Meeting of the WHO Strategic and Technical Advisory Group of Experts

2–4 November 2020
Executive Summary .................................................................................................................. 1

Background .................................................................................................................................. 3

Meeting Sessions .......................................................................................................................... 4
Indirect impact of COVID-19 on maternal, newborn, child and adolescent health and nutrition services
STAGE recommendations

Knowledge translation ....................................................................................................................... 8
STAGE recommendations

The missing middle and early adolescent years and nutrition throughout the life-course
The missing middle and early adolescent years (5–14 years)
Nutrition throughout the life-course

Updates from WHO and partners .................................................................................................. 16
WHO Child Health Redesign
WHO measurement groups for maternal, newborn, child and adolescent health and nutrition
WHO Strategic Advisory Group of Experts on Immunization (SAGE)
World Bank Group and Global Financing Facility

Next steps and closure ...................................................................................................................... 19

Annex 1 ........................................................................................................................................ 20
Background on disruption of essential services and mitigation strategies used in countries during the COVID-19 Pandemic

Annex 2 ........................................................................................................................................ 25
Background on knowledge translation

Annex 3 ........................................................................................................................................ 28
Background on health in the missing middle (5–9 years) and early years of adolescence and nutrition throughout the life-cycle

Annex 4 ........................................................................................................................................ 34
Meeting Agenda
Executive Summary

The Strategic and Technical Advisory Group of Experts (STAGE) met virtually on 2–4 November 2020 for its first technical meeting since its inaugural meeting in April 2020. The role of STAGE is to provide strategic guidance to WHO on maternal, newborn, child and adolescent health and nutrition (MNCAHN).

In his opening remarks, the Director-General, WHO, welcomed the STAGE members and partners and thanked the members for their work in such challenging times. He highlighted the need for additional focus on countries with weak health systems. He thanked STAGE for their recommendations on improving the lives of women and children and looked forward to the outcome of the deliberations of the present meeting.

Professor Caroline Homer, Chair of STAGE, thanked the Director-General for his support and welcomed all participants to the second virtual meeting of STAGE. She recalled that, during its inaugural meeting, STAGE had decided, in alignment with proposals from WHO and partners, to focus on three areas:

- the indirect impact of COVID-19 on MNCAHN services;
- knowledge translation and implementation of WHO guidelines; and
- nutrition throughout the life-course, including the “missing middle” (5–9 years) and early adolescence.

Three working groups were formed from the 31 STAGE members. Each group had two co-chairs and held four or five virtual meetings between July and October, with support from the WHO secretariat. Two groups made recommendations, while the third prepared a concept note. The co-chairs, on behalf of the working groups, presented the recommendations and the concept note to STAGE and to the partners, who commented and provided inputs during the discussions.

The meeting also heard an update from the World Bank Group and Global Financing Facility, delivered by Dr Muhammad Pate, who described activities to enhance outcomes for women and children, thus complementing WHO’s “survive, thrive and transform” agenda. STAGE members were also apprised of the recommendations of the Strategic Advisory Group of Experts on Immunization (SAGE) on a vaccine against COVID-19 and other immunization-related issues. Updates were presented on MNCAHN activities by the various measurement groups in WHO, which could support STAGE in issues of metrics. WHO’s work on Child Health Redesign was described, and STAGE members were asked to comment.

At the closing session of the meeting, Dr Anshu Banerjee and Dr Francesco Branca made some closing remarks, and Professor Homer thanked all members and partners for their participation. She assured the group that STAGE members would use the comments of partners to finalize their recommendations and would solicit further input for planning the next STAGE meeting, in April 2021.

---

1 One member left STAGE because of a conflicting appointment; 30 members were present at the meeting.
The recommendations made by STAGE\textsuperscript{2} are as follows:

**Indirect impact of COVID-19 on MNCAHN services**

1. **Mechanism of coordination:** WHO to lead development of a global, recognized, inclusive, coordinated mechanism (to be triggered during an external shock and coordinated with WHO emergency response mechanisms) to measure the disruption of and impact on MNCAHN and socioeconomic outcomes and to record the guidance and information provided in countries on continuation of essential health services and mitigation strategies.

2. **Measurement in real time:** WHO to work with countries in strengthening routine health information systems to collect and analyse high-quality real-time data, especially during external shocks, to complement and supplement surveys. This would entail alignment with planned real-time data collection with the [ACT-Accelerator](https://www.act-accelerator.org) and [WHO SCORE](https://www.who.int) tools and leveraging the coordination mechanism proposed in recommendation 1.

