life aspiration, peer pressure etc., addictions and substance abuse prevention and management, and addressing child labour.

Members noted that while the proposed programme may be achievable in high-income countries, it may be more difficult to realize in resource-limited settings where human resources for health are already strained and have not been trained to address social determinants as part of their clinical duties. Members noted that the transformation can be facilitated by a change in the role and function of paediatricians and traditional child health providers. There is a critical role for child health professional societies, in particular paediatric associations, to take a lead in this endeavour. It was also proposed that civil society, religious bodies and the private sector should be included in service provision and capacities enhanced inside and outside the health system, such as social workers, extension officers, to spread the tasks across different cadres at the different stages of the life course. A few members, however, proposed that a specific workforce might be introduced to carry out these services, for instance, child and adolescent health nurses with postgraduate training along with social workers who are specialized in supporting health and well-being. Other members suggested training the existing workforce, both through pre-service and in-service education. There were suggestions to shift tasks, for example to community health workers and other ancillary staff.

Members recommended that WHO prioritize actions for each age group and help countries identify a list of prioritized universal preventive services, which should be based on population prevalence and critical life-course transitions. Targeted or indicated interventions may be detected by screening, and others through more comprehensive psychosocial assessments. Members recommended more adolescent visits than what is proposed. They also observed that operationalization in countries is needed to learn how to implement. The importance of the school setting was emphasized as a likely avenue for scale-up.

Many members highlighted the need to integrate a well-being agenda in the universal health coverage, including by enhancing content in existing packages, such as for MNCAH, immunization and nutrition, as well as potentially defining a specific package for well-child and adolescent health care contacts and services within the primary health care/universal health coverage agendas.

Proposed next steps and considerations

- Conduct feasibility studies in selected countries.
- Define what can be done in health facilities, in communities, in schools, at home.
- Redesign pre-service and in-service curricula for capacity building.
- Ensure that child and adolescent health and well-being are integrated in universal health coverage intervention packages and approaches for strengthening primary health care in countries.

In the closed session, STAGE members reiterated the need for multisectoral engagement to develop age-specific interventions across the life course. STAGE made the following recommendations:

- A working group be formed to help advance the formulation of the rationale, the evidence synthesis of what to do and how, the overall implementation guidance and its operationalization in countries, including best staffing practices to support development of clinical expertise in MNCAH.
- A position paper on child and adolescent health and well-being be developed by the working group to socialize the transformative agenda more widely.
- An investment case be made for the health and well-being agenda of children and adolescents.
- The Director-General to advocate with governments and partners to lead the transformation in health systems that is essential for healthy growth, development and well-being of children and adolescents.
Midwifery models of care

Professor Homer invited Dr Amelia Latu Afuhaamango Tuipulotu, Chief Nursing Officer, WHO, to provide her insights on the topic. Dr Tuipulotu highlighted the need to strengthen the midwifery profession within country contexts to improve maternal and newborn care. She mentioned that she looked forward to hearing updates on the implementation guidance framework that was being developed by the STAGE working group.

Background

Ms Justine Le Lez, MCA/WHO, provided a brief recap of the previous presentation to STAGE and a summary of the formation and progress made by the STAGE working group in developing the implementation framework to enable countries to transition to midwifery models of care. Midwifery models of care refers to the process through which countries move over time to well-functioning systems in which midwives are educated, regulated and work within an enabling policy and health system environment. She also highlighted the role and importance of midwives in achieving the ENAP and EPMM targets. Midwives can provide over 80% of skilled care during pregnancy and childbirth. Recent evidence indicates that achieving universal coverage of midwife-delivered interventions by 2035, including the provision of family planning, could save 4.3 million lives per year by 2035 and could avert more than 60% of all maternal deaths, stillbirths and neonatal deaths.

As per STAGE recommendations, a STAGE midwifery working group was created with three subgroups (midwife; health systems; and enabling policy regulation and environment). The primary output of the Working Group on Midwifery is an implementation guidance document targeted at ministries of health in countries where this is expected to aid them in taking a political decision regarding transition to midwifery models of care. The implementation guidance will contain three parts:

- Part I – Design and plan the implementation of a midwifery model of care
- Part II – Implement the midwifery model of care
- Part III – Advocate and influence for change.

STAGE was requested to provide inputs into the structure and process of the working group, and a proposed outline for the implementation guidance document and the proposed work plan. The co-chair of the working group, Professor Jane Sandall, reiterated the importance of this implementation guidance and its value to the countries in ensuring midwifery models of care are well integrated into the health systems and existing systems of delivery for mothers and newborn.

Discussion

STAGE members also agreed with the importance of such a document and its value in ensuring care for the mother–newborn dyad. Moving from a skilled birth attendee (SBA) to midwifery models of care will ensure continuity of care starting from pre-conception to pregnancy, childbirth, and postpartum or longer. Currently, midwives are responsible for care until six weeks after birth.

Some STAGE members cautioned against replacing SBAs in countries, or in emergency situations, where they are the only trained providers. In some cases, it would be useful to highlight the need for additional training for existing cadre while supporting the strengthening of the midwifery workforce.

STAGE members highlighted the importance of integrating midwives and the midwifery model of care into the health system by bringing together midwives, nurses, doctors, ministry of health stakeholders and high-level decision-makers, so that everyone is part of the decision-making process at the country level. It will be necessary to review the education and training of midwives and other cadres, especially on continuity of care, family planning, sexual health etc. Interprofessional education and practice need to be included in education programmes. Use of digital technology both for training and practice was also suggested by some members.

Members also highlighted the need to focus on implementation issues for different country contexts, with short and long-term monitoring outcomes. Some suggested using country case studies to understand how this model fits within the context of primary health care.
Discussion was then opened to WHO regional colleagues and other participants who also reiterated the value of the midwifery model of care and highlighted the need for policy-level dialogue, as there are many barriers in many countries to the extent of care midwives can provide. They also highlighted the need for improved training to build up midwifery skills and leadership within various country contexts and cultures. Some partners also highlighted the need for careful positioning of this among countries, as countries are at different stages in terms of midwifery care, so case studies of different country contexts would be important. Others reiterated the need to clearly differentiate this model of care from the existing SBA or auxiliary nurse midwives’ model and focus on how additional training to SBAs may be a way forward in many countries where SBAs are being used.

A United Nations Population Fund (UNFPA) colleague mentioned that UNFPA is fully supportive of this work and is supporting countries who wish to transition to a midwifery model of care. She mentioned that this has been included as a key priority in the UNFPA Strategic Plan and in the new UNFPA Midwifery Acceleration Strategy that will be launched later this year.

Dr Tuipulotu highlighted the need to continue the development of the current cadre, to ensure safe and good quality of care, the need for regulation and to include not only the ministry of health but also the ministries of finance and planning in the discussions at country level.

