<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviations and acronyms</td>
<td>3</td>
</tr>
<tr>
<td>Executive summary</td>
<td>4</td>
</tr>
<tr>
<td>Background</td>
<td>6</td>
</tr>
<tr>
<td>Opening session</td>
<td>7</td>
</tr>
<tr>
<td>COVID-19 vaccines for children and adolescents</td>
<td>8</td>
</tr>
<tr>
<td>Outpatient management of possible severe bacterial infections</td>
<td>10</td>
</tr>
<tr>
<td>Background</td>
<td>10</td>
</tr>
<tr>
<td>Discussion</td>
<td>11</td>
</tr>
<tr>
<td>STAGE recommendations</td>
<td>12</td>
</tr>
<tr>
<td>Anaemia: Global action plan</td>
<td>13</td>
</tr>
<tr>
<td>Background</td>
<td>13</td>
</tr>
<tr>
<td>Discussion</td>
<td>14</td>
</tr>
<tr>
<td>STAGE guidance</td>
<td>15</td>
</tr>
<tr>
<td>Maternal, child, and adolescent health redesign: Addressing mortality</td>
<td>17</td>
</tr>
<tr>
<td>in children one month to nine years of age</td>
<td>17</td>
</tr>
<tr>
<td>Background</td>
<td>17</td>
</tr>
<tr>
<td>Discussion</td>
<td>18</td>
</tr>
<tr>
<td>STAGE guidance</td>
<td>18</td>
</tr>
<tr>
<td>Improving breastfeeding and mitigating the marketing of breast-milk</td>
<td>19</td>
</tr>
<tr>
<td>substitutes</td>
<td>19</td>
</tr>
<tr>
<td>Background</td>
<td>19</td>
</tr>
<tr>
<td>Discussion</td>
<td>20</td>
</tr>
<tr>
<td>STAGE recommendations</td>
<td>21</td>
</tr>
<tr>
<td>Closure and next steps</td>
<td>22</td>
</tr>
<tr>
<td>Annex 1. STAGE meeting agenda</td>
<td>24</td>
</tr>
<tr>
<td>Annex 2. WHO progress report on STAGE recommendations from meetings</td>
<td>27</td>
</tr>
<tr>
<td>held in April 2021 and November 2020</td>
<td></td>
</tr>
<tr>
<td>Annex 2 (cont.). WHO directors’ progress report to STAGE on</td>
<td>34</td>
</tr>
<tr>
<td>recommendations from meeting of November 2020</td>
<td></td>
</tr>
</tbody>
</table>
## Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS</td>
<td>Breast-Milk Substitute</td>
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<tr>
<td>EBF</td>
<td>Exclusive Breastfeeding</td>
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<tr>
<td>GFF</td>
<td>Global Financing Facility For Women, Children And Adolescents</td>
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<td>HMIS</td>
<td>Health Management Information Systems</td>
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<td>HPS</td>
<td>Health-Promoting Schools</td>
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<td>KMC</td>
<td>Kangaroo Mother Care</td>
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<tr>
<td>LMIC</td>
<td>Low- And Middle-Income Country</td>
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<tr>
<td>MNCAHN</td>
<td>Maternal, Newborn, Child And Adolescent Health And Nutrition</td>
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<td>MNCH</td>
<td>Maternal, Newborn And Child Health</td>
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<tr>
<td>PHC</td>
<td>Primary Health Care</td>
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<tr>
<td>PSBI</td>
<td>Possible Severe Bacterial Infection</td>
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<tr>
<td>PSE</td>
<td>Private Sector Engagement</td>
</tr>
<tr>
<td>RHIS</td>
<td>Route Health Information System</td>
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<tr>
<td>SAGE</td>
<td>Strategic Advisory Group Of Experts</td>
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<tr>
<td>STAGE</td>
<td>Strategic And Technical Advisory Group Of Experts</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNESCO</td>
<td>The United Nations Educational, Scientific And Cultural Organization</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
Executive summary

The World Health Organization (WHO) convened the fourth meeting of the Strategic and Technical Advisory Group of Experts (STAGE) on a virtual platform on 9–11 November 2021. The meeting participants included 28 STAGE members who were joined by WHO staff at headquarters and regional offices, and 60 observers from partner organizations.

Following opening remarks by Dr Zsuzsanna Jakab, Deputy Director-General, WHO, Dr Anshu Banerjee, Director, Maternal, Newborn, Child and Adolescent Health and Ageing (MCA), provided feedback on WHO activities in response to STAGE recommendations from the meetings convened in November 2020 and April 2021.

Professor Caroline Homer, Chair of STAGE, described the way in which the meeting had been planned. She highlighted the fact that, in addition, this year, four STAGE members had joined in October 2021, a meeting of the Strategic Advisory Group of Experts (SAGE) (Immunization) working group on COVID-19 vaccinations for children and adolescents to develop an interim statement on vaccines in children and a summary of the discussions was presented.

STAGE members had also provided written inputs and the statement was scheduled for publication on 24 November 2021. The consensus among STAGE members was that there is a need to differentiate between the benefits of immunization for children and the community and the global equity issues when it came to operationalizing vaccines.

The meeting sought guidance from STAGE on the following issues: outpatient management of possible severe bacterial infections (PSBI); maternal child health redesign, looking at post-neonatal mortality and risk stratification; the development of the anaemia global action plan; and improving breastfeeding and mitigating the marketing of breast-milk substitutes (BMS). These were presented during the STAGE sessions, which were open to STAGE members, partners and observers. The guidance or recommendations were further refined during the closed sessions of STAGE members which were held after each day’s meeting.

At the closing session, Dr Ian Askew, Director Sexual Reproductive Health (SRH), Dr Anshu Banerjee, Director, MCA, and Dr Francesco Branca, Director, Nutrition and Food Safety (NFS), summarized the salient points raised at the meeting for their departments. Professor Homer thanked all members and partners for their participation. She also informed the partners that as part of a prioritization exercise, WHO had received 50 topics on maternal, newborn, child and adolescent health and nutrition (MNCAHN) issues. Some of these were very broad and WHO and STAGE were currently working to bring more clarity and focus to these areas to be able to identify specific priority topics for STAGE.

The main recommendations of STAGE are summarized below. The full recommendations are given in the relevant sections of this report.

Outpatient management of possible severe bacterial infections

- WHO guidelines on inpatient and outpatient possible severe bacterial infections (PSBI) management should be updated using the standard WHO guidelines development process.
- A STAGE working group on PSBI prevention and management should develop consensus around an implementation strategy among all relevant agencies and stakeholders to support acceleration of an integrated strategy for the care of sick or small newborns. The strategy should include safeguards to ensure quality of care, and the strengthening of health systems (supply chains, health provider training, reporting mechanisms, monitoring and evaluation, etc.).
• STAGE recommends investment in research and innovation, including improving precision in the diagnosis of infections, accuracy of clinical algorithms, surveillance for antimicrobial resistance, and prevention of newborn infections.

Anaemia: Global action plan

• The global action plan should cover children, adolescent girls, and women of reproductive age, and should be comprehensive and ensure community engagement.
• The plan should be multisectoral in design and include implementation with the health sector as well as food systems and agriculture, and education and social affairs.
• Form a STAGE working group to review the current evidence on actions to address anaemia and involve STAGE members in reviewing the progress of the global action plan on anaemia, and in identifying the gaps (diagnosis, safety and toxicity of iron, current guidance, etc.).
• Keep STAGE informed on the integration and implementation of strategic plans and actions (coordination within countries, mapping of platforms to deliver interventions, including digital, etc.).

Improving breastfeeding and mitigating the marketing of breast-milk substitutes

• Importance of breastfeeding and the need to regulate the marketing of BMS must be raised to the highest political level considering the multisectoral dimensions of the issue. WHO to undertake political economy analyses of multiple barriers in selected countries to build the case for breastfeeding promotion, protection, and support.
• Need further research to better understand the social norms and values, health status (anemia, etc.), work and economic demands which are impacting women’s opportunities and decisions to breastfeed, and how the BMS industry is both utilizing and influencing these norms.
• WHO to explore and use marketing models to increase societal support for breastfeeding and eliminate BMS marketing.
• To establish a STAGE working group on BMS and breastfeeding.

Redesign of maternal and child health: Addressing post-neonatal child mortality

• WHO should invest in understanding the risk stratification at multiple levels, household, individual, programme, and the broader context (fragile areas/states). Risk stratification strategies should look at vulnerable households for delivery of focused household pre-emptive interventions.
• Strategies should recognize the clinical, social, environmental, administrative, and economic risk factors but the agenda should remain focused on concrete actions to protect, prevent, and treat particularly the children who receive zero services.
Background

The WHO departments of Maternal, Newborn, Child and Adolescent Health and Ageing (MCA), Nutrition and Food Safety (NFS) and Sexual and Reproductive Health (SRH) convened the STAGE for its fourth meeting which was held on a virtual platform from 9 to 11 November 2021. During the three days, 28 of the 31 STAGE members were joined by WHO staff at headquarters and regional offices, and 60 participants from partners organization as observers.