3. **Mitigate and learn for the future:** WHO to work with global partners to strengthen documentation of lessons learnt and methods for assessing the impact of strategies, including rapid short-term evaluation and long-term implementation research, to enable countries to assess the efficiency and quality of delivery of mitigation measures and to identify sustainable measures beyond the pandemic to improve MNCAHN outcomes and increase health system resilience.

**Knowledge translation**

1. **National and regional technical advisory groups and sub-national committees:** WHO to support Member States in strengthening or forming national MNCAHN technical advisory groups (TAGs) as the main technical and monitoring bodies for MNCAHN in countries. WHO also to support sub-national MNCAHN committees, as health authorities in states, provinces and districts are often the implementers in devolved states and closer to where health services are delivered to most women and children. Further, we recommend that WHO establish more regional MNCAHN TAGs.

2. **Strategies to improve guideline uptake:** WHO to produce a limited number of consolidated, comprehensive guidelines that combine all recommendations, which are updated as new evidence becomes available, and also a comprehensive operational handbook for MNCAHN that provides guidance on programmes and training. STAGE also recommends that, as appropriate, WHO lead coordination of the guidelines of other agencies, including international professional bodies, international nongovernmental organizations and other United Nations agencies. WHO also institute a new programme of support for training health care workers in institutions in low- and middle-income countries to teach WHO guidelines and address gaps in health systems.

3. **Monitor gaps in knowledge translation:** WHO to monitor gaps at national and local levels and report the lessons learnt from operational research in implementation of MNCAHN.

\textsuperscript{2} For the detailed recommendations, see the respective sections in the report.
Background

WHO convened the Strategic and Technical Advisory Group of Experts (STAGE) on maternal, newborn, child and adolescent health and nutrition (MNCAHN) for its second virtual meeting on 2–4 November 2020. During the 3-day meeting, 30 STAGE members, staff from WHO headquarters and regional offices and over 80 participants from partner organizations discussed updates and draft recommendations from three STAGE working groups. The three working groups (with almost equal numbers of STAGE members in each group) were formed after the first meeting. They were led by two co-chairs and met four or five times virtually between July and October, supported by WHO technical colleagues. The Group reviewed their recommendations to WHO in a closed session each day.

All STAGE members who attended the virtual meeting submitted declarations of interests, which were assessed by the WHO secretariat. Twelve members reported relevant conflicts of interest, but none was relevant to the topics for decision on the agenda.
Meeting Sessions

Opening

The Director of the WHO Department of Maternal, Newborn, Child and Adolescent Health, Dr Anshu Banerjee, opened the meeting and invited the Director-General of WHO to make opening remarks.

Dr Tedros Adhanom Ghebreyesus, Director-General, WHO, welcomed the STAGE members and thanked them for their work, acknowledging the extra effort that was required to work in such challenging times. He noted that there were over 45 million confirmed cases of COVID-19 and over 1.1 million deaths. Countries with weak health systems in particular require programmatic and financial support. He commented that, even in the best of times, many countries were unable to avert preventable deaths among mothers and children, let alone implement the thrive or transform agenda. He had been briefed on the three initial areas of focus by Professor Caroline Homer, the Chair of STAGE, and welcomed the choices. He recognized that STAGE had a challenging task but was impressed by the leadership and membership. Dr Tedros welcomed all United Nations agencies, bilateral partners, foundations, civil society organizations and academic networks and looked forward to the outcome of the deliberations.

Professor Homer thanked Dr Tedros for his support. She welcomed all participants and especially partners to the second virtual meeting of STAGE. She reminded participants that, at the first meeting, in April 2020, STAGE members had reflected on the topics that would best assist WHO. They had focused on work necessary to attain the Sustainable Development Goals (SDGs) through substantial revitalization of primary health care as a core input to attaining universal health coverage. She said that the work is now urgent, as countries have only 10 years to meet the SDGs, and their promises are at risk even of reversal, particularly given the impacts of the COVID-19 pandemic.

Professor Homer recalled that three working groups had been formed at the first meeting, to discuss four topics. The first had discussed disruption of essential services and mitigation strategies used in countries during the COVID-19 pandemic; the second had discussed knowledge translation and guideline implementation at country level; and the third had addressed two topics: health in the “missing middle” children (aged 5–9 years) and those in early adolescence; and nutrition throughout the life-course, including the specific issues of micronutrient deficiency anaemia and nutritional interventions.