The closed session continued the discussion, reiterating similar issues, and concluded that the guidance document on transitioning to midwifery models of care will be about operationalizing midwifery care in countries, depending on their context. It will be a practical implementation guidance document that will include case studies. This guidance intends to help countries consider the full scope of moving beyond considering the midwifery workforce as being only SBAs to midwives providing continuity of midwife care to the dyad (mothers and newborn) across the continuum from pre-conception to the postpartum period, including family planning, safe abortion care, and prevention of stillbirths. The guidance will strengthen the importance of collaboration and cooperation across health cadres. This work will be linked with STAGE work on the MNH transition framework, EmONC and primary health care.
New topics

Maternal and newborn transition model

Background

Dr Allisyn Moran, MCA/WHO, gave an overview of the MNH transition framework, describing the various frameworks and the different types on transition. She provided a brief history of various transitions like the population, epidemiological, nutrition and then the maternal transition in 2014. She highlighted the need to incorporate stillbirths and newborn for a comprehensive MNH transition framework. She then presented some of the work done by the Exemplar project (led by the University of Manitoba, John Hopkins University, and the London School of Hygiene and Tropical Medicine) that looked at a comprehensive five-phase transition model. MNH and the prevention of stillbirths were combined into one model to look at defining different stages, and then thinking about how countries are moving through those stages. Phase 1 represents the highest mortality and phase 5 the lowest mortality. The researchers used a variety of indicators like institutional delivery, caesarean sections, the skill mix of providers, and out-of-pocket spending across the five phases.

Dr Moran emphasized the need to focus on the operational aspects of this framework that will enable the implementation of bundles of care with quality (using the WHO quality of care framework for MNH) to achieve the ENAP and EPMM targets. This means looking at both the provision of care and the experience of care, but also the human resources, physical resources, information systems, referral systems, commodities, etc. She suggested that perhaps phases 2, 3 and 4 could be collapsed to one middle stage to produce three mortality stages: highest, middle and lowest. For these three stages, the focus would be different, with the focus being on physical or system-level resources for level 1, while level 2 would be equitable access for managing all complications, and level 3 would be for more intensive care.

Dr Moran referred to WHO’s universal health care compendium, where it is divided into routine care and management of complications, and this would link with the presentation on EmONC, which will focus on signal functions. She also highlighted how this work would link with other work in MCA such as transitioning to midwifery models of care, prioritization of MNH commodities, innovations, and especially service delivery innovations, which would help countries to accelerate more quickly to the next stages.

Dr Moran then focused on the need for finalizing the cut-offs and thresholds for defining the different stages, working closely with the Exemplar project but with the final goal of operationalizing the framework using clear programmatic elements for each stage. She was appreciative of the comments and feedback from the International Maternal And Newborn Health Conference and noted that more is expected from the quality-of-care network meetings.

She then posed specific questions to STAGE.

- What is the general feedback on the overall concept and framing?
- What are the essential parameters to consider when defining the stages of transition?
- Would a STAGE working group be helpful to inform development and finalization?

The meeting was then opened for comments from STAGE members and then to WHO regional colleagues and partners/observers.
Discussion

STAGE members highlighted the importance of considering health system issues like infrastructure, the health workforce and logistics, that is, the functionality of health systems. Some members commented on the need to use the existing workforce and upgrade their skills, for example traditional birth attendants to skilled birth attendants. Quality of care is key and needs attention. Skill mix ratios, especially in relation to midwifery models of care, are important to consider. It is also necessary to consider the workforce distribution in terms of urban/rural, public/private etc. Many members highlighted the need to consider subnational-level differences, especially in large countries.

Other social structures, including cultural and social aspects, community engagement, equity and social determinants, would also be important to address when considering the framework, as these will help sharpen the classification. Quality of care needs recognition irrespective of who delivers it.

Moving from survival to well-being is an important aspect that is taking place in various countries, and this should be included in the framework. Climate impacts and migration also need to be taken into consideration. Giving special attention to countries with fragile humanitarian settings may be required, as their needs and phases may be very different from other countries.

A robust monitoring and accountability framework is needed, especially at a subnational level, to help identify risk populations. A metric that helps identify the variation at country level would be helpful.

Family planning and abortions, especially unsafe abortions, are a key mortality driver and need to be addressed. Similarly, late pregnancy and pregnancy with comorbidities need special attention. Adolescent well-being should also be considered. Some members emphasized the importance of the pre-conception period. The variation in access to quality care is another important factor to be considered.

All members supported the formation of a STAGE working group that will help move this agenda forward.

During the closed session with STAGE members, additional inputs were provided focusing on the importance of communicating the framework with countries and what it means for the countries to use it. Countries with a large number of immigrants might need special attention, as many of the underlying issues might be from their country of origin. Members suggested that the MNH Transition Working Group should also include EmONC discussions. Members also suggested including more technical work, including that from the Exemplar project.

Dr Moran provided a summary of the discussion. She highlighted the need for the framework to relate to health system building blocks and link to other pieces of work. It is important to see this from a country perspective, based on country needs and feasibility. The working group could possibly be an umbrella for the work on EmONC and commodities, and it needs to link to the midwifery models of care work. Integration of other workstreams is important in relation to the actual content but so is the outward-looking integration in relation to the life course. An update may be provided to STAGE in November 2023 and the final work will potentially be presented in May 2024.

Re-visionsing emergency obstetric and newborn care

Background

Professor Lynn Freedman, Director of the Averting Maternal Death and Disability (AMDD) program at Columbia University, presented the “Re-visionsing EmONC” project, which has been a joint project of WHO, UNICEF, UNFPA, the London School of Hygiene and Tropical Medicine, and Columbia University. She described how this project and the revised EmONC framework fit into the overall MNH landscape and specified its links to other WHO MNH initiatives. The presentation focused on the proposed new EmONC signal functions, levels of care and indicators.
Professor Freedman alluded to the original Guidelines for monitoring the availability and use of obstetric services in 1997 and its updates in the 2009 handbook Monitoring emergency obstetric care. A deeper review was deemed necessary by the above groups and UN agencies and has been undertaken for the past three years in the form of workstreams, country studies and expert groups, resulting in an evidence base to inform recommendations for a revised EmONC framework. The four workstreams were (1) signal functions; (2) levels of care; (3) quality of care; and (4) indicators and lessons learned. Country studies were done in Senegal, Bangladesh and Malawi. The current beta version was also presented at the Maternal and Newborn Health Conference at Cape Town and was brought to STAGE for further review with the ambitious aim to complete it by the end of the year.