Between May and October 2021, discussions were held between WHO Secretariat and the four workstreams1 to provide updates on work being done in response to previous STAGE recommendations as well for the current meeting. Potential topics for the meeting were discussed internally and presented to the Evidence and Guidelines for Impact (EGI) workstream for their inputs. Detailed discussions led to the preparation of a shortlist of four topics, one of which was moved to the April 2022 meeting due to the need for additional work. EGI members provided detailed comments to WHO technical leads to enable them to clarify their presentations and questions to STAGE. Further discussions on the maternal and child health redesign coupled with technical meetings on pneumonia and diarrhoea led to the selection of postnatal mortality of children as the fourth topic for the meeting. Four STAGE members were invited to attend SAGE Working Group discussion in mid-October on COVID-19 vaccines for children. A summary of that discussion was added to the agenda for the STAGE meeting.

The agenda items for the meeting were finalized in discussion with the STAGE Chair (Annex 1). WHO technical leads made presentations for each of the selected topics and prepared the background documents along with specific questions for guidance from the STAGE. All background documents with specific questions were sent to STAGE members two weeks prior to the meeting. Work on possible severe bacterial infection (PSBI) was discussed with the EGI workstream for their inputs and draft recommendations were developed by the STAGE focal points and then presented at the STAGE meeting. During the open sessions, WHO technical leads made presentations which included specific questions for guidance from STAGE for discussion with STAGE members, and representatives of WHO regional offices, United Nations (UN) partners and participants. The guidance or recommendations were based on these discussions and then finalized based on comments and discussions during the closed sessions of STAGE members at the end of each day.

All 28 STAGE members attending the meeting confirmed that they had no significant conflicts of interest other than funds received by their institutions for doing research in MNCAHN. One member had a potential conflict for a commercial product related to food supplements. However, since the current agenda did not entail discussion on related commercial products, this conflict was not deemed significant enough to preclude their participation in the meeting.

1 Evidence and Guidelines for Impact; Knowledge Translation; Maternal Child Health Redesign; Emerging topics -COVID 19
Opening session

Dr Zsuzsanna Jakab, WHO Deputy Director-General, opened the meeting. She welcomed the STAGE members and partners to the fourth meeting of the STAGE, and underscored the continued impact of the COVID-19 pandemic on mothers and children, and the immense impact of school closures on children. She thanked members for the useful recommendations they had provided at the previous meetings, which had helped improve coordination mechanisms both within and beyond WHO, and for their efforts in translating WHO’s normative products into efficient and effective country programmes. She appreciated STAGE members’ interactions and inputs to the SAGE working group on COVID-19 vaccines for children and adolescents, and looked forward to the outputs of these exchanges. She reiterated WHO’s resolve to continue to work on the STAGE recommendations. She looked forward to STAGE’s inputs and to short- and long-term partner support as WHO strives to reach the triple billion targets.

Professor Caroline Homer, STAGE Chair, thanked Dr Jakab for her remarks and echoed the welcome to STAGE members and partners in the virtual space, thanking especially those who were attending the meeting at unsociable hours. She described the way in which the meeting had been planned, with discussions continuing in the four workstreams and focusing on the issues identified by WHO as requiring strategic guidance: outpatient management of PSBI; revisiting the maternal child health redesign, looking at post-neonatal mortality; the anaemia global action plan; and improving breastfeeding and mitigating the marketing of breast-milk substitutes (BMS). She thanked the four STAGE members who had joined a meeting of the SAGE working group on COVID-19 vaccinations for children and adolescents and a summary of the discussion was presented at the meeting. STAGE members also provided inputs to an interim statement on vaccines for children which would be published by WHO on 24 November 2021.

She then invited the Director of MCA, Dr Anshu Banerjee, to summarize WHO’s work in following up on the recommendations made by STAGE at its previous meeting.

Dr Banerjee noted that there has been some progress in terms of the response to the STAGE recommendations made at meetings held in November 2020 and April 2021. Some of these were part of ongoing tasks for WHO, while others were new areas of work. He said that progress would be reported regularly, and a written report would be attached to the STAGE report (Annex 2). He recalled that the recommendations from April 2021 fell into four broad themes: mitigating the impact of COVID-19 pandemic on MNCAHN service provision and use; kangaroo mother care (KMC); private sector engagement (PSE); and the redesign of the maternal and child health programme.

In response to the recommendations relating to mitigating the impact of COVID-19, WHO had published various technical scientific briefs (Annex 2) that provided guidance or information related to the direct and indirect impact of COVID-19 including a scoping review that detailed the lessons learned from previous disruptor events such as earthquakes and epidemics and on improving the use of routine data provided by countries.

In response to recommendations on self-care interventions, WHO was working on a digital adaptation kit for self-monitoring during the antenatal period. Although this work had been started before COVID-19, the need for it had been exacerbated by COVID. It is expected to be finalized by January 2022. In addition, as part of the WHO 2021 guidelines on self-care, two systematic reviews had been completed on self-monitoring of blood glucose and blood pressure during pregnancy. In response to the recommendation on the use of digital health, WHO was publishing a guide on how to plan and conduct teleconsultations with children and adolescents; guidance on telemedicine is under development.
as is a tool to assess the quality of digital health interactions between health workers and women/parents/caregivers/families for MNCH.

The previous recommendation on KMC was addressed by the formation of a STAGE working group on KMC with STAGE members, country programme managers, United Nations (UN) agencies, bilateral development agencies, donor agencies, professional bodies, and parents’ groups. A global position paper on KMC and the implementation guidance for KMC should be completed by April 2022.

In response to the recommendation on private sector engagement (PSE), Dr Banerjee mentioned that a working group had been established which would facilitate the development of a joint working paper to build collaboration and identify the role of different partners. The role of WHO was to develop technical guidance to support national governments in their PSE on MNCH work. He said that a short report would be available at the STAGE meeting in April 2022.

Recommendations related to the maternal child health redesign were being addressed by: the finalization of the framework publication Investing in our future: A comprehensive agenda for the health and well-being of children and adolescents (in press); a technical consultation on a number of contacts and a package of interventions to support well child and adolescent health and well-being programming planned for 7–9 December 2021; and a stakeholder consultation with governments and partners on the implications for current programming planned for the first quarter of 2022.

The recommendation related to health promoting schools (HPS) was being addressed through WHO and The United Nations Educational, Scientific and Cultural Organization (UNESCO) building on existing governance mechanisms to support the HPS initiative such as the International Parliamentary Network for Education and Global Education Meeting Forum. Furthermore, WHO and partners were developing a common way of measuring progress in school health, whilst WHO, United Nations Population Fund (UNFPA), United Nations Children’s Fund (UNICEF), and UN- Women had contributed to the UNESCO publication The journey towards comprehensive sexuality education global status report, 2021.

In response to the recommendation on maternal health and well-being, a technical consultation is planned for early 2022 to discuss the results of the mapping of maternal well-being and networks of care concepts.

**COVID-19 vaccines for children and adolescents**

The SAGE secretariat invited four STAGE members to participate in the SAGE working group discussions during October 2021 on COVID-19 vaccines for children and adolescents and to provide their inputs to an WHO interim statement on this topic.

Professor Zulfi Bhutta, STAGE member, presented a summary of this discussion along with some background information related to the COVID-19 situation and the direct and indirect impact on children. He highlighted the fact that, over the last year, information and understanding of the epidemiology and disease burden of COVID-19 on children had improved. While the overall burden of cases in children remained low at less than 10% of total cases and less than 1% of total mortality, although there were significant variations across age groups. Studies had shown that schools were generally not a major source of community outbreaks and transmission risks in schools were in line with community transmission. However, school closures had been extensive across almost all countries, which was the biggest indirect impact of COVID-19 on children and adolescents. Learning had been disrupted by at least two years or more, with gender implications as girls in low- and middle-income countries (LMICs) had been more affected than boys. In addition, the emotional anxiety of children and parents has had mental health consequences. Mitigation strategies such as masks and social distancing in schools had been difficult to enforce, especially in LMICs.

However, vaccinations for children had been
impacted by the availability of vaccine supplies and inequity of vaccine distribution. As of 6 November 2021, although 7.5 billion COVID vaccine doses have been administered, only 4% of the adults in low-income settings had received the vaccine, while high-income countries are planning and or introducing boosters and vaccination for children. Thus, the current policy on vaccines for children was influenced by vaccine availability and equity, and questions to STAGE were:

1. When should children be vaccinated based on current evidence?
2. Given vaccine inequity, what guidance should be provided globally?

**Discussion**

STAGE members discussed the impact of school closures and highlighted that parental anxiety and reluctance to send their children to schools unless they are vaccinated had been reported in many countries including India, Indonesia, and other Southeast Asian countries. The digital divide in LMICs was another issue that had impacted learning, and loss of learning in poorer neighbourhoods was estimated to be three years. Some members suggested that it may be important to publicize information on COVID-19 seropositivity in children which has been reported to be similar to that of adults, as found in India and in other countries. This could then reduce parental anxiety and encourage them to send their children to school. Vaccination for children could then be delayed without major impact on their well-being.