Professor Homer recognized that STAGE was in its early stages and proposed that members take stock at the end of the meeting of how they could ensure that STAGE is meeting its terms of reference, especially in relation to advice to be provided on research, guidelines and implementation gaps. A workplan would be developed based on the results of the reflection.
Indirect impact of COVID-19 on maternal, newborn, child and adolescent health and nutrition services

The co-chairs of STAGE working group 1 provided a brief summary of their deliberations on the indirect effects of COVID-19 on MNCAHN services, including disruption and mitigation strategies used by countries (See Annex 1 for the full background to the recommendations). The methods used to measure disruption of essential health services, including MNCAHN, comprised pulse, rapid phone, household and facility surveys, interviews and inconsistent use of routine health information systems to capture similar information. The working group therefore recognized that an acceptable global coordination mechanism should be available that is triggered during emergencies. The recommendation included the requirements and specifications for such a mechanism, to be led by WHO with broad partner input and buy-in. The group also discussed strengthening of routine health information systems in countries, which should be based on planned investment in improving both data collection methods and the quality of data and a set of indicators to be collected during emergencies.

The discussion on mitigation was limited because of insufficient information on successful efforts. Preliminary information from surveys and documents showed that the health systems in many countries were able to change their way of functioning relatively quickly, by adopting digital technologies, rapid deployment and reassignment of health workers, triaging and innovative means to ensure supplies. It is important to learn from examples so that the global health community can plan for similar emergencies in the future. Some the adaptations might be useful beyond the pandemic, although their suitability, sustainability and impact should be studied carefully. The recommendation on mitigation strategies focused on learning and sharing of information and on long-term implementation research to determine the effectiveness and impact of the more sustainable adaptations and changes to service delivery.

Issues of measurement and data

The COVID-19 pandemic has forced the global community to find alternative ways of collecting and reporting health data, especially on digital platforms. Routine health information systems will benefit the most from such a change, as the quality and methods of collecting data could be improved so that the systems could be sustained and used productively in emergencies and crises. A basic set of indicators should be promoted for comparison and analysis in all countries; however, countries and regions should have some flexibility to determine the specific set of indicators that is most useful for their planning and decision-making. WHO should actively promote use of data for local use. Data systems and information in fragile and humanitarian contexts should be considered.

Information should also be made available on the impact of the pandemic on the health workforce. More granular, systematic data should be collected and used in decision-making, such as on infection prevention and control. In addition, analyses should include a gender lens, with a focus on the burden of the crisis on nurses, midwives and community health workers.

The coordination mechanism suggested by STAGE should extend work with emergency management response teams, with integrated data and management systems.

The issues of data sharing should be highlighted. Some countries are unwilling to share information, especially on negative outcomes. Confidential reporting should be encouraged, with the possibility of reporting both effective and ineffective strategies and positive and negative outcomes (with no pressure to report “success”), making reporting a learning experience.

Documenting mitigation strategies for service delivery

During crises and emergencies, rapid real-time learning from examples should be promoted in order to clearly separate what is possible in the short term and what is necessary for the long term. For example, implementation research and studies of cost–effectiveness cannot be conducted during a crisis but are useful in the long term, while rapid
evaluation methods are more useful in the short term to quickly identify mitigation strategies that work. The results must be shared widely. WHO must give clear messages and support to national and subnational health providers on maintaining and promoting safe routine services and minimizing disruption.

The STAGE recommendations apply also to the global health community working in MNCAHN. They should both maintain essential services and also advance them in new ways, with attention to standards of quality of care, increasing countries’ self-reliance in developing and maintaining high-quality data systems and supporting and enabling the health workforce, including those in the private sector.

It is vital during a pandemic to maintain delivery of services to high-risk populations and areas. For example, the mortality of small and sick newborns can increase sharply with a decrease in the quality or quantity of care provided.

In a discussion of the aspirational nature of some of the recommendations and whether they could be realized in all regions and countries, clarification was requested on the modalities of collaboration with non-health sectors such as water, sanitation and hygiene. Examples should be obtained from countries in which cross-sectoral integration has been achieved. Countries with layered data systems for analysing different sectors might be able to identify particularly vulnerable areas and populations.

The chair of STAGE and the co-chairs of working group 1 thanked everyone for their contributions and said that their suggestions would be considered in finalizing the recommendations.

**STAGE recommendations:**

1. **Mechanism for coordination:** WHO to lead development of a recognized, global, inclusive coordination mechanism (that is triggered during an external shock and coordinated with emergency response mechanisms at WHO) to identify disruption of MNCAHN services and the socioeconomic impact, based on guidance and information provided by countries on continuation of essential health services and mitigation strategies.