The core purpose of both the original framework and revised framework for EmONC is to focus on services for women and newborn with complications. The primary users of the framework are thus country-based planners and managers. Professor Freedman highlighted the connections of this project to other major WHO initiatives such as the ENAP, EPMM, midwifery, networks of care, and the MNH programmatic transition with the intent of alignment and harmonization across these areas. The goal is to develop a framework that can be adapted by countries and used across the stages of the MNH transition from high mortality to various levels of improvement.

Professor Freedman explained the changes in the three building blocks of the framework from the last version in 2009. The first building block was the use of signal functions, which are a parsimonious list of tracer interventions representing key processes of care to treat the main complications of childbirth that would otherwise result in maternal or newborn death and disability or stillbirth. The 2009 emergency obstetric framework did little to account for the newborn, therefore the ‘N’ for newborn was not added. The second building block was the levels of care. The third building block linked the signal functions to a set of eight indicators, with a predetermined guideline for an acceptable level of care.

The signal functions for the new framework of EmONC were worked through with a newborn expert group as well as a workstream involving maternal and newborn experts from around the world. The new signal functions are separated into obstetric and neonatal categories at three levels of care: (1) basic; (2) comprehensive; and (3) intensive.

The proposed beta version includes 15 indicators, grouped into three domains. For each domain a set of core indicators were developed, to be collected routinely, which is preferable to a large facility assessment every 10–15 years. The working group also identified a set of additional indicators as elaborations or nuances of the core, requiring data involving special studies such as exit interviews, observations and facility assessments.

The first domain assesses whether there are equitably distributed and accessible well-functioning EmONC facilities in terms of availability, readiness and accessibility. The second domain is new, and critical to the people-centeredness of the EmONC system, with the key notion of keeping the mother–newborn dyad together. Domain three looks at the effectiveness of EmONC services, including coverage, clinical appropriateness and impact.

Professor Freedman then highlighted three key issues to discuss at STAGE:

**Questions to STAGE**

1. Indicator domains: do these indicators reflect the essential parameters to guide implementation and monitoring of good quality, equitable EmONC?

2. Do we have a framework that can be adapted by countries to do that and support emergency care for mothers and newborn in a wide range of countries and different kinds of health systems? Have we achieved the goal set out for the framework?

3. Request for input on the topics still in development: benchmarks for availability, human resources adequacy in terms of caseload, and better equity measures.
Discussion

Professor Caroline Homer invited Dr Jean-Pierre Monet from UNFPA to speak as an integral partner of the project, after which the floor was opened for discussion.

Dr Monet explained that the UNFPA is a member of the steering committee of the EmONC revision process and provided financial and technical support over the past three years. This included supporting 14 countries to use the framework, planning the national network of human facilities, and addressing gaps in the availability and quality of care. He highlighted the importance of defining the scope of the revision by the end of the year and of identifying specific milestones to achieve in the coming seven months. In addition to these three core components of the framework, the revision process identified further areas for discussion such as human resources, referrals and routine MNH care. It is important to define the contribution of the EmONC revision process to these other areas and to link with ongoing work done by other groups, such as ENAP, EPMM and the broader MNH plan.

The chair thanked Dr Monet and reflected on the urgency of the work, then invited the STAGE members to begin the discussion.

STAGE members appreciated the integration of neonatal and obstetrics care and reflected on additional work needed in integrating signal functions and training, and the infrastructure needed for them, as effective integration could reduce redundancy and transform care.

Some STAGE members queried the feasibility of increasing the number of signal functions when the capacity to perform the signal functions by midwives or other care workers is often already quite low. In many LMICs midwives are not authorized to perform all listed levels of care, making it challenging to perform the signal functions. The issue of the readiness of facilities, including the capacity to assess leadership and management as well as equipment and care workers, is an important aspect. Members highlighted the need to focus on care worker well-being as part of teamwork and coordinated care. Further, members addressed the wide range of human resource challenges, such as variabilities in number, skill set and competency. Community engagement and cultural sensitivities were also raised as important.

In terms of indicators, overuse of caesarean section, immediate postpartum family planning, stillbirth reduction, and use of a partogram were useful indicators that may be able to be integrated into the EmONC framework. Members alluded to failed skills and assisted birth (vacuum and forceps), as these can have a connection to neonatal outcomes. Members also raised the issue of developing monitoring guidelines for level of care and the signal functions.

Response from Professor Freedman

Professor Freedman first acknowledged that that some aspects require further work in the field, further validation, and implementation. There is a plan for a digital handbook that can be continuously updated even after the completion of the revision cycle. In some areas, such as human resources, it is currently more important to acknowledge the need to address the area, to open up space for future discussion. Then Professor Freedman reflected on the overuse of caesarean sections, the ideal proportion being 5–15% as determined by WHO. Addressing the question of implementing the signal functions, the definition of a comprehensive care unit could include a dimension to account for EmONC units missing just one or two signal functions. For example, assisted vaginal births are not taught in some places. On the challenges of routine data collection and care, Professor Freedman opined that problem-solving and implementation of guidelines need to allow for the freedoms required in a complex and adaptive system like emergency obstetrics, considering that implementation happens at the ground level. Therefore, guidelines need to be flexible yet useful. Two measures that still require development are tracers for routine care (for example, a partogram) and the question of teamwork.

In the closed session, members expressed their enthusiasm to provide inputs into this work and STAGE recommended that the work of the EmONC re-visioning project to be part of the STAGE working group on the programmatic transition framework, with a focus on management of maternal and newborn complications. This will include how it may contribute to or be applied to the transition framing and ensure linkages with other ongoing WHO initiatives.
Closing session and next steps

Closing remarks

The chair, Professor Caroline Homer, thanked all STAGE members and all partners, stating that the work shown is a culmination of years of effort. She acknowledged the excellent documents, clear presentations and lively discussion, then called on the directors of the three departments to share closing remarks.

Dr Pascale Allotey, director of SRH Human Reproduction thanked everyone for their work. She stated that there are significant overlaps between the work presented and the work of her group with MCA. She stated that this structure can effectively facilitate working together and she pointed out the overlap in membership with STAGE members. In her reflection, the key takeaways are that the research priorities reflect the recommendations coming to her department. She highlighted the following topics: the S in sexual and reproductive health gaining space; interventions beyond the clinic; and health system structures. She emphasized the importance of joint efforts as one WHO and one UN, with aligned messaging across the departments.

Dr Anshu Banerjee highlighted the position paper on KMC as an example of what STAGE output can look like. He thanked that working group and acknowledged the concrete, tangible outcomes showing how STAGE contributes to moving the wider agenda forward. He closed his remarks by emphasizing the need to move the well-child approach to country level and to shift the agenda to a much larger, inclusive approach towards child development. Then he highlighted the importance of strengthening the role of midwifery for improving maternal and newborn outcomes. He restated the links between the EmONC review and the maternal newborn transition model and underlined the importance of incorporating interventions to achieve an operational model helping countries to move from one stage to another.