The discussion also highlighted the high burden of adult mortality due to COVID-19 especially in the 25–50 year age group and with current vaccine supply, adults would and should remain the priority. However, many felt that for those countries with sufficient vaccine supplies, it may be useful to vaccinate all age groups including children. Countries may be empowered with clear information on the safety (risk) and effectiveness of vaccines for children so that they could adopt vaccination policies suitable to their needs. Current data indicated that providing COVID-19 vaccines to children and adolescents was an effective strategy and could keep children in schools, however, vaccine supplies and equity are important considerations. Some members also mentioned that access to, and use of, antivirals may also soon influence these policy decisions.

All STAGE members suggested that the interim statement from WHO should separate the COVID-19 vaccine equity issues from vaccine safety and effectiveness, and should clearly indicate that COVID-19 vaccines are safe and effective for children, although, countries could make the decision based on the availability of vaccines.
Outpatient management of possible severe bacterial infections

Background

Dr Rajiv Bahl, WHO, presented the history and evolution of the work on PSBI in the past 15 years in WHO. He recalled that the WHO integrated management of childhood illness (IMCI) algorithm classifies neonates and young infants < 2 months old with clinically suspected sepsis as possible severe bacterial infection (PSBI). Newborn infections account for a third of neonatal deaths. The WHO guidelines recommend that young infants with PSBI be managed with injectable antibiotics and supportive care in a hospital. However, a study found only one in four young infants manifesting the clinical signs accepted a referral for hospital treatment. Evidence from a study in Bangladesh suggested home-based treatment with community health workers as possible with a combination of oral and intramuscular antibiotics. Other studies showed remarkable results revealing no difference between the standard and home-based treatments with oral amoxicillin.

Subsequently, in 2016, WHO updated the guideline to operationalize the management of sick young infants with PSBI when the referral is not feasible in the context of existing maternal, newborn and child health programmes. When referral to hospital is not possible, the guidelines recommend that: (i) a baby with fast breathing only (> 7 days older) can be treated with oral amoxicillin at home; and (ii) the further classification of these young infants into those who are critically ill and those who have clinical severe infection. If a referral is not feasible, those with clinical severe infection (CSI) should be managed on an outpatient basis with injectable gentamicin for 2 or 7 days plus oral amoxicillin for 7 days.

From 2016–2019, WHO coordinated implementation research to test novel PSBI management strategies in routine health systems in six countries. The implementation research demonstrated that outpatient treatment is safe and effective when hospitalization is not feasible. It proved that improved identification of PSBI signs by family members and community health workers was possible and identified that oral treatment at first-level health facilities is safe and effective if fast breathing in infants aged 7–59 days. The same study highlighted key ingredients for success, including orientation and policy dialogue at district and sub-district level, the establishment of technical support units, the creation of a learning platform, strengthening the health system, and the continuous use of data. The study showed 54–97% of PSBI cases were treated, many in outpatient facilities. Dr Bahl pointed to the need to maintain and support staff confidence along with the competencies of staff.

Dr Bahl also explained that, with 2% case fatality (proportion of death among the 6000 total cases identified as PSBI with new treatment strategy) and when treatment coverage increases from 25% to 75%, expected deaths averted will be around 225 000 per year in sub-Saharan Africa and South Africa (assuming that there are six million PSBI cases).

Currently, an open-label, two-arm, individually randomized controlled trial is ongoing to examine the hypothesis that: (i) the majority of infants with CSI with low-mortality risk signs (severe chest indrawing or high body temperature or fast breathing in infants < 7 days) do not benefit from hospitalization; (ii) the majority of young infants with moderate-mortality risk signs (not feeding well or low body temperature or movement only on stimulation) who need hospitalization can be discharged early.
Discussion

STAGE members appreciated the very large body of work on PSBI that WHO had been leading to date. The discussion evolved around implementation safeguards (proper training, education, monitoring, better care-seeking education for parents/family members, better risk assessment), antimicrobial resistance, and better diagnostics. Members also raised the need for an integrated approach to the management of PSBI, KMC and other interventions for small or sick newborn babies. Members highlighted the need for implementation guidance and buy-in from professional associations. They also cautioned against oversimplifying a complex situation where it is unclear what proportion of illness is actually attributable to bacterial infections even in study situations and against applying this more widely to a stricter definition of bacterial infections. Some members alluded to the fact that suggesting or recommending that aggressive life-threatening neonatal sepsis could be managed by this approach may be misleading. Also, this could lead to the perception that home care would suffice even in areas where referral is possible.

STAGE members highlighted the need for precision medicine and recommended movement in that direction. They considered that moving away from presumptive treatment and towards a better culture and diagnostics for treating specific bacterial aetiology was also important. While important to save lives, it is also prudent to not overtreat and overuse antibiotics especially ones like gentamycin, as this is not without risk. Therefore, the push should be for better diagnostics and prevention, and innovations such as vaccines.

Dr Bahl agreed that there was need for better diagnostics, specifically molecular ones. However, in the interim, sick babies would need to be treated but given the realities of delayed referral and infection control practices in LMICs, it is unclear whether hospital care is always the best. He clarified that this did not mean that all children should be treated as outpatients. However, what these studies suggest is that when children meet the criteria to be sent to hospital, and when the situation prevents them from going, the option of outpatient care should be made available to them.

Very sick babies in need of hospital care should be treated in a hospital setting. However, he noted that overcrowding could be reduced so that babies who can be treated in outpatient care do not end up in hospitals. He also agreed with the need for an integrated approach where interventions can be packaged for newborn care.

Regional colleagues also supported the need for continued efforts in moving towards precision medicine while ensuring babies are not left untreated in situations where referrals are not possible. One raised concerns about the interpretation of equivalence of treatments from research studies. STAGE members agreed on including safeguards in the implementation strategy to achieve quality care. Clear guidance on how to manage such babies would be very useful for frontline workers. They highlighted the need to train community health workers, strengthen primary care facilities and push for an integrated approach. Professional associations like the International Pediatric Association (IPA), the International Confederation of Midwives (ICM) and others endorsed this strategy, and highlighted the role of midwives in this strategy. The idea of having a working group to take this forward was appreciated by partners.

During the closed session discussions, STAGE members and WHO participants concluded that it was critical not to leave children untreated and, at the same time, focus on research and innovation to get accurate, preferably point-of-care diagnostics for bacterial infection. The recommendations are provided below.
STAGE recommendations

- PSBI management should become a focus for STAGE, given the potential for high impact through equitable access to treatment.
- WHO guidelines on inpatient and outpatient PSBI management should be updated using the standard WHO guidelines development process.
- A STAGE working group on PSBI prevention and management should develop consensus around an implementation strategy among all relevant agencies and stakeholders to support acceleration of an integrated strategy for the care of sick or small newborns. The strategy should include safeguards to ensure quality of care, and include strengthening of health systems (supply chains, reporting mechanisms, monitoring and evaluation, etc.).

- STAGE recommends investment in research and innovation, including to improve precision in diagnosis of infections, accuracy of clinical algorithms, surveillance for antimicrobial resistance, and prevention of newborn infections.
Anaemia: Global action plan

Background

Dr Francesco Branca provided an overview of the anaemia situation for women and children, highlighting that anaemia remained unresolved, largely due to the siloed approach of work on a multifaceted issue. Therefore, WHO has been planning to set up a flagship initiative bringing together different areas of work around nutrition, and maternal and child health, food safety, malaria and neglected tropical diseases (NTD) and other areas that contribute to the understanding of anaemia. Guidance from STAGE would be timely as there is an opportunity to scale up our response to anaemia during this year’s Nutrition for Growth Summit in Tokyo (7–8 December 2021). A large number of partners had expressed interest in scaling up the action plan. He specifically thanked the Bill & Melinda Gates Foundation for committing their support in developing this global action plan.

Dr Lisa Rogers, WHO, presented a draft proposal for the development of a Global Action Plan for Anaemia and requested that STAGE members provide their inputs to the specific questions related to the scope of the plan. She highlighted the fact that since 2012 WHO had a global nutrition target on reducing anaemia in women of reproductive age as part of the Comprehensive Implementation Plan on Maternal, Infant, and Young Child Nutrition. Recent WHO estimates indicated that 40% of children, 37% of pregnant women and 30% of women of reproductive age are affected by anaemia, with the WHO regions of Southeast Asia and Africa having the highest burden. Trends in the estimated prevalence of anaemia in women of reproductive age indicate that most countries appear off track in meeting the goal of 50% reduction in anaemia by 2025. The 2013 Global Burden of Disease estimates indicated that iron deficiency anaemia accounted for about 63% of the total global cases of anaemia, with other micronutrient deficiencies (e.g., vitamin A, B12, folate, riboflavin) also contributing. Anaemia due to infection (e.g., malaria, hookworm and schistosomiasis) is the second most common cause, followed by genetic haemoglobin disorders and other conditions (e.g., gynaecological conditions, gastrointestinal disease and chronic kidney disease). The World Bank estimates that the cost of not investing in anaemia prevention and management would result in 265 million more cases of anaemia in women in 2025 compared to 2015; 800 000 more child deaths and a range of 7000–14 000 more maternal deaths. Each US dollar invested in anaemia interventions is expected to yield $12 in economic returns.