This would involve:

   - Identification of a single, integrated, predetermined coordinated mechanism\(^3\) that is activated during emergencies. The members should include a wide range of experts and groups, including United Nations partners involved in MNCAHN, with some convergence and integration with partners in non-health sectors that may affect MNCAHN. The mechanism would function in full coordination with the WHO emergency management response team.

   - Commitment and investment by United Nations agencies and key global stakeholders to ensure collaboration and coherent support for MNCAHN. Tasks should be distributed among members according to their comparative advantages to avoid duplication and ensure efficiency.

   - Development of global standards and consensus on definitions of agreed “essential” indicators, classification systems, data collection methods and tool kits that include equity and economic perspectives (with sufficient flexibility in indicators to fit different kinds of emergencies).

   - Special consideration should be given to fragile countries and those in conflict to ensure that information on disruption and mitigation efforts is included.

   - Information should be collected on the impact on and mitigation strategies for the health workforce.

   - Oversight of data collection and analysis by different partners \(^4\) (with emphasis on data quality).

   - Strengthening the capacity of countries to use modelling tools, surveys or routine health information systems that are flexible enough to be relevant to different regions and countries.

   - Coordination of information-sharing on mitigation strategies so that countries can learn from each other, including dissemination of strategies and methods for informing health...
care managers, providers and communities about the importance of maintaining essential health services.

2. Measurement in real time: WHO to work with countries to strengthen national real-time routine health information systems to collect and analyse high-quality data in a timely manner, especially during an external shock, to complement or supplement surveys. This would entail alignment with the planned real-time data collection ACT-Accelerator and WHO SCORE tools and leveraging the coordination mechanism proposed in recommendation 1.

This would require:

- Increased investments by partners and countries in improving data quality, including use of digital technology for data collection at all levels of services, from primary to tertiary, automated recording and analyses to improve timeliness and for all levels of the health system, including the private sector.
- Development of standard operating procedures for collection and analysis of the list of “essential” MNCAHN indicators (with enough flexibility) in both public and private sectors during emergencies and external shocks.5
- Identification and capacity-building of national and sub-national staff to collect and analyse data, with a focus on MNCAHN, through WHO country offices with support from regional offices and headquarters.
- Promotion of and support for evidence-based decision-making by countries in developing and evaluating mitigation strategies during emergencies, including use of anonymized data on negative impacts.

3. Mitigate and learn for the future: WHO to work with global partners to strengthen investment in documenting lessons learnt and developing methods to assess the impact of strategies, including short-term rapid evaluation and long-term implementation research, so that countries can assess the efficiency and quality of delivery of mitigation measures and identify sustainable measures beyond the pandemic to improve MNCAHN outcomes and health system resilience.

- Identify policies and strategies from the supply and the demand side (including local and national innovations and adaptations to protect health care workers and messaging to maintain service use) that enable continued service delivery and use of MNCAHN services during the pandemic (and in past crises). Use quantitative and qualitative methods to measure people-centeredness and family and community support and details of responses by governments, implementing partners and the private sector for the provision and promotion of MNCAHN services, including interventions for mental health and nutrition (especially to screen for and treat severe acute malnutrition).
- Identify policies and strategies that can and should be sustained beyond the pandemic in other contexts to advance people-centred essential service delivery and use in the long term:
  - Evaluate the effectiveness and cost–effectiveness of such policies and strategies (with tools to develop costed mitigation plans, including marginal costs and the costs of adding services).
  - Identify aspects of strategies that should be strengthened or modified for continued use after COVID-19 or another crisis, through an equity (including gender equity) lens.
  - Share policies and practices that worked well and those that did not work among countries and regions.

5 This is under way at WHO as part of the guidance for HMIS during external shocks: lists of indicators for MNCAHN and immunization (with flexibility for countries) are being drawn up.
Knowledge translation

The co-chairs of working group 2 summarized their discussions, which included the definition of “knowledge translation” used by the group and the constraints and challenges of communicating WHO recommendations and guidelines. The group noted progress in WHO in translating guidelines, such as the “living guideline” process and quality of care networks. The constraints include the complexity and number of guidelines, variable quality of different agency guidelines and lack of resources in countries to adapt and adopt guidelines into policies and then to disseminate and use them. The group mentioned other constraints, including shortage of health care workers, lack of continuing professional development, limited engagement with non-health actors and, in some cases, poor community engagement. (See Annex 2 for the full background to the recommendations.)