Dr Francesco Branca, Director NFS, was unavailable to provide his closing remarks. Laurence Grummer-Strawn from NFS highlighted the importance of the guidance provided by STAGE for the anaemia comprehensive framework over the past three meetings and was glad that the framework was disseminated at the conference last week. He was thankful for the STAGE guidance as they move into implementation of the framework with a multisectoral focus. He also alluded to the need for advocacy that was raised by STAGE, especially with professional associations. He highlighted the need for the framework to translate to action at the country level, reaching out to families directly in terms of the kinds of changes they can make, the actions they can take directly on the nutritional side, but also on the other aspects of protecting their health if they can, to prevent anaemia. He concluded by thanking STAGE for the continued guidance.

Professor Homer thanked everyone for the closing remarks and closed the meeting by thanking the members of STAGE, namely the partners, observers, and colleagues from WHO and UNFPA. She announced that the next STAGE meeting is scheduled for 14–16 November 2023, an in-person meeting within a hybrid mode to enable participation of partners and observers across different countries and regions.
# Meeting of the Strategic and Technical Advisory Group of Experts (STAGE) on Maternal, Newborn, Child, and Adolescent Health and Nutrition (MNCAHN)

15–17 May 2023
Agenda (Virtual Meeting)

## Day 1: 15 May 2023 (all time in CET)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Duration</th>
<th>Purpose (Chair/Lead)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td><strong>Opening Remarks</strong>&lt;br&gt;Caroline Homer, Chair STAGE (5 min)</td>
<td>30 min</td>
<td>Welcome and Update (Chair STAGE)</td>
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<tr>
<td></td>
<td><strong>Update and follow-up of STAGE recommendations</strong>&lt;br&gt;Anshu Banerjee, Director MCA (10 min)</td>
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<tr>
<td>13:30</td>
<td><strong>Maternal newborn transition model</strong>&lt;br&gt;Allisyn Moran, MCA/WHO (15 min)</td>
<td>1 hr</td>
<td>Information and Discussion (Chair STAGE)</td>
</tr>
<tr>
<td></td>
<td><strong>Bio break</strong></td>
<td>10 min</td>
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<tr>
<td>14:40</td>
<td><strong>The comprehensive framework for integrated action on the prevention, diagnosis, and management of anaemia: update and next steps</strong>&lt;br&gt;Lisa Rogers, NFS/WHO (15 min)</td>
<td>1 hr</td>
<td>Information and Discussion (Chair STAGE)</td>
</tr>
<tr>
<td>15:40</td>
<td><strong>Wrap-up for open session</strong>&lt;br&gt;Caroline Homer, Chair STAGE</td>
<td>5 min</td>
<td>Closing</td>
</tr>
<tr>
<td>15:55</td>
<td><strong>STAGE Closed session</strong>&lt;br&gt;Refining recommendations: STAGE members</td>
<td>1 hr</td>
<td>Decision making (Chair STAGE)</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Duration</td>
<td>Purpose (Chair/Lead)</td>
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<tr>
<td>13:00</td>
<td><strong>Midwifery update</strong></td>
<td>1 hr</td>
<td>Information and Discussion</td>
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<tr>
<td></td>
<td>Justine Le Lez, MCA/WHO (15 min)</td>
<td></td>
<td>(Chair STAGE)</td>
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<tr>
<td>14:00</td>
<td><strong>Implementation of new MNH commodities: update</strong></td>
<td>1 hr</td>
<td>Information and Discussion</td>
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<tr>
<td></td>
<td>Allisyn Moran, MCA/WHO (15 min)</td>
<td></td>
<td>(Chair STAGE)</td>
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<tr>
<td>15:00</td>
<td><strong>Bio break</strong></td>
<td>15 min</td>
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<tr>
<td>15:30</td>
<td><strong>Launch of kangaroo mother care guidance</strong></td>
<td>1 hr 30 min</td>
<td>Information and Discussion</td>
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<tr>
<td></td>
<td>Shuchita Gupta, MCA/WHO</td>
<td></td>
<td>(KMC Working Group Chairs Gary Darmstadt and Betty Kirkwood)</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Duration</td>
<td>Purpose (Chair/Lead)</td>
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<tr>
<td>13:00</td>
<td>Maternal and child health redesign: operational guide</td>
<td>1 hr</td>
<td>Information and Discussion (Chair STAGE)</td>
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<tr>
<td></td>
<td>Bernadette Daelmans, MCA/WHO (15 min)</td>
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<tr>
<td>14:00</td>
<td>Bio break</td>
<td>10 min</td>
<td></td>
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<tr>
<td>14:00</td>
<td>Emergency obstetric newborn care review</td>
<td>1 hr 30 min</td>
<td>Discussion and Decision making (Chair STAGE)</td>
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<tr>
<td></td>
<td>Lynn Freedman, AMDD, Columbia University (15 min)</td>
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<tr>
<td>15:30</td>
<td>Wrap up STAGE meeting and closing remarks</td>
<td>10 min</td>
<td>Closing session (Chair STAGE)</td>
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<tr>
<td></td>
<td>Caroline Homer, Chair STAGE</td>
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<tr>
<td></td>
<td>Pascale Allotey, Director, SRH/WHO</td>
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<td></td>
<td>Francesco Branca, Director, NFS/WHO</td>
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<tr>
<td></td>
<td>Anshu Banerjee, Director MCA/WHO</td>
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<tr>
<td>15:50</td>
<td>STAGE Closed session</td>
<td>1 hr 10 min</td>
<td>Decision making (Chair STAGE)</td>
</tr>
<tr>
<td></td>
<td>Refining recommendations and next steps: STAGE members</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MCA:** Maternal, Newborn, Child and Adolescent health and Ageing  
**SRH:** Sexual and Reproductive Health and Research  
**NFS:** Nutrition and Food Safety
Annex 2: List of participants

STAGE members

Professor Caroline Homer, Co-Program Director, Maternal and Child Health and Working Group Head; NHMRC Principal Research Fellow, Burnet Institute, Melbourne, Australia, Chair STAGE

Dr Amanuel Abajobir, Researcher, African Population and Health Research Center (APHRC), Ethiopia

Dr Kokila Agarwal, Program Director, USAID Maternal Child Survival Program, Jhpiego, Washington DC, United States of America

Dr Rina Agustina, Assistant Professor at the Department of Nutrition; Head of Human Nutrition Research Center (HNRC), Faculty of Medicine, Universitas Indonesia