WHO identified six different focus areas to tackle this broad agenda: the prevention, diagnosis, and management of anaemia; diagnostics; therapeutics; analysis of the relative impact of various determinants of anaemia; integrating the management of anaemia across the life course; and research, leadership and coordination. WHO is seeking both internal and external inputs on the development of a global action plan, which will be followed by broader technical consultation with different stakeholders. To inform the plan, a situation analysis will be conducted on what is currently known about the magnitude and distribution of anaemia, its determinants, the health and economic impact of anaemia, country policies that have been implemented on the prevention and control of anaemia, implementation bottlenecks, etc. Different working groups are envisaged on each priority area to develop a draft framework followed by meetings at regional and country level. The process will end with a public review and comments period. The goal would be to develop a model roadmap that could be adapted by countries based on their local contexts to address their priority areas. Work is ongoing with UNICEF and other partners to discuss the formation of an Anaemia Alliance. The development of the global action plan and the formation of an anaemia alliance are proposed commitments to be announced at the Nutrition for Growth Summit in December 2021.
STAGE guidance was sought in the following areas:

1. **Scope of work.** Which population groups should the plan cover: women of reproductive age only; women and children; other population groups?

2. **Sectors for inclusion in the plan.** Within the health sector, which areas should be included: nutrition only; family planning; malaria; neglected tropical diseases? What other sectors should be included: food systems and agriculture; education; others?

3. **Process for development.** How should the plan be developed: led by WHO with inputs from other UN agencies, nongovernmental organizations (NGOs), experts, regional and country representatives; or co-led by WHO and other agencies? How and when to engage public and private sectors? STAGE working group with additional external experts to assist in developing a plan? Or should representatives of STAGE join a committee specifically dedicated to developing a plan?

4. **Identification and prioritization of knowledge gaps.** What are the knowledge gaps and the priorities for addressing them, examples include: optimal formulation of supplementation; availability of recommended dose for intermittent supplementation; alternatives to oral supplementation (e.g., Intravenous iron)?

5. **Integration and implementation of strategic plans and actions.** What types of platforms should be considered and improved/scaled up for the delivery of actions to address anaemia: routine primary health care, including antenatal care; school health; social protection?

**Discussion**

The consensus among STAGE members was to include the broader group—women of reproductive age, children under five years, and adolescents, especially in pre-conception phase. It may be useful to introduce anaemia targets for children similar to the targets for women of reproductive age. Similarly, given the Global Anemia Exemplars work (led by SickKids and Gates Ventures/ BMGF) that clearly showed that 50–60% of the drivers of anaemia are outside the health sector, multisectoral inclusion is required, which varies by geographic region (while malaria is an important driver in Africa, this is not the case in South Asia). The general focus has been on nutritional anaemia with the assumption that a good deal of it is due to iron deficiency. However, this may need to be questioned given the data obtained from large-scale supplementation interventions and fortification studies. Thus, there is a need to develop a regional research agenda to better understand the reasons for anaemia, especially its linkages with other forms of undernutrition.

In terms of sectors, food systems and agriculture are becoming more important, as people focus more on healthy and sustainable diets and on behaviour change communication (BCC). Schools are another important platform for information, supplementation and feeding. In addition, it is important to consider the integrated approaches where opportunities for contacts within the health sector are better utilized to deliver a comprehensive set of interventions, including the improvement of diets. Social sectors and water and sanitation are important as well. Nutrition and healthy diets at the household level are important to consider, both for BCC and for the distribution of supplements. Maternal education would be another area that could have an impact on anaemia. Also, the use of digital platforms should be explored.

In terms of knowledge gaps, continued research is required on how to implement the recommendations that involve multiple sectors. This work also requires better diagnostics for measuring haemoglobin and a better understanding of the current definitions and cut-off values used to define anaemia. A review of the use and validity of supplementation strategies versus healthy diets is needed with the focus on bioavailability. Also, there must be more clarity within countries on how multiple interventions (e.g., supplementation, fortification) to address anaemia are being implemented. We may also be able to learn lessons from the countries that have a greater likelihood of achieving the global nutrition target on anaemia. A better understanding is needed of the socioeconomic inter-household behavioural determinants, using a community perspective.
It was highlighted that there is an urgent need to go back to basics on anaemia and understand why programmes over the last 50 years have not been as effective as expected in decreasing anaemia.

STAGE members expressed interest in being both part of a working group and contributing to the larger agenda as and when required.

Regional colleagues highlighted the need for integration within ministries of health and across different ministries. Also, it is important to use existing multisectoral coordination mechanisms rather than creating a new mechanism for anaemia discussions. Reviving the growth monitoring platforms would be important, as well as using every opportunity for contact with households (e.g. ANC, immunization visits) for both the prevention and management of anaemia. They also discussed the need to address nutrition for children, adolescents and mothers in humanitarian and emergency settings.

Most of the partners echoed the points raised by STAGE members. Some suggested that using primary health care as the platform for anaemia would be beneficial as it incorporates the community perspective that is so important when addressing anaemia. Similarly, they suggested that using the education sector to include nutrition programmes would be beneficial. Professor Homer recalled that this was a broad area, and the focus needed to be on specifics, so, for example, focusing on WASH may be important, while building on existing coordination mechanisms, and focusing on the need for developing better diagnostics.

Based on the comments from members, regional colleagues and partners, the STAGE guidance was further refined and is provided below.
STAGE guidance

1. Population groups to be covered:
   - women of reproductive age, children <5 years of age, adolescent girls (particularly in the pre-conception phase).

2. Sectors for inclusion in the plan:
   - should be comprehensive (multisectoral) and ensure community engagement;
   - health sector (nutrition and food safety, family planning/reproductive health, malaria, NTDs, PHC, environment – lead, WASH);
   - food systems and agriculture;
   - education (schools, academia, professional associations);
   - social affairs (e.g., human rights, gender, equity, social protection).

3. Process for development of the global action plan – options for engaging with STAGE:
   - form a STAGE working group to provide a more ‘holistic and deeper’ review of the current evidence on anaemia actions; and or
   - periodically involve STAGE members in reviewing progress and inputting on development of the global action plan on anaemia;

4. Identification of knowledge gaps:
   - ensure the research agenda cuts across all geographical regions to better understand variations in the aetiology of anaemia;
   - mapping of sectors with interventions related to anaemia (coordination of an integrated, multisectoral, wholistic approach);
   - mapping of country projects/programmes;
   - effective implementation of anaemia actions, including treatment approaches, depending on aetiology of anaemia;
   - safety and toxicity of iron;
   - relationship of anaemia with other forms of undernutrition and complementary strategies;
   - diagnostics (innovation, technology, thresholds to define anaemia);
   - analysis of countries progressing well towards global nutrition target.

5. Integration and implementation of strategic plans and actions:
   - coordination within ministries of health and across other relevant ministries within the country;
   - informed by mapping of the platforms currently being used to deliver interventions (e.g. growth monitoring, ANC, immunization, PHC);
   - use of existing multisectoral coordination mechanisms;
   - informed by analysis of countries progressing well towards global nutrition target;
   - inclusion of local NGOs and consideration of country-specific aetiology of anaemia and local practices;
   - use of digital platforms.
Maternal, child, and adolescent health redesign: Addressing mortality in children one month to nine years of age

Background

Professor Homer introduced the session on post neonatal mortality and mentioned that several STAGE members have been involved in the discussion on pneumonia and diarrhoea. She also mentioned that WHO is seeking guidance from STAGE on how to take this issue forward. Dr Banerjee drew attention to the fact that the primary issue is risk stratification that needs further clarity as identifying at-risk populations is at the core of several programmes.

Dr Wilson Were, WHO, highlighted that at least 53 countries are off track to meet the Sustainable Development Goal (SDG) target for under 5 mortality of 25 or fewer deaths per 1000 live births by 2030. He said that most of these are in sub-Saharan Africa thus emphasizing the need for guidance in terms of the implementation and identification of gaps in addressing the most common causes of post-neonatal mortality. He presented an analytical review of global child mortality data and identified high-burden countries where pneumonia, diarrhoea, and malaria account for nearly half of mortality for ages 1–59 months and about 30% of mortality for ages 5–9 years. Globally, pneumonia and diarrhoea account for 36% and 23% of all deaths in children 1–59 months and 5–9 years, respectively, with the highest mortality in high-mortality burden countries, particularly in humanitarian settings. Beyond clinical disease risk factors, high mortality is associated with age, malnutrition, comorbidity, and environmental, social and economic factors.

Literature reviews on the prevention and management of pneumonia and diarrhoea followed by various internal and external consultations showed that high post-neonatal mortality continued due to common infections, driven by increasing inequities and multiple deprivations that children face in countries with a high burden of childhood deaths. An accumulation of risk factors added to the burden, including, poverty, food insecurity/ malnutrition, lack of access to clean water and sanitation, air pollution, and fragile/humanitarian contexts. This was further exacerbated by suboptimal primary health care (PHC) systems, inequity, poor access, low coverage of critical interventions, and huge gaps in the quality of service.

Key recommendations included: reviewing and updating guidelines and tools for pneumonia and diarrhoea (children and young adolescents 0–14 years of age); focusing on high-burden countries and vulnerable populations within countries; and building on global initiatives such as Zero-dose children, WASH Alliance, Scaling up Nutrition, Accelerated Action for Pneumonia, Global Financing Facility (GFF), Gavi, The Vaccine Alliance and the Global Fund to Fight Aids, Tuberculosis and Malaria (GFATM) to support an expanded agenda for child survival.