The group outlined their recommendations on knowledge translation, focusing on structures and processes that could expedite the normative guidelines with quality and equity (see below). In the discussion of the deliberations of working group 2, it was noted that the recommendations addressed many real challenges. Participants also commented that the group had made many recommendations, and some would require significant commitment and investment by partners.

Technical advisory groups (TAGs)

In the discussion on national TAGs, the group emphasized that they should be based on national mechanisms, as the participation of professional associations, civil society organizations and non-formal health providers in these groups would improve the quality of the advice, identification of bottle-necks to implementation and the dissemination of recommendations, particularly sub-nationally. The tasks of TAGs should be limited to providing technical advice, while monitoring should be undertaken by others, although periodic reports of implementation and epidemiology would be welcomed. WHO, as the technical and normative health lead, would provide essential direct support. National ownership of the groups was emphasized, and the recipient of any advice should be clearly identified. Working group 2 recommended that TAGs be statutory bodies, so that they are embedded in the health infrastructure, to give their outputs greater impact.

Silos in the field of MNCAHN should be reduced and a community of practice be created among national authorities. Investment in and development of more centres of excellence in areas of health care can assist countries in knowledge translation and guideline adaptation, if technical working groups do not have the capacity to do so. Local centres of excellence could be commissioned to undertake activities recommended by a TAG.

Some disease-specific programmes have received considerable funding for both data collection and implementation. A similar level of investment has not been made in MNCAHN and is sorely lacking, given the scale of needs. Evaluation of the distribution of funds according to health needs would be interesting.

Process of knowledge translation

Translation of evidence into policy and practice requires an evidence-based approach to ensure uptake and high-quality care. Analyses of bottlenecks to implementation and successes could be used to address time lags or gaps. The elements necessary for a guideline to be implementable should be stated, and a health systems approach should be used. An important principle of knowledge translation is “better value for money”.

The working group highlighted the importance of national ownership and control. The common procedure of introducing new guidelines and then training in their use is usually not sustainable, as not all guidelines are required urgently. A more effective means would be to update guidelines at a time that is relevant for the country. Flexibility in operationalization of guidelines would allow sub-national differences. Use of technology for more effective knowledge transfer is important, including open online courses and mobile apps that function as job aides.

Development, adaptation and implementation of guidelines would benefit from increasing the connectivity, input and feedback from those concerned by the guidelines, such as providers and users of services. This can be done in various ways in various structures, which could be considered at all levels of WHO.

The chair of STAGE and the co-chair of working group 2 thanked all those who had contributed to the discussion. The recommendations were reviewed in the closed group meetings.
STAGE recommendations:

1. National and regional technical advisory groups and sub-national committees

TAGs\(^6\) have been formed for various programmes, such as HIV infection, tuberculosis and immunization. For immunization, there are national and regional TAGs and a Global National Immunization TAG Network, complemented by a resource centre to support capacity-building and the evolution of TAGs.\(^7\) TAGs are generally funded and supported by national governments and partners.

We recommend that WHO support Member States in strengthening or establishing national MNCAHN TAGs as the top technical and monitoring body for MNCAHN in the country. We also recommend that WHO support sub-national MNCAHN committees, as health bodies in states, provinces or districts in devolved states are often the drivers of implementation and closer to where health services are delivered to most women and children. Further, we recommend that WHO establish more regional MNCAHN TAGs.

Many countries have national and even sub-national committees that oversee policy in maternal and child health. These often rely on the limited resources available for MNCAHN, and many have limited statutory endorsement and resources. We recommend that WHO and partners support ministries of health in building on those structures and committees. It is not the role of WHO to establish such committees or structures, but WHO can play a normative and technical role in enabling them to develop and perform their functions. WHO can also ensure that all external partners recognize the authority of such national and local committees as the top national technical bodies in MNCAHN. This would reduce silo-type decision-making and foster alignment and respect for national autonomy.

The criteria and terms of reference listed below are principles and are indicative only; local needs may result in different terms of reference. TAGs must be established within national regulatory structures according to relevant best practice to ensure the credibility of their recommendations and their accountability to national governments.\(^8\) Countries should build on and strengthen the functions of existing committees.

National MNCAHN TAGs are the top technical advisory bodies for MNCAHN in each country. They can provide advice to the management or key personnel of the ministry of health or directly to executive government, and they provide updates and recommendations on policy and practice to health managers, health care workers and other stakeholders. They are ultimately accountable to the ministry of health, which establishes their terms of reference.