Professor Fadia Al Buhairan, Health Sector Transformation Program, Interim Chief Medical Officer, Al Dara Hospital and Medical Center, Riyadh, Saudi Arabia

Dr Shabina Ariff, Associate Professor, Aga Khan University, Pakistan

Dr Narendra Kumar Arora, Executive Director, INCLEN Trust International, New Delhi, India

Dr Richmond Aryeetey, Professor of Public Health Nutrition, University of Ghana School of Public Health, Legon, Accra, Ghana

Professor Per Ashorn, Professor of Pediatrics, Tampere University, Tampere, Finland

Dr Oliva Bazirete, Senior lecturer, Dean of the School of Nursing and Midwifery, College of Medicine and Health Sciences at the University of Rwanda/ Kigali, Rwanda

Dr Jay Berkley, Professor of Paediatric Infectious Diseases, KEMRI, Kenya / University of Oxford, United Kingdom of Great Britain and Northern Ireland

Dr Mariam Eva Claeson, Department of Global Health, Karolinska Institute, Stockholm, Sweden

Dr Gary Darmstadt, Associate Dean for Maternal and Child Health; Professor and Co-Director of Global Pediatric Research, Stanford University School of Medicine, Stanford, California, United States of America

Professor Kathryn Dewey, Distinguished Professor Emerita, Department of Nutrition and Institute for Global Nutrition, University of California, United States of America

Dr Trevor Duke, Professor, Centre for International Child Health, University of Melbourne, Melbourne, Australia

Dr Faysal El Kak, Director of the Women Integrated Sexual Health (WISH) Program at the Department of Obstetrics Gynecology, American University of Beirut, Lebanon

Dr Fyezah Jehan, Associate Professor and Chair, Department of Paediatrics and Child Health, Aga Khan University, Karachi, Pakistan

Dr Caroline Kabiru, Associate and Senior Technical Advisor, Evidence to End FGM/C Program, Population Council, African Population and Health Research Center, Nairobi, Kenya

Professor Nuray Kanbur, Professor of Pediatrics, Adolescent Medicine Specialist, University of Ottawa; Hacettepe University Faculty of Medicine İhsan Doğramacı Children’s Hospital, Ankara, Türkiye

Professor Betty Kirkwood, Professor of Epidemiology and International Health, Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine, London, United Kingdom

Dr Jonathan Klein, College of Medicine, University of Illinois at Chicago, United States of America

Dr Daniel Martinez Garcia, Paediatric Specialist; Paediatric Head of Clinic, Paediatric Hospital, Geneva University Hospital, Geneva, Switzerland
Dr Sjoerd Postma, Global Health Consultant, Monrovia, Liberia
Professor Linda Richter, Distinguished Professor, University of the Witwatersrand, Durban, South Africa
Professor Jane Sandall, Professor of Social Science and Women’s Health, Department of Women and Children’s Health, School of Life Course Science, King’s College, London, United Kingdom
Dr Auliya Suwantika, Associate Professor (Health Economics) at Department of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Universitas Padjadjaran, Indonesia
Dr Nizam Uddin Ahmed, Executive Director, Shastho Shurokkha Foundation and Vice Chair, Gavi CSO Steering Committee, Dhaka, Bangladesh
Dr Peter Waiswa, Associate Professor, Dept of Health Policy, Planning and Management, Makerere University School of Public Health, Kampala, Republic of Uganda
Dr Dilys Walker, Director, Global Maternal Newborn Child Health Research Group, Institute for Global Health Sciences, University of California, San Francisco, United States of America
Dr Stanley Zlotkin, Munk School of Global Affairs and Public Policy, University of Toronto; Chief, Global Child Health, The Hospital for Sick Children, Toronto, Canada

**World Health Organization (WHO) headquarters and regions (online or in person)**

Mr Edgardo Abalos, Consultant, MCA, Geneva
Dr Adeniyi Aderoba, Team Lead (Reproductive and Maternal Health), RGO/ULC/RMH, AFRO
Dr Kurabachew A. Alemu, Regional Consultant, WHO AFRO
Dr Pascale Allotey, Director, Sexual and Reproductive Health, Geneva
Dr Valentina Baltag, Scientist, Unit Head Adolescent and Young Adult Health, MCA, Geneva
Dr Prerna Banati, Scientist, Adolescent and Young Adult Health, MCA, Geneva
Dr Anshu Banerjee, Director, Maternal, Newborn, Child and Adolescent Health & Ageing, Geneva
Ms Kelsey Barrett, Technical Officer, Strategy, Unitaid
Ms Frida Berg, JPO, Maternal Health, MCA, Geneva
Dr Francesco Branca, Director, Nutrition and Food Safety, Geneva
Dr Maurice Bucagu, Medical Officer, Maternal Health, MCA, Geneva
Dr Betzabe Butron Riveros, Regional Advisor, Child Health, Family, Health Promotion, and Life Course, PAHO
Dr Sonja Caffe, Regional Prevention Advisor, PAHO
Dr Doris Chou, Medical Officer, Maternal and Perinatal Health, SRH, Geneva
Dr Bernadette Daelmans, Unit Head, Child Health and Development, MCA, Geneva
Dr Ayesha De Costa, Scientist, Newborn Health, MCA, Geneva
Dr Kirrily de Polnay, Technical Officer, Food and Nutrition Action in Health Systems, NFS, Geneva
Dr Theresa Diaz, Unit Head, Epidemiology, Monitoring & Evaluation, MCA, Geneva
Mr Martin Dohlsten, Technical Officer, Maternal Health, MCA, Geneva
Dr Pablo Duran, Asesor Regional en Salud Perinatal, Centro Latinoamericano de Perinatología/Salud de la Mujer y Reproductiva
Ms He Tang, Technical Officer, MCA, Geneva
Ms Amelia Latu Afuhaamango Tuipulotu, Chief Nursing Officer, Geneva
Dr Özge Tunçalp, Medical Officer, Maternal and Perinatal Health, SRH, Geneva
Dr Delgermaa Vanya, Technical Officer, WPRO
Dr Beena Varghese, Consultant, Food and Nutrition Action in Health Systems, NFS, Geneva
Dr Martin Weber, Team Lead, EURO
Dr Wilson Were, Medical Officer, Child and Health Development, MCA, Geneva
Ms Mariana Widmer, Technical Officer, SRH, Geneva
Ms Shelby Elena Wilson, Food and Nutrition Action in Health Systems, NFS, Geneva
Dr Nuhu Yaqub, Medical Officer, Child and Health Development, MCA, Geneva
Dr Sachiyo Yoshida, Technical Officer, Newborn Health, MCA, Geneva
Ms Katia Gaudin-Billaudaz, Senior Assistant to Director, MCA