For STAGE guidance, two questions were posed:
1. How do we improve risk stratification to identify high-risk children before, during and the immediate period after illness to mitigate mortality, and short- and long-term consequences?
2. How do we modify or redesign our current care strategies to identify all children at risk of death and ensure healthy/well child development?
**Discussion**

The waning of IMCI and the new focus on newborn mortality are some of the factors that led to the decrease in attention on childhood mortality. Advocacy is thus needed for more focused work and financing in this area. In terms of risk stratification, it was suggested that this be assessed at household level. The primary reason being that many cases of childhood illnesses come from the same household, where many of the key determinants are shared. This is not just true for childhood illness, maternal and newborn vulnerabilities including anaemia are also linked to the same household. Identification of at-risk households may also improve the integration of services, which may also benefit from linkages with poverty alleviation programmes that have used households as their unit of stratification.

Other participants suggested extending this to communities and integrating it with nutritional assessments, air pollution (indoor and outdoor), WASH programmes and working closely with community health workers and strengthening community health programmes incorporating broader contextual dimensions. It may also be useful to consider collaboration with other partners such as the development banks, GFF, and others. There was a suggestion to use machine learning and demographic country data to identify communities at high risk of social determinants of death and disability. In addition, it would be useful to learn from examples of positive deviants, such as in African countries, that are relatively more on track to meet their under-five mortality targets. For fragile and emergency settings, it may be useful to consider digital technologies and telemedicine for the provision of care. Another important aspect highlighted by members was the need to train health-care workers in risk assessment which has become more complex and includes a review of clinical, socioeconomic, geographic, and home environmental factors.

Partners also reiterated and supported the concept of risk stratifications at the household and community level, highlighting the concept of zero dose communities – communities where children have not received a single dose of usual immunization and the associated deprivations. This level of risk stratification may have been difficult earlier, but with newer technology, this would be possible. They also suggested multi-level risk stratification before, during, and after illness episodes. Various partners mentioned the need to focus on quality of care and not just on availability of care. Follow up and care of those children who were born preterm, small or sick, and then discharged need to be part of the risk stratification process.

Based on these comments and further discussion in the closed session, STAGE members agreed on the following guidance.

**STAGE guidance**

- WHO should invest in understanding the risk stratification at multiple levels, household, individual, programme, and broader context (fragile areas/states).
- Risks commonly cluster at the level of the household whether PSBI, anaemia, pneumonia, diarrhoea, or malnutrition – risk stratification strategies should look at vulnerable households for delivery of focused household pre-emptive interventions.
- Strategies should recognize the clinical, social, environmental, administrative, and economic risk factors but the agenda should remain focused on concrete actions to protect, prevent and treat particularly children who receive zero health services.
Improving breastfeeding and mitigating the marketing of breast-milk substitutes

Background

Dr Nigel Rollins, WHO, provided a brief background of this work, with its focus on mitigating the impact of marketing breast-milk substitutes (BMS) and improving breastfeeding practices. The importance and benefits of breastfeeding is well known in: saving newborn lives (820,000 lives in 2016); preventing childhood obesity (13% reduction); improving intelligence quotients in children; improving maternal well-being and survival; and reducing risk of invasive breast cancer and ovarian cancer. However, despite this evidence, for the past two decades, exclusive breastfeeding (EBF) rates have been almost stagnant with very little progress. There are very many reasons why women do not or cannot breastfeed exclusively, some by choice and some due to external factors such as work constraints, perceived milk insufficiency, and societal norms. Poor health-care support is certainly an important component, while trade and labour provisions do not provide adequate maternity protection (it is important to acknowledge that 70–80% of women in the labour force in low- and middle-income countries are in the informal sector). The 2016 Lancet series highlighted that breastfeeding cannot be the sole responsibility of women, promotion of breastfeeding should be a collective societal responsibility.

WHO along with UNICEF, the International Labour Organization (ILO) and Global Breastfeeding Collective is working on a variety of activities including: advocacy for improved policies and programmes; access to skilled support and counselling; strengthening Code legislation; and monitoring breastfeeding indicators. There have been a few success stories, for example, in Bangladesh, Ethiopia and Viet Nam where EBF rates showed steep increases between 2010 and 2014. However, during the same period and since then, the sale of BMS has also grown at almost 8% per year. The influence of marketing must be acknowledged, they simplify the problem, position a product or diverse products as a solution, build relationships, and create new social norms. Conversely, public health relies on evidence and uses it to appeal to the rational mind. The companies invest $3–6 billion annually in marketing BMS ($45 per newborn). However, investments in breastfeeding efforts have been dismal. The World Bank estimates that an additional $5.7 billion is needed annually to achieve Global Nutrition targets of at least 50% EBF by 2025 ($4.70 per newborn). Current breastfeeding support is less than $2 per newborn. It is clear that protecting, promoting and supporting breastfeeding are not public health priorities for most countries.

WHO has been reviewing the BMS marketing components, for example, packaging, digital marketing, the impact of marketing on human rights, ongoing code violations, and considering the role of political economy. The strategic and economic value of the dairy industry to government is apparent in many of the legislation in various high-income countries. Companies use multiple channels of advertising, such as health professionals for marketing and for promotional videos that are aspirational in nature. The use of digital marketing utilizing personal data and complex algorithms is on the rise. To counter these, it is important to influence trade and labour sectors and will require national and global consensus and responses. WHO in collaboration with UNICEF and Save the Children is planning a series of launches, research reports and hope to have a global impact.
To move this further, WHO is seeking STAGE guidance for the following issues:

1. **How to elevate breastfeeding as a public health priority in health policy, investment and programmes in both low- and high-resource settings?** What additional data or evidence is needed; how to elevate it to collective responsibility?

2. **How to effectively mitigate the effects of BMS marketing as a negative determinant of breastfeeding?** How to use research to increase investments in breastfeeding; how can partners engage in this further?

3. **How can the health workforce – medical, nursing and nutrition – support efforts to effectively protect, promote and support breastfeeding, and reduce the inappropriate use of BMS?**

**Discussion**

Professor Homer reminded the audience of the sobering statistics and the marketing efforts for BMS, which many think of as a phenomenon of the 1970s but which is still a critical issue. STAGE members acknowledged the need to address this issue in a multifaceted way to mitigate the effect of BMS marketing. The issue of human milk banking was raised and reiterated by few members. The issues of costs, both financial and time resources needed for women, to be considered and acknowledged. While marketing is a factor, there are other barriers to EBF.

Some understanding of the kind of interventions is required as EBF does not aim at behaviour change, but at behaviour initiation. Also, public health interventions need to keep pace with changing marketing trends. Perhaps starting the education process early on during the adolescent years and focusing on nutrition and breastfeeding should be considered. Developing breast-feeding champions that is - people who set social norms-may be another way to promote EBF.

In terms of interventions, it is important to understand the level of supporting policies and infrastructure that is needed across countries—maternity leave policies, availability of professional counsellors, day-care support mechanisms, etc. The variation between urban and rural areas, the formal and informal workforce, the role of husbands and other family members would also need to be considered. An implementation strategy would require a country-by-country assessment of the barriers.

It may be useful to understand how marketing companies influence women and social norms, and learn lessons from them. Public health needs to take these trends and social theories into account. In addition, if we hold countries and communities accountable, and use breastfeeding rates as a measure of social success, countries may start focusing on EBF rates. It may be useful to review the political economy analysis carried out by UNICEF a few years ago on EBF coupled with a detailed political analysis of barriers in selected countries including those in Vietnam that reported significant progress in EBF rates. High-level political support may be one of the important reasons for their success. Thus, advocacy may be the answer to get high-level political and global support for EBF. In India, the Infant Milk Substitute Act (IMS) has been very useful in curbing the sale of BMS, and advocacy with other governments for such acts may be considered. Another example is from Australia, where a hypothesized tax on tobacco was used to set up a health promotion foundation, which focused on social marketing targeting tobacco control and plain paper packaging. If there were the political will, something similar may be considered for BMS.

One of the partners raised the issue of how midwives may be portrayed as only promoting EBF and this may deter women to seek support. Another partner highlighted the role of social norms that influences behaviour, for example, in Africa where the initiation of breastfeeding is very high, EBF is low, mainly due to social norms that promote the use of supplements with breastmilk.

Regional colleagues echoed similar issues in promoting breastfeeding efforts—the role of fathers and family members and the need to strengthen legislation. In Africa, although the norm is to breastfeed, working conditions for poor women coupled with social norms make it difficult for them to EBF. Adding a breastfeeding counsellor may not
be feasible for Africa where shortages of human resources is a serious issue. Colleagues also emphasized that marketing and code violations are a major issue and urged the prioritization of this discussion at the highest level both politically and globally.