The conditions and functions may include:

- Endorsement by the national government as a permanent “statutory” or “standing body”, with properly defined terms of reference and governance.
- Review and oversee the collection of essential primary data on MNCAHN, and use it to guide policy and recommendations.
- Provide leadership and technical guidance on adoption, adaptation and dissemination of new evidence-based guidelines framed in the context of national policies or strategic plans, legislation, health system data, equity and socioeconomic context.
- Support capacity-building for monitoring and evaluation, data synthesis and implementation research.

---

\(^6\) The group may be called a “TAG” or another name, such as “scientific advisory committee”. A TAG is not part of MNCAHN coordination mechanisms, the main role of which is to coordinate, harmonize and align technical assistance and investments in one national plan and strategy. Although they include provision of technical assistance and support, these mechanisms are rarely mandated, composed or resourced to provide scientific support on adoption and adoption of technical recommendations in countries.


• Initiate and oversee a national MNCAHN quality improvement programme to cover all aspects, including health facility accreditation, education, standards and assessment, audit, problem-solving in small groups, communication of local initiatives and addressing health system bottlenecks in improving the quality of care. The programme could include support for “centres of excellence” in MNCAHN in district or sub-national health facilities (not only in tertiary referral or academic hospitals).

• Oversee an annual or periodic report on the “state of the nation’s mothers, newborns, children and adolescents”, providing data on health, education and other SDG targets. This would also serve for monitoring and evaluation, with follow-up at national and sub-national levels and accountability.

• Strategic thinking on how often and how to update guidance: from “simple” changes (e.g. substitution of one drug for another) to more complex changes (e.g. shifting a task from one cadre to another).

• Advocate for funding, resource mobilization and technical support to implement recommendations.

The functions that a national TAG assumes will depend initially on its capacity, but WHO should be able to help countries to increase the capacity and support resource mobilization from partners.

Membership. The membership of a national TAG should be determined by the country. It should ensure intellectual independence, a range of perspectives and broad alignment and dissemination of decisions. Members could include people knowledgeable in the epidemiology and disease burden of MNCAHN, members of professional associations, academic personnel, sub-national representatives, implementing stakeholders and sectors other than health, such as education, finance and law, and the private health sector. Members should also include representatives of consumer, community and civil society organizations, such as women’s groups, a community leader, any indigenous groups and an adolescent. Members should also include the frontline health workers who will implement the guidance and policies, such as a midwife, child health nurse or allied health professional. Wide representation ensures that issues are seen from all perspectives and facilitates dissemination of findings in the community. TAGs require funding and support to exercise their duties effectively.

Regional TAGs for MNCAHN would communicate MNCAHN strategic priorities and technical recommendations to WHO regional directors and countries according to new global guidance and its regional relevance. They would support regional exchange and national capacity-building. The structure and procedures of regional TAG would reflect the needs and capacities of its member states. Links between national and regional TAGs should be ensured by representation of national TAG chairs on regional TAGs.

Regional TAGs could be part of an inter-country collaboration (including recognized economic blocs) or based on common health challenges or cultural and social ties. They may not have to be rigidly aligned with regional WHO structures.

In countries with devolved systems, sub-national (state, province or district) MNCAHN committees are necessary to operationalize the recommendations of national TAGs and to oversee and monitor local operations. Sub-national or local committees should have wide representation, including frontline health workers, such as a midwife, child health nurse or allied health professional, and ensure that consumers and civil society have a voice in decision-making by including a community leader, a member of a women’s group or representatives of other sectors such as teachers. Local structures also require support, and WHO should advise national ministries of health in supporting sub-national committees and sharing lessons on what works among countries. In some countries, UNICEF, local partners or nongovernmental organizations may be best placed to provide sub-national support.

To support national and sub-national capacity, WHO could identify short courses in evidence review and synthesis that could be conducted in countries, including those offered by the forthcoming WHO Academy. WHO could also offer scholarships for such courses, either directly or by advocating for government or donor agency funding.
2. Strategies to improve guideline uptake

WHO to:

- **Produce a limited number of comprehensive guidelines consolidating all recommendations and to update them regularly as new evidence becomes available.** This would reduce confusion about which guidelines or recommendations health care workers should follow and countries should put resources into implementing. This approach would strengthen longer-term incorporation of WHO guidelines and recommendations into the health system culture. WHO should consider consulting relevant organizations to ensure harmonization and alignment (see below). The consolidated guidelines should be readily adaptable to promote ownership, such as “co-branding” by national ministries of health or professional associations. They could be in digital form as well as in books. The consolidated guidelines would be the source for all technical norms in the discipline. Several examples could be built on.9,10,11,12 The input of front-line workers such as midwives, paediatric nurses and community health workers should be sought in developing such resources, as it is they who will be asked to implement the guidance. Education and training resources should be linked to the guidelines for use by health services, ministries of health and schools and colleges for health worker training, for pre-service education and continuing professional development.