**Partners and other registered participants**

**Bill & Melinda Gates Foundation**
Ms Jennifer Akuamoah-Boateng, Senior Programme Officer
Dr Rasa Izadnegahdar, Director, MNCH Discovery & Tools
Dr Kate Somers, Deputy Director, Maternal, Newborn & Child Health team

**Foreign Commonwealth and Development Office (formerly DFID)**
Dr Meena Gandhi, Senior Health Advisor

**German International Cooperation Agency**
Dr Lara Speer, Advisor, German International Agency (GIZ)

**Japan International Cooperation Agency**
Dr Akiko Hagiwara, Senior Advisor on Health
Ms Keiko Osaki, Senior Advisor, Health and Medicine
Dr Maki Ozawa, Director, Human Development Department

**USAID**
Dr Nancy Bolan, Senior Newborn Health Advisor
Ms Robyn Churchill, Team Lead, Maternal Health
Dr Omar Dary, Senior Nutrition Advisor
Dr Patricia Jodrey, Senior Advisor for Child Health
Dr Lily Kak, Senior Country Advisor
United Nations Children's Fund (UNICEF)
Dr Tedbabe Degefie Hailegebriel, Chief, Maternal, Newborn and Adolescents Health

United Nations Fund for Population Activities
Ms Sarah Bar-Zeev, Midwifery, Maternal and Newborn Health Specialist
Dr Jean-Pierre Monet, Technical Specialist, Maternal and Newborn Health

World Bank and Global Financing Facility
Dr Alison Morgan, MNCH Health Specialist, Global Financing Facility, World Bank

Professional organizations
Dr Jeanne Conry, President, International Federation of Gynecology and Obstetrics (FIGO)
Dr Hani Fawzi, International Federation of Gynecology and Obstetrics (FIGO)
Dr Sally Pairman, Chief Executive, International Confederation of Midwives (ICM)

Other observers
Dr Himansu Basu, Medical Director RMCH Rotary Action Group, Rotary International
Dr Lorena Mercedes Binfa, Professor, Universidad de Chile
Dr John Borrazzo, Lead Advisor, Child Health, Save the Children US
Ms Helen Cox, Associate Professor, University of Cape Town
Dr John Eastwood, Medical Officer of Health, National Public Health Service, New Zealand
Dr Lynn Freedman, Professor, Population and Family Health, Mailman School of Public Health, Columbia University
Dr Jeffrey Goldhagen, Professor & Chief, Division of Community and Societal Pediatrics, University of Florida
Dr Karoline Kemp, Senior Health and SRHR Specialist, Global Affairs Canada
Dr Elizabeth Mason, Global Public Health Sarl
Dr Rajesh Mehta, Formerly Regional Adviser, WHO-SEARO
Dr Laura Reichenbach, Senior Associate and Project Director, Breakthrough RESEARCH
Dr Olusola Sotunde, Senior Analyst, Socio-economic and Policy Research, Global Affairs Canada
Dr Feili Lo Yang, Fu Jen Catholic University
Dr Jennifer Yourkavitch, Adjunct Associate Professor, Department of Maternal and Child Health, University of North Carolina at Chapel Hill
### Annex 3. WHO progress report on STAGE recommendations from STAGE meetings in November 2022 and May 2022

Directors’ progress report from WHO on the November 2022 STAGE recommendations

<table>
<thead>
<tr>
<th>STAGE Recommendations/Guidance (November 2022)</th>
<th>Progress Made (May 2023)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comprehensive framework for integrated action on the prevention, diagnosis and management of anaemia</strong></td>
<td><strong>A further update will be provided during the May meeting</strong></td>
</tr>
</tbody>
</table>

- Developing operational guidance to support countries in translating and integrating global recommendations at national and local community levels.

- Strengthening communications and advocacy on the burden and consequences (health-related and economic) of anaemia (at individual, family, and community level), as well as the investment required to prevent and treat anaemia.

- Collaborating with the WHO working group on devices and drugs to stimulate innovation in diagnosis of anaemia and its causes (using non invasive techniques) and treatment (e.g., delivery of iron, blood substitutes).

See above comment on the next steps and possible development of an investment/costing framework. There is an opportunity to work with the programmatic working group of the Anaemia Action Alliance on the investment/costing framework as well.

WHO is also updating its health topic page on anaemia and developing an anaemia fact sheet.

We have not yet connected with this group.
Advocating for global targets on anaemia that are realistic and achievable and that cover all relevant age groups/populations at risk across the lifecourse (for example adolescent girls).

The WHO Department of Nutrition and Food Safety is working on an official extension of the existing Health Assembly targets to the year 2030. Analyses are underway to evaluate whether the previously proposed 2030 targets should be revised based on more recent evidence. New targets will not be added at this time, although the addition of possible process targets supporting achievement of the 2030 targets is being considered. A new set of targets will be developed for the post 2030 agenda. We are aware of work being undertaken by the Lancet Commission on Haematology that could inform these new targets. Although targets for other population groups may not be done through the Health Assembly, targets may be considered through the monitoring work.

Ensuring linkages with other initiatives within WHO—for example, school health and youth screening programmes, MNH innovations, and with other developmental efforts addressing social determinants of health; and strengthening engagement with the other relevant sectors.

We have obtained feedback on the comprehensive framework from the Adolescent and Young Adult Health unit, MCA department. We reached out to team members in Social Determinants of Health, and invited the directors of Integrated Health Services, TB and HIV to nominate a focal point for anaemia but were not able to connect with the teams. As we move into the implementation of the framework, we can explore linkages with other initiatives within WHO and with relevant sectors, and we welcome recommendations from members of STAGE.

### School health and well-being

**WHO and partners focus on enhancing accountability of educational systems in Making Every School a Health Promoting School, under the leadership of education authorities.**

**WHO and UNESCO have developed a provisional list of indicators to monitor school health and a web platform to collect data and calculate indicator values. On 20 April 2023, a meeting of the UN interagency group on school health was organized, and meeting participants endorsed the proposal to develop a consensus list of indicators for school health and highlighted that it should be informed by ongoing efforts (e.g. by the school meals coalition).**

**WHO and partners to ensure that school health is co-created with students, parents, and teachers, is context specific, is inclusive of the whole school community and beneficial to out of school children.**

**Adolescent and Young Adult Health unit, MCA, is leading an adolescent health data project in Ghana, Morocco, Jamaica and India in over 100 schools to generate health information through school surveys that will be used directly and locally, involving students and school staff, to change structures and policies and plan school health actions to improve health. Messages that school health is co-created with students, parents and teachers, is context specific, is inclusive of the whole school community and beneficial to out of school children are an integral part of WHO guidance on school health.**
School health should also be strengthened through more investments for: creation of leadership cadres for health promotion in the education system, integration with adolescent health programmes, dissemination of lessons learned and for strengthening research.