Dr Rollins, Dr Branca and Dr Larry Grummer-Strawn responded to the comments raised by STAGE members and partners. They clarified that WHO with UNICEF and NGOs are organizing a call to action on a set of specific policies including a code of marketing for BMS, paid family leave and workplace breastfeeding policies. They reiterated that WHO had a good understanding of the numerous policies and the level of implementation in various countries. Regulatory policies do result in changes, as shown by some countries that have shown improvements in EBF rates, suggesting that while there has been progress, a lot more needs to be done. The Nutrition Summit will see some important commitments and this space could be used for more advocacy and push for EBF. What is missing is large-scale investment in breastfeeding to make it a priority for countries. It was agreed that there are many reasons for women not to choose EBF, however, marketing exposure is immense as reported during interviews with 8500 women and has remained unaddressed in most public health interventions.

Dr Grummer-Strawn highlighted that the focus of this discussion should be BMS marketing as marketing makes many of the political battles difficult. BMS is presented as a solution for many of the issues including the introduction of maternal leave and protection policies, and thus influences funders, decision-makers, and parliamentarians. Similarly, health-care workers who are supported professionally by many of the BMS manufacturers, tend to lend support to BMS directly or indirectly through endorsements and advertisements. While interventions and policies can be implemented and influenced at country level, marketing by nature is transnational and, with digital marketing, it has become even more so. Thus, there is an urgent need to focus on BMS marketing.

Dr Rollins summarized the discussions by stating that there was a need to capture the attention and gain support of high-level participants at G20, and leaders at the very highest levels. Advocacy should stress that breastfeeding is more or as important as deciding between trade and labour implications, and that it is not the sole responsibility of women.

Dr Homer suggested that STAGE could support WHO by either setting up a working group or STAGE members could be part of technical working groups to take this forward. Based on the comments at the meeting and further discussion at the closed session, the following recommendations were finalized.

**STAGE recommendations**

- Recognition of the importance of breastfeeding – and the need to eliminate the marketing of BMS must be raised to the highest political level considering the multisectoral dimensions of the issue – includes trade, labour, equity and not just health. Strategies, processes, and mechanisms should be identified for high political impact and support.
- There is a need to better understand the social norms and values, health status (anemia, etc.), work and economic demands which are impacting on women’s opportunities and decisions to breastfeed, and how the BMS industry is both utilizing and influencing these norms.
- WHO to explore and use marketing models to increase societal support for breastfeeding and eliminating BMS marketing.
- Conduct and use comprehensive political economy analyses of multiple barriers in selected countries to build case for breastfeeding promotion, protection, and support.
- STAGE to support through either a working group on BMS or through participation of STAGE members in technical working groups for BMS.
Closure and next steps

Professor Homer thanked all the participants especially STAGE members, WHO colleagues, UN and other partners and she said it was phenomenal to have over 100 people every day on Zoom platform at this meeting. She reminded everyone that the meeting report would be finalized and published on the STAGE website with the recommendations and guidance from STAGE. She also said that she would be meeting the Director-General to share the outputs of this meeting.

Professor Homer provided a summary of the prioritization activity undertaken. The survey on priority topics in MNCAHN received over 50 responses across a wide range of topics. A small subgroup of STAGE members worked with WHO on these and identified 12 broad topics which include climate change and health, MNCAHN in fragile settings, mental health, and various health-system issues, with a few specific issues related to guidelines. She explained that WHO is working on these to identify specific issues/topics within each broad area and will bring those to STAGE in the next few months to prioritize. This list of priority topics will then be shared during the STAGE meeting in April 2022.

As part of the closing session, Dr Ian Askew and Dr Branca provided their comments. Dr Askew mentioned that he had been listening to the rich discussions in the past three days and wanted to thank all members, Chair, partners and observers for their participation. He was thankful to all participants for the breadth and depth of the discussions and bringing in ideas from different perspectives, irrespective of the topic.

Dr Branca echoed Dr Askew’s appreciation, thanking the STAGE members and Chair for their recommendations and guidance especially for those on anaemia and breastfeeding, two priorities for Nutrition and Food Safety. He acknowledged the partners who are part of the process of implementation, and informed the group that at the WHO Executive Board meeting in January 2022, a report on maternal, infant and young child nutrition will provide information on progress towards global nutrition targets. The report will also include progress being made in the implementation of the child feeding strategy and will have a section on digital marketing of food to children. The Global Action Plan on Anaemia is a deliverable for WHO and an avenue for advocacy, so the advice from STAGE is timely. He mentioned that WHO is looking forward to the work of the proposed subgroup.

Professor Homer then invited partners for their comments. Various professional associations endorsed the recommendations from STAGE and requested that they be distributed to all their members. Dr Jefferey Smith from the Bill and Melinda Gates Foundation thanked WHO for the opportunity to participate in the meeting and said that he appreciated the structured conversations. He also appreciated STAGE’s effort to creating a structured approach to some of the critical issues that he thought would help to drive momentum and align the MNCH community leading to greater impact. He added that STAGE was providing guidance to the donor community to invest wisely on implementation of clinical guidance and recommendations from WHO. He thought that having a clear pathway through the recommendations and the strong support of a broad group of experts was critical. He thanked WHO and STAGE members for a productive meeting.

Dr Pavani Ram of the United States Agency for International Development (USAID) thanked all the STAGE members and WHO for the rich discussion during the last three days on very timely topics. She appreciated the clear guidance on what needs to be done, and the strategic thinking that STAGE brought to the meeting. On behalf of USAID, she said was grateful for the opportunity to participate in the discussions and be part of the plans to address these issues.
Dr Himanshu Bhushan from Rotary International echoed his appreciation for an informative meeting. Dr Keiko Osaki from JICA also expressed her appreciation to be part of the meeting of global experts. She looked forward to welcoming everyone to the next Nutrition Summit in Tokyo in December 2021.

Professor Homer thanked the partners for their support and appreciation and then asked Dr Banerjee to provide his closing remarks. Dr Banerjee echoed his thanks to all members and to the Chair for an engaging meeting. For most sessions, he recalled that WHO did not always have pre-prepared recommendations and welcomed STAGE’s excellent guidance and recommendations during the meeting on how to move things forward. He thanked all members and WHO technical teams who worked together with STAGE members to produce straightforward and concrete questions which resulted in clear guidance from STAGE. He also reminded participants that the next STAGE meeting would be 26–28 April 2022.

Professor Homer closed the meeting by repeating her thanks the STAGE members, partners, WHO technical leads and the STAGE secretariat. She wished everyone a good holiday season. She also wished everyone well in these difficult times.
## Annex 1. STAGE meeting agenda

**Meeting of the Strategic and Technical Advisory Group of Experts (STAGE) on Maternal, Newborn, Child, and Adolescent Health and Nutrition (MNCAHN)**

9-11 November 2021

Agenda for Virtual meeting

### Day 1: 9 November 2021

<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Duration</th>
<th>Purpose (Chair/Lead)</th>
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<tbody>
<tr>
<td>13:00</td>
<td><strong>Opening Remarks</strong>&lt;br&gt;Zsuzsanna Jakab, Deputy Director General, WHO (3 min)&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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<td><strong>Update and Follow-up of November/April STAGE recommendations</strong>&lt;br&gt;Anshu Banerjee, Director MCA (10 min)</td>
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<td>13:30</td>
<td><strong>Update from SAGE and STAGE discussion:</strong>&lt;br&gt;Vaccines for children (10 min)&lt;br&gt;Zulfi Bhutta, member STAGE</td>
<td>30 min</td>
<td>Information (Chair STAGE)</td>
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<td>14:00</td>
<td><strong>Outpatient management of possible severe bacterial infections (PSBI) in newborn:</strong> Background and Next Steps:&lt;br&gt;Rajiv Bahl, MCA/WHO (15 min)</td>
<td>1 hr 30 min</td>
<td>Discussion and decision-making (Chair STAGE)</td>
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<td>15:30</td>
<td><strong>Wrap up for open session</strong>&lt;br&gt;Caroline Homer</td>
<td>5 min</td>
<td>Wrap up</td>
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<td>15:40</td>
<td><strong>Refining Recommendations (closed session)</strong>&lt;br&gt;STAGE members</td>
<td>20 min</td>
<td>Decision making (Chair STAGE)</td>
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| 13:00 | Anaemia, Global Action Plan  
Lisa Rogers, NFS/WHO (15 min)                                      | 1hr 30 min | Discussion and Decision making  
(Chair STAGE)                     |
| 14:30 | Break                                                                   | 5 min    |                                       |
| 14:35 | Maternal Child Health Redesign:  
Addressing the post neonatal child  
mortality for at risk children.  
Wilson Were. MCA/WHO (15 min)    | 45 min   | Information and Discussion            |
| 15:20 | Wrap up for open session  
Caroline Homer                                                             | 5 min    | Wrap up                               |
| 15:30 | Refining Recommendations (closed session)  
STAGE members                                                               | 30 min   | Decision making  
(Chair STAGE)                    |
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<tr>
<td>13:00</td>
<td>Improving Breastfeeding and Mitigating the Marketing of Breast Milk Substitutes</td>
<td>1 hr 30min</td>
<td>Discussion and Decision making (Chair STAGE)</td>
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<td>Nigel Rollins, MCA/WHO (15 min)</td>
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<td>14:30</td>
<td>Wrap up Session</td>
<td>15 min</td>
<td>Closure of meeting</td>
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<td>Caroline Homer; Anshu Banerjee, Director MCA; Ian Askew, Director SRH; Francesco Branca, Director, NFS</td>
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<tr>
<td>15:00</td>
<td>Refining recommendations (closed session)</td>
<td>60 min</td>
<td>Discussion (Chair STAGE)</td>
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<td>Next Steps</td>
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<td>STAGE members</td>
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**MCA:** Maternal, Newborn, Child and Adolescent health and Ageing  
**SRH:** Sexual and Reproductive Health and Research  
**NFS:** Nutrition and Food Safety
Annex 2. WHO progress report on STAGE recommendations from meetings held in April 2021 and November 2020

This is the second progress report on recommendations and feedback to STAGE. Recommendations in full are in the STAGE meeting report of April 2021. This report will be part of the STAGE meeting report of November 2021.