- **Develop a comprehensive operational handbook for MNCAHN that provides guidance on programming and training, which can be adapted and owned at national level.** Such a handbook could include tools for adapting guidelines, advice on programming, decision-making tools for front-line staff, training aides and recommendations on management, training, supervision, monitoring, evaluation, integration of services, quality improvement and implementation research. Given the wide scope of topics and different end-users (health care workers, service managers, district authorities), a modular format would be helpful. Information on successful use of MNCAHN guidelines, especially in low-income settings, fragile contexts and for marginalized groups, and the enablers of success would be useful in development of such materials. WHO may not have the capacity to develop all the materials and should use the resources of other organizations, ensuring that the materials are carefully produced.

- **When appropriate, lead coordination of guidelines with other agencies,** including international professional bodies, international nongovernmental organizations and other United Nations agencies. If there are strong differences of opinion, WHO may be able to resolve conflicts with scientific evidence. National coordination of guidelines should be done by national structures (ministries of health, professional associations, MNCAHN committees), supported by WHO.

- **Encourage and support national ministry of health guideline websites in all countries for locally adapted and endorsed guidelines and operational handbooks.** As ministries of health in many low- and middle-income countries have rudimentary or outdated websites, so capitalizing on digital needs to address this local need is important. Digital platforms for mobile phone and app approaches can give health care workers ready access to guidance.

- **Support national MNCAHN quality improvement programmes.** A quality improvement programme may cover all aspects – from health facility accreditation to education, standards, assessment, audit, problem-solving in small groups and communication of local initiatives – to unstop health system bottlenecks to improving the quality of care. It is not WHO’s role to initiate such national programmes, but its technical support and endorsement

---


Meeting of the WHO Strategic and Technical Advisory Group of Experts • 2-4 November 2020

will be crucial. The country may have quality improvement programmes in other areas (e.g. HIV, immunization) with which synergies may be found and lessons learnt.

• **Develop a new WHO programme to support health training institutions in low- and middle-income countries** to include teaching of WHO guidelines. In many low-income settings, colleges of nursing, midwifery, medical and allied training are under-funded and under-resourced, and the output is inadequate to meet demands, which stifles progress towards all the health-related SDG targets. Inequality in the numbers, distribution and training of health workers and the tragic consequences have been starkly highlighted by the COVID-19 pandemic. Lack of resources and lack of support for health care worker training must be addressed by WHO, governments and partners. A WHO programme of support for schools and colleges could result in incorporation of WHO guidelines into curricula, increase the capacity of educators, provide an argument for more funding for health worker training institutions in global projects and local budgets, facilitate links with other organizations that could support such institutions, including accreditation bodies, and provide curricula for nursing and other health professional training that could be adapted locally. WHO should encourage ministries of education and of health to develop systems for translating evidence rapidly into pre-service health worker training curricula and ensuring that boards of accreditation use new curricula based on WHO guides and standards. Lack of support for health care worker schools and colleges goes beyond MNCAHN, and such a programme could benefit health systems in general.

• **Develop child health nurse training as a post-graduate course supported by WHO, similarly to promotion by WHO and other agencies of midwifery training globally.** Child, neonatal and adolescent health is far more complex in the SDG era, and there is much more to be learnt than can be taught in pre-service general nursing courses. A generic curriculum could be developed, based on WHO guidelines, which would comprise the relevant guidelines and consolidate the many “short-courses” into a 1–2-year practical post-graduate course, covering primary child health care, nutrition, hospital care, newborn care, HIV, tuberculosis, immunization, adolescent health, care of children with chronic conditions, child protection, disability and quality improvement. It would also cover prevention and treatment, principles of family-centred care and equity. It would empower nurses working in remote practices where there are few doctors. WHO support for paediatric nursing would spread the practices across the globe, like midwifery training, and fill the gaps in knowledge and practice. A generic post-graduate child health course would also be suitable for cadres of non-medical (non-physician) health care workers, such as those designated as clinical officers in Kenya, health extension officers in Ethiopia and Papua New Guinea and para-medical workers in other countries, who look after children and neonates in district hospitals but often have no opportunities for career progression or continuing education.