A global report, Ready to learn and thrive: school health and nutrition around the world, was released by UNESCO in collaboration with WHO and other partners in January 2023 targeting policy-makers and planners in ministries of education, health and finance, and development partners, to advance a common agenda and greater collaboration on school health and nutrition. A series of policy briefs was developed with the aim to inform policy-makers about the value of investing in school health for issue-specific agendas such as mental health, sexual reproductive health, substance use prevention, etc. Lessons learned are being summarized from early adopter countries of the Making Every School a Health Promoting School initiative and will be published.

### Promoting child and adolescent health and well-being

| STAGE requests the Director-General to support the health and wellbeing work spearheaded in the MCA department, make resources available towards its advancement. | An update and information on operational guidance will be presented at the May 2023 meeting. |
| Call upon Member States and partners to lead the transformation in health systems including the human resources that is essential for healthy growth, development, and well-being of children and adolescents. | Work across teams is in progress to develop the guidance on well-child/well-adolescent visits. |

### Risk stratification analyses to identify infants and children at high risk of mortality

| Evaluate programmatic approaches to identify infants and children at high risk of mortality and impaired childhood development. | The work has focused on completing the primary analyses. There were some unexpected delays, now resolved, and the main analyses are almost complete. Manuscripts are in development to frame the concept of risk-differentiated care. These will include the main findings and include discussion on programmatic implications and opportunities. Formal evaluation of programmatic approaches will require dedicated funding and the Department is seeking funding opportunities. |
Develop and evaluate – through clinical and implementation research – interventions to mitigate these risks and improve deployment of health system resources, including skilled personnel.

A research consultation is planned in Q3/Q4 to develop intervention strategies to reduce mortality in high-risk infants and children. The focus is prevention of mortality among infants and children in the early post-discharge period. Additionally, the consultation will consider interventions that include algorithms to identify infants and children who may initially be admitted but who could be safely and effectively discharged early and managed at home.

Review and update WHO tools e.g., IMCI/Hospital pocketbook to include differentiated care approaches based on available evidence.

A review of specific elements of the IMCI/Hospital pocketbook is underway to consider revisions that will reflect risk-differentiated clinical care approaches.

**Maternal and newborn health innovations**

<table>
<thead>
<tr>
<th>WHO to define innovations for MNH and conduct a horizon scanning/mapping of innovations.</th>
<th>Detailed feedback on the framework is being reported at the May meeting.</th>
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<tbody>
<tr>
<td>Convene and prioritize innovations among stakeholders with a focus on the end-to-end process from development to implementation at scale, including involving end-users.</td>
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<tr>
<td>Develop TPPs (target product profiles) and normative products for MNH.</td>
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<tr>
<td>Include scale up and sustainability of innovations within the implementation strategy for scaling up commodities across different country contexts as part of strengthening health systems and improving quality of care.</td>
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</table>

**Small or sick newborn care**

<table>
<thead>
<tr>
<th>WHO to continue the acceleration of the scale up of SSNC in level 2 facilities including the integration of maternal and newborn care, zero separation, and human resourcing.</th>
<th>(1) Manuscript in Press with Journal of Global Health that summarises and advocates for SSNC. (2) Norms project underway. This provides the foundation for the SSNC scale-up. It will establish benchmarks for essential components of level-2 care of SSNs in LMICs: including number of beds per population of live births, time to travel to level-2 facilities, human resources, and space and design required in SSNC units.</th>
</tr>
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<tbody>
<tr>
<td>WHO to provide presentation at a later STAGE meeting on progress toward defining and standardizing signal functions indicators for monitoring SSNC.</td>
<td>To be finalized. Discussions underway for an EmONC presentation at this meeting to include some of the indicators.</td>
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**The impact of climate change on MNCAHN**

<table>
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<tr>
<th>WHO to strengthen in-house collaboration to embed MNCAHN into climate change policy and actions, and vice versa, and to define and consolidate internal roles, responsibilities, and actions.</th>
<th>Discussions are underway across various departments in WHO (MCA, SRH, NFS and Climate Change and Health Unit (CCH)). All departments are also invited by CCH to collaborate as per the ATACH, particularly the Working Group on Climate Resilient Health Systems, to support Member States, including those that have signed the COP26 Health Programme commitments on building climate resilient health systems, to progress and drive the climate resilient health systems agenda forward and to promote accountability.</th>
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<tr>
<td>WHO to call upon Member States, UN agencies and partners to work together to ensure a coordinated response to the climate change and health crisis, with specific attention on actions to safeguard MNCAHN, on sharing lessons learned from country experiences and on strengthened capacity of national MNCAHN actors.</td>
<td>A first agreement has been the WHO-UNFPA-UNICEF-WMO publication on indicators to monitor the impact of extreme heat on MNCH, led by WHO/MCA and WHO/CCH. A meeting with external experts (climate scientist, MNCH, and monitoring experts) and UN partners to scope the indicator prioritization was held in April 2023. Next steps were identified including gaps in the literature and research and next steps needed to identify priority indicators.</td>
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<td></td>
<td>WHO/MCA with UNFPA have co-led the organization of a satellite session at the International Maternal Newborn Health Conference to discuss climate change and MNCH, particularly extreme heat.</td>
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<td>A WHO call to action on climate change and MNCH is underway to be signed by UN partners and other implementing partners. A policy brief is also being developed as part of the Initiative on Climate Action and Nutrition (I-CAN).</td>
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<td>The PMNCH is leading efforts to discuss financing for MNCH in climate change actions and budgets, and a policy brief will be prepared in collaboration with WHO and other partners.</td>
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<td>Action</td>
<td>Description</td>
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<tr>
<td>WHO to strengthen and coordinate research, including strengthening research capacity and synthesis of evidence and implementation experience to address climate risks for MNCAHN.</td>
<td>WHO/MCA has taken the lead on evidence synthesis including a review of impacts of different climate events on MNCAH and nutrition as well as a scoping review of grey and published literature to develop an inventory of interventions undertaken in different settings to address the impact of extreme heat and/or outdoor air pollution. Publication of scoping reviews on the impacts in a peer-reviewed journal is expected this year.</td>
</tr>
<tr>
<td>WHO to lead on bringing together studies and documentation.</td>
<td>WHO to identify research priorities for climate change and SRH and MNCAH.</td>
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<tr>
<td>WHO to identify research gaps in the evidence base.</td>
<td>In-depth stories of actions in countries will begin once WHO/MCA finalizes the inventory mentioned above and after the International Maternal Newborn Health Conference. UN partners and other implementing partners have expressed interest in developing these jointly.</td>
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<tr>
<td>WHO to identify, document and share case studies.</td>
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<tr>
<td>WHO to scale-up communication and advocacy to raise awareness among policymakers on the impacts of climate change for MNCAHN.</td>
<td>See call to action above.</td>
</tr>
<tr>
<td>WHO to establish a working group of interdisciplinary experts who can provide inputs on an action plan for integrating MNCAHN into climate change efforts.</td>
<td>To be organized.</td>
</tr>
</tbody>
</table>
## Directors’ progress report from WHO on the May 2022 STAGE recommendations