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<thead>
<tr>
<th>STAGE Recommendations (April 2021)</th>
<th>Progress (November 2021)</th>
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<tr>
<td><strong>Mitigating the impact of COVID 19 on MNCAHN service provision and use</strong></td>
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<td>WHO and partners to support Member States to develop, a timely and coordinated response to health emergencies and crises with better coordination and communication among national and sub-national emergency response structures, health systems, and programmes for the life-course, nutrition, and diseases to ensure that the response addresses both the direct, and the indirect impact of COVID-19 on populations at risk. Coordination is expected to start at WHO between the emergency response structures and other programmes.</td>
<td>WHO/MCA has shared the findings from Phase 1 of the WHO Mitigation of Effects of COVID-19 on MNCAH initiative across relevant WHO departments. Phase 2 of the initiative in 15 countries across six WHO regions is focusing on national efforts in the 15 countries to integrate across health areas and health structures. These will be widely disseminated.</td>
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<td>A sustained commitment to strengthen health management information systems (HMIS) and surveillance in countries to ensure reporting of granular, sensitive data, including on the work of private providers and nongovernmental entities.</td>
<td>WHO has responded to country requests for capacity strengthening in the interpretation and use of Routine Health Information Systems (RHIS) data through interactive orientation sessions in October 2021. A Report related to improving analysis and use of routine data has been published. WHO commissioned a review of how HMIS has been used to monitor MNCAHN service disruption during COVID-19. WHO is now developing an overall strategy on HMIS/RHIS to which MCA will contribute.</td>
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To continue to work with partners to identify, document and share experiences and lessons from countries that are meeting national policy objectives to reduce SARS-CoV-2 infections while also maintaining essential MNCAHN services. At global level, WHO to collate and synthesize studies of critical interventions for anticipating needs and maintaining essential MNCAHN services during shocks. Work is ongoing, as part of Phase 2 of the COVID-19 project and through sharing of lessons learned. In-depth reports will be developed for actions identified by each national technical working group as key in their effort to maintain essential MNCAH services. The report will allow for more in-depth understanding of experiences including details of implementation, facilitators, and barriers and lessons learned. For release in February 2022. WHO has conducted a scoping review of the literature on interventions and service delivery modifications implemented to maintain essential RMNCAH services during past disasters, humanitarian emergencies and other disruptive events, including SARS and COVID-19. WHO is conducting a scoping review of service delivery modifications and innovations to ensure access and quality of SRH services during the COVID-19 pandemic. This scoping review aims to identify lessons learned and examples of interventions for maintaining delivery of essential SRH services. In addition, WHO will be collating country case studies and issuing a call to implementers to understand experiences of service delivery modifications that may not have been captured through a formal literature search. Working with UNFPA, SRH contributed to the development of a technical brief *Not on pause: Responding to the SRH needs of adolescents during the COVID-19 pandemic* and supported its dissemination and building capacity in its use.
WHO is to continue to work with partners engaged with adolescents to identify any vulnerability that might have been exacerbated by COVID-19.

STAGE requests WHO to further strengthen self-care in MNCAHN and ensure its integration into the “Maternal–Child Health Redesign” life-course approach.

MCA is working with internal groups (e.g. SAGE, IVB department) to make sure the needs of vulnerable children and adolescents are reflected in the upcoming Interim statement on COVID-19 vaccination for children and adolescents, and that the indirect effects of control measures on children and adolescents are being recognized and mitigated by national response strategies.


SRH supported EMRO in carrying out studies of the indirect effects of COVID-19 on adolescents in Jordan and Palestine. SRH is working with research institutions – Population Council, GAGE, Johns Hopkins Bloomberg School of Public Health and Rutgers – to distil research findings on the indirect effects of COVID-19 that influence SRH as well as the methods that have been used.

Work on strengthening self-care in MNCAH is ongoing. A digital adaptation kit for self-care interventions focusing on self-monitoring during the antenatal care period and with home-based records is expected to be finalized by January 2022 and is being done in collaboration with SRH and MCA. Furthermore, in the development of the 2021 guideline on self-care interventions, two systematic reviews on self-monitoring of blood glucose and on self-monitoring of blood pressure during pregnancy, to expand the evidence-base were carried out in collaboration between MCA, SRH and NFS.

WHO is to establish a working group composed of experts in digital health and MNCAHN to identify what contribution WHO can make to country programmes to assess how digital health tools can effectively improve MNCAHN outcomes.

This work is also ongoing, including activities at regional levels to map the use of digital technology for MNCH as well as WHO headquarters efforts.

WHO/MCA is developing a tool to assess the quality of digital health interactions between health workers and women/parents/caregivers/families for MNCH. As part of the first phase of this work, we are conducting a series of discussions with experts and subsequently a working group will be established.

WHO/MCA is publishing a guide on how to plan and conduct teleconsultations with children and adolescents.

SRH has been coordinating internally with the central WHO Department of Digital Health and Innovations in response to country requests, including the development of telemedicine guidance to Member States.
**Evidence and guidelines for impact: Kangaroo mother care**

STAGE should create a working group on kangaroo mother care (KMC) to facilitate consensus and acceptance of strategies so that governments and partners can act in a harmonized way to maximize impact. The working group will prepare a global position paper on KMC and guidance for KMC and for integrating KMC with other key newborn care interventions in routine health systems.

The STAGE Working Group (WG) on KMC was created under the chairpersonship of Dr Betty Kirkwood and Dr Gary Darmstadt, with WHO MCA as the secretariat. The WG includes other STAGE members, country programme managers (India, Malawi), UN agencies (UNICEF, WHO, World Bank), bilateral development agencies – UK Foreign and Commonwealth Office (FCDO), Japan International Cooperation Agency (JICA), Norwegian Agency for Development Cooperation (NORAD), USAID; donor agencies – Belinda and the Bill and Melinda Gates Foundation (BMGF), Children’s Investment Fund Foundation (CIFF), Save the Children; professional bodies – American Academy of Pediatrics (AAP), Council of International Neonatal Nurses (COINN), International Federation of Gynecology and Obstetrics (FIGO), International Pediatric Association (IPA), International Confederation of Midwives (ICM), Kangaroo Foundation; parents’ groups – European Foundation for the Care of Newborn Infants (EFCNI), Fundación para Padres de Niños Prematuros (FUNDAPREMA), Costa Rica, Premiee Connect-South Africa; and other members suggested by the WG, e.g., Doctors without Borders (MSF), Partnership for Maternal, Newborn & Child Health (PMNCH), etc. The WG has met twice and has started discussions on the global position paper on KMC and the implementation guidance for KMC. The deliverables are likely to be completed within an anticipated timeline of six months.

**Knowledge translation: Private sector engagement**

To identify the key provisions and strategies for PSE specifically to achieve equity, with better outcomes for women, children and adolescents as part of high-quality universal health coverage. STAGE requested a short report on the approach taken to advance MNCAHN within the broader WHO PSE strategy.

A working group was established and will develop a joint working paper to build the basis of collaboration and identify the role of different partners, including WHO/MCA. The first meeting was held in mid-October 2021. The role of WHO will be on developing the technical guidance to support national governments in PSE for MNCH work, capacity building and technical assistance to countries, knowledge development and evaluation. In preparation, MCA has updated its guidance for programmes interested in strengthening the governance of the private sector to deliver health results. A short report will be available to STAGE at the April 2022 meeting.
MNCAHN throughout the life course: Redesign of maternal and child health

WHO is to establish “well-child” and adolescent services by increasing the number of scheduled contacts between caregivers, children and adolescents with health services, including in schools, and finding new platforms for the delivery of interventions for health and well-being with guidance and tools for programme implementation.

The child health redesign document “Investing in our future: A comprehensive agenda for the health and well-being of children and adolescents” is undergoing WHO and UNICEF internal clearance for publication and is expected to be published soon.

A technical consultation to review, discuss and generate consensus on the proposed scheduling of contacts, package of interventions, and the draft programme guidance document to support well child and adolescent health and well-being programming is planned for 7–9 December 2021.

Programme guidance to support implementation by strengthening the existing child and adolescent health programmes to address survival and establish well-child and adolescent services beyond the current antenatal and postnatal period, immunization and school-entry checks is being drafted for review and comments at the planned technical consultation in December 2021.

A draft document (annexed in the programme guidance) on an evidence-based package of well child and adolescent interventions and services along the life course with the purpose of monitoring health, growth, development and well-being, provide anticipatory guidance on developmental transitions and age-specific needs, and timely interventions to address apparent difficulties or additional needs ready for review and comments at the planned technical consultation in December 2021.