<table>
<thead>
<tr>
<th>STAGE Recommendations (May 2022)</th>
<th>Progress Made (November 2022)</th>
<th>Update (May 2023)</th>
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<td><strong>Innovations in maternal health and scaling up for country impact</strong></td>
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<td>WHO to support countries to implement life-saving commodities to improve MNH and well-being and reduce stillbirths.</td>
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<td>An update is to be provided during the May 2023 meeting.</td>
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<td>WHO will establish a working group under STAGE with key partners, professional organizations, and other stakeholders, including country representation. The working group will identify life-saving MNH commodities and will guide the development of an implementation strategy for scaling up across different country contexts as part of strengthening health systems in line with WHO recommendations.</td>
<td>WHO is developing a working group and process to prioritize and develop implementation guidance for scaling up WHO recommended maternal and newborn commodities and devices. Students from LSE are conducting a desk review of key stakeholders and WHO recommended commodities to be completed by early 2023. The working group will be formed in 2023.</td>
<td>The first meeting of the working group was convened on 27 April 2023 to review the list of maternal health commodities and devices. A desk review is in progress on newborn health commodities and devices. The working group discussed criteria for prioritization and a Delphi will be conducted. The implementation guidance will be based on the MNH Programmatic Transition model, across different contexts.</td>
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<td>STAGE requests WHO to present at a subsequent meeting the full scope of the MNH innovation pipeline for commodities/medicines/devices.</td>
<td>A session on the MNH innovations pipeline will be presented during the November 2022 meeting.</td>
<td>This is now part of the tasks of the MNH Innovations Working Group. CLOSED</td>
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<td><strong>Assessing the impact across the life course of preventive adolescent health and well-being check-ups</strong></td>
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<td>WHO identifies critical components and organizational models for adolescent health care to inform policy-makers, as part of the child health redesign agenda.</td>
<td>Work across teams is in progress to develop the guidance on well-child/well-adolescent visits. The adolescent health and well-being perspective is integrated into the guidance by considering age-specific recommendations.</td>
<td>Part 1 of this guidance has been completed as a working draft and addresses the minimum schedule of contacts and content. Part 2 will look at programming more broadly and will be discussed at the next STAGE meeting.</td>
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<td>WHO develops a conceptual framework and measures to assess the impact across the life course as well as the intergenerational impact of context-specific adolescent health and well-being preventive check-up visits.</td>
<td>Work has begun on a systematic review of impact measures used in preventive screening programs. Drawing on the results, a conceptual framework will be proposed that has appropriate measures identified from the analysis.</td>
<td>The systematic review is underway. Planned completion by Q3 2023.</td>
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<td>WHO develops an investment case that accounts for the life-course impact of preventive care in adolescence, and in particular of preventive well-adolescent visits.</td>
<td>MCA is collaborating with PMNCH and other partners to develop the investment case in the lead-up to the Global Forum for Adolescents 2023. An Advisory Group to provide technical inputs and guidance on the investment case was set up, and work is in progress.</td>
<td>This work is ongoing, with planned completion of the investment case by end May, the toolkit will be available by end July, and 3 country case studies will be completed by end 2023.</td>
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<td>WHO makes every effort to expand the Y-check research program to all regions and use the Y-check and other similar context-specific implementation research programmes as an opportunity to validate the applicability of the conceptual framework, critical components and organizational models as recommended above.</td>
<td>A number of ‘satellite’ countries (Finland, Nepal, India and Gambia) have been identified, which have or are undertaking screening programs like the Y-Check intervention. These together with current Y-Check countries constitute a community of practice for Y-Check, sharing experiences and findings from diverse contexts. The conceptual framework, critical components and organizational models will be discussed at the next Y-Check investigators meeting to be held in January 2023.</td>
<td>The conceptual framework and discussion of components and models took place at the annual Y-Check investigators meeting held in Harare in January 2023. The following paper is now under development: Defining the content of an adolescent health check-up: lessons from Y-Check. Planned for submission by end 2023.</td>
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<td>WHO updates the adolescent health research priorities 2015, including research priorities for preventive well-adolescent visits.</td>
<td>An evaluative exercise on the 2015 priorities is underway.</td>
<td>A survey has been developed with the goal to complete the evaluative exercise by Q3 2023.</td>
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### Supporting countries who are transitioning to midwifery models of care

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<th>WHO to support countries that wish to transition to a collaborative midwifery model of care, requiring professional midwives, with policy advice and implementation guidance. This transition and the model of care will depend on the context of the country health system and should be aligned with integrated health workforce solutions.</th>
<th>WHO is supporting 6 countries in midwifery through which we are learning from supporting the transition to a midwifery model of care.</th>
<th>An update to be provided during the May 2023 meeting.</th>
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<td>The WHO project ended in December 2022, although there is interest from all countries to continue with priorities around leadership and education. The learnings will be incorporated into the STAGE recommendations on transitioning to midwifery models of care.</td>
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WHO to convene a STAGE working group, bringing together key stakeholders, ensuring midwifery representation to develop implementation guidance to support countries transition to a midwifery model of care, including collaborative teamwork, networks of care, leadership, and engagement of private and non-profitmaking (3rd) sector. The working group should develop the implementation guidance within a 6–12 month timeframe, as well as an agenda for evaluating the implementation of midwifery models of care in different country health systems.

The terms of reference of the working group have been drafted and the potential members have been identified, ensuring midwifery representation. The working group will develop the implementation guidance within a 6–12 month timeframe.

Five working sub-themes have been identified from the results of a theory of change on midwifery conducted by WHO: 1- midwives; 2- women, families and communities; 3- health systems; 4- legal, policy, regulatory environment; and 5- enabling environment (gender, equity & human rights).

The first meeting will take place in November, at which the final objectives of the working group will be discussed.

STAGE endorses the WHO community of practice platform to establish a continued learning agenda on transitioning to midwifery models of care, which links to ending preventable maternal mortality (EPMM)/Every Newborn Action Plan (ENAP) and other global programmes.

WHO Global Nursing and Midwifery Community of Practice (GNMCoP) platform has been set up as the learning platform with the Chief Nursing Officer. Its structure will be further discussed at the 17 November planning meeting, to ensure it reflects the needs as a learning platform and repository of information.

Completed, CLOSED.

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