MCA has finalized a research protocol, and secured funding, for the Y-check research project that will explore in a multi-country randomized controlled trial (RCT) the effectiveness and feasibility of health check-ups in adolescents in Ghana, the United Republic of Tanzania and Zimbabwe.
WHO, with UNESCO, is to lead a global coalition of national governments, United Nations (UN) agencies and donors to improve school health and nutrition and make every school a ‘Health Promoting School’ with focus on creating a framework of accountability so that health and well-being considerations become measures of performance of the national education systems.

Jointly with UNESCO, options for global engagement at political and technical levels are considered/planned, for example:

- Global Education Meetings (GEM) that are happening twice a year;
- engage with the Education Commission which organizes the GEM forum and includes donor countries with a focus on education sector;
- engage with the International Parliamentary Network for Education (IPNEd) that helps mobilize the political leadership necessary to accelerate quality education for all, by working with individual parliamentarians along with groups of parliamentarians at national, regional and global levels;
- regular joint statements by heads of agencies, e.g. UNESCO and WHO urge countries to make every school a health-promoting school.

At the technical level WHO and UNESCO are engaging with the existing inter-agency working group on school health and nutrition to build a common understanding of a comprehensive school health programme. Work is under way to try to align global monitoring tools (e.g. World Bank’s SABER tool and WHO’s G-SHIPPS survey) to come up with a common way of measuring progress in school health; SRH contributed to documents on “quality standards” and “implementation guidance” on Making every school a health-promoting school to ensure that SRH issues were adequately addressed and will continue to be involved in dissemination and country support activities; working with UNESCO, UNFPA, UNICEF, and UNWomen, SRH contributed to a global status report on comprehensive sexuality education in schools: *The journey towards comprehensive sexuality education: Global status report – highlights* (available from: UNESCO Digital Library).
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<tr>
<th>WHO is to include maternal health and well-being as part of the life-course approach in the maternal health review and further develop the networks of care as an innovative model of integrated service delivery.</th>
<th>A mapping of maternal health and well-being will be conducted based on WHO maternal health recommendations and the well-being domains in the child and adolescent framework by the end of 2021 and a technical consultation will be held in late 2021 or early 2022. WHO will hold a technical consultation on networks of care concept in the first quarter of 2022 to further explore this concept as an innovative model of integrated service delivery.</th>
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<td>WHO and UNICEF are to present the agenda to several governments and partners and discuss its implications for policy and programming</td>
<td>A stakeholder consultation to engage with a few governments and partners to present the agenda and have a policy dialogue on the implications for current programming and next steps is planned for first quarter of 2022. This will ensure that the programme guidance and proposed evidence-based packages of interventions are ready.</td>
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Annex 2 (cont.). WHO directors’ progress report to STAGE on recommendations from meeting of November 2020

This is the update of the first report on progress made in achieving the recommendations. Full recommendations are in the November 2020 report. Detailed progress was reported in the April 2021 STAGE report.

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<th>Recommendation</th>
<th>Progress (April 2021)</th>
<th>Update (November 2021)</th>
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<td>Mechanism to coordinate: WHO leads the development process of a recognized and inclusive coordination mechanism at the global level (that gets triggered during external shocks, and coordinated with the emergency response mechanisms at WHO) to capture the disruption and impact on MNCAHN and socioeconomic outcomes (global standards on definitions and indicators) along with guidance and information on continuation of essential health services and information on mitigation and modelling</td>
<td>WHO has shared these STAGE recommendations with various entities such as the Global Preparedness Monitoring Board (GPMB); and the WHO COVID-19 Strategic Preparedness and Response Plan (SPRP) for 2021. The GPMB Secretariat has expressed interest in this recommendation — especially capturing real-time quality data during crises. The STAGE recommendation will be highlighted at the upcoming meeting of the GPMB Monitoring Framework Working Group. Some of the STAGE recommendations are incorporated as part of lessons learned or as recommendations of SPRP. Operational plan of SPRP is yet to be finalized, where we expect further incorporation of the recommendations from STAGE. Internal WHO discussion started for better coordination between Emergency response and Health system responses during crises. To monitor continuity of essential health services (EHS), MCA, NFS and SRH advised on the RMNCAH content included in various tools such as the EHS pulse survey on service disruption and mitigation strategies and a suite of health service capacity assessments. MCA team conducted training on LiST from regions, countries and partners; a review of all modelling assessing impact of COVID-19 on RMNCAH, which is to be published soon.</td>
<td>Discussions are continuing with GPMB The internal discussion on SPRP is closed Mitigation of EHS has been recognized (currently Pillar 9 in SPRP) as core pillar of emergency response Tool is published and this is closed The review is complete and closed</td>
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**Measurement in real time: WHO to work with countries to strengthen real-time national RHIS to enable collection and analysis of quality data in a timely manner.**

A [Guide](#) on how to analyse and use routine data to monitor the effects of COVID-19 on EHS was published in January 2021. The COVID-19 Mitigation project also uses data from RHIS in the 19 countries and have mapped indicators that can be monitored, and these will be published.

**Mitigate and learn for the future: WHO to work with global partners to strengthen investments on documenting lessons learned (both in short and long term) and developing methods for implementation and operational research.**

The WHO project to maintain essential MNCAH services during COVID-19 to publish findings on lessons learned and actions taken by 19 countries, and findings of systematic scoping reviews of actions taken, and lessons learned from past service disruptions and COVID-19.

**WHO to support national and regional technical advisory groups (TAGS) and sub-national committees.**

There has been a dialogue with all regional offices in relation to this recommendation and of note, the AFRO Regional Director has recently established a RMNCAH TAG and is in early consultations regarding national TAGS. In terms of the landscape of TAGS (or similar structures that exist already):

- SEARO has an established Technical Advisory Group (TAG);
- WPRO has established an Independent Review Group for early essential newborn care with technical experts to review progress and provide technical support on implementation.
- EURO established a TAG on Schooling during the time of COVID-19.
- PAHO has a TAG on newborn health.

WPRO: In Laos RMNCAH committee and five sub-committees established based upon the target populations on life course;

Papua New Guinea: RMNCAH Technical Advisory Committee (TAC) and TWGs exist;

Cambodia: Sub-technical Working Group for RMNCH exists;

SEARO: National Technical Advisory Groups for RMNCAH have been set up in various countries. A webinar to map the progress of the same is scheduled from 30 November to 1 December 2021.
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<th>Strategies to improve guideline uptake: Produce limited number of consolidated comprehensive guidelines bringing together all recommendations, which are regularly updated as new evidence becomes available. Develop a comprehensive operational handbook. Support national MOH websites to house locally endorsed WHO guidelines</th>
<th>Knowledge Translation is an area of ongoing work for WHO and the MCA, NFS and SRH departments and some of the STAGE recommendations will be addressed within the framework of ongoing work, have already triggered further discussions within WHO and will stimulate new outputs, alignment and activities.</th>
<th>Ongoing work, various activities in progress</th>
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<td>WHO to take a lead on the coordination of guidelines between other agencies that produce health guidelines, including international professional bodies, international NGOs and other UN agencies.</td>
<td>WHO follows rigorous procedures on guideline development, so rather than arbitrating other guidelines at a global level, it is more efficient and effective to develop WHO recommendations. There are multiple examples where other UN agencies have contributed to the development of these guidelines and are acknowledged accordingly.</td>
<td>Closed recommendation</td>
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<td>HCW worker training support to increase teaching of WHO guidelines; Paediatric nurse training</td>
<td>There are ongoing initiatives that relate to this recommendation and there has been further engagement with the Health Workforce Department. The Health Workforce (HWF) Department is developing a Global Competency and Outcomes Framework. This will link competencies with undergraduate educational curricula for health workers within 12–48 months programmes that lead to diplomas or degrees.</td>
<td>Ongoing activities</td>
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Quality Assurance of Norms and Standard Department (QNS) is supporting WHO departments to improve the process of developing and designing guidelines so they are locally adaptable, user-friendly and increasingly incorporate user feedback. Existing experiences within the departments, will continue to support future work in this realm including most recently Implementing antenatal care recommendations, South Africa.

Another related activity is the Global Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey (2018–2019) which tracks adoption of specific WHO sexual, reproductive, maternal, newborn, child and adolescent health and nutrition (SRMNCAHN) recommendations into country policy. This work is soon to be complemented with a searchable publicly available repository on the WHO website to enable access to country guidelines, policies and laws. This will be an excellent resource for countries that are yet to incorporate policy changes in line with WHO recommendations, as they may benefit from approaches employed elsewhere.

MCA is going to initiate a living guideline process for NCAH

QNS’ Framework for Monitoring, Evaluation, and Learning (MEL) pilot with countries and departments, including MCA has been finalized, will be released in December 2021. QNS will support MCA to develop publication uptake and impact monitoring plan.

A rapid review of literature “Improving WHO’s Understanding of WHO Guideline Uptake and Use in Member States” has been finalized and results will be shared and discussed at a planned QNS Webinar on 19 November 2021.

For 2022/2023, as an initial step to address some of these gaps, QNS has suggested development of a living review database that can be regularly monitored and acted upon.