• **Develop and support more multi-media communication, such as videos, in several languages to be broadcast on the WHO YouTube channel and other platforms.** WHO should be more creative, engaging and multilingual in communication, balanced with scientific information. Videos could target health care workers in the field, families and communities. This would require skilled people and time and also adolescent understanding of social media sites such as YouTube. WHO-endorsed YouTube clips could also tell local stories of successful implementation and encourage users to make videos of what they have learnt locally or nationally, which could be reviewed or endorsed by WHO. WHO might also consider developing or evaluating digital mobile apps linked to WHO guidelines. WHO might have to work with and harness the resources of international and national partners to achieve these goals.
3. **Monitor national and local gaps in knowledge translation and report the results of operational research in MNCAHN care.**

We recommend that WHO establish processes to identify gaps in implementing WHO recommendations for MNCAHN. Identification of gaps should be based on the problems faced by people who directly manage and deliver services as reflected in routine data on MNCAHN and recognition of countries’ autonomy to adapt recommendations to their context. TAGs, sub-national committees, local universities, public health research institutes and professional associations can provide information.

Similarly, successful implementation of MNCAHN guidelines and models of integrated care should be recorded, such as in clearly stated case studies of models of care or guideline implementation with objective identification of the elements of success and the challenges. Policy-makers, system managers and clinicians would benefit from such examples. The WHO Redesign project will also benefit, as there are few operational studies of models of integrated MNCAHN care in which health facilities are linked to communities for prevention and the management of children with the chronic diseases that are increasingly prevalent in the SDG era.

WHO should also support sharing of experience among TAGs in different countries for continuous, long-term learning, to provide examples and cumulative strengthening of what works. WHO can assist countries in addressing certain gaps such as those related to programme planning, setting priorities, organization of training and logistics support, monitoring and evaluation, and financing.

**Assessment of success in achieving recommendations**

We recommend that WHO, with STAGE, monitor progress in achieving recommendations 1 and 2 with the indicators listed below.

- number of countries with functioning MNCAHN committees that fulfil the above roles and structures (or as relevant to the country);
- number of countries that issue “State of the nation’s mothers, newborns, children and adolescents” reports annually or periodically;
- number of countries in which WHO and/or partners have instituted a systematic programme for supporting health care worker training institutions, with the nature of the support reported;
- number of countries that have introduced one or more courses for post-graduate paediatric nursing or post-basic training in child health for other non-medical health care workers;
- number of countries that have introduced national MNCAHN quality improvement programmes under the auspices of the ministry of health or the MNCAN TAG, with a broad evaluation; and
- number of countries with holistic primary health care programmes that cover the key elements of MNCAHN and achieve wide coverage.
The missing middle and early adolescent years and nutrition throughout the life-course

The co-chairs of working group 3 summarized their work (background paper in Annex 3).

The missing middle and early adolescent years (5–14 years)

There are relatively few deaths among children aged 5–14, but there is little primary national information on basic parameters for this group. Global estimates reveal that the main causes of death change from communicable to noncommunicable diseases as children reach school age; however, in some countries and regions, infectious causes of death remain important in children > 5 years of age. The causes of morbidity between early and late adolescence also differ. Understanding such differences therefore requires a nuanced approach. There is increasing recognition of developmental plasticity that may continue up to adolescence. This age group can be positively influenced to counteract negative impacts (on health, development and nutrition) and also to support positive trajectories into later adolescence and adulthood.

Gaps in information and interventions for high-burden conditions and modifiable risks should be addressed for children aged 5–14 years. Delivery platforms should be established for interventions, including schools, communities and facilities, and also digital platforms and social media. Working group 3 recommended an overview of data and of work in WHO to provide evidence for interventions and optimize outcomes, especially in vulnerable contexts.

Nutrition throughout the life-course

Working group 3 addressed this broad topic through three themes. The first is optimizing nutrition policy while preventing harm from the rapid nutrition transition. The discussion indicated that measures are sometimes based on past evidence, which may not be appropriate or relevant in the current era. Nutrient requirements are also not the same globally. Increasing evidence indicates that traditional anthropometry may hide coexisting metabolic overnutrition when biomarkers are used, especially in countries with an advanced nutrition transition. This raises concern about the safety of using energy-dense foods in the treatment of undernutrition, including during pregnancy. The measurement, definition and treatment of anaemia is another concern, as current definitions provide overestimates according to studies in some contexts, so that healthy individuals are misclassified as anaemic. Population interventions, such as food fortification, may therefore carry a greater risk than a test-and-treat approach. Thus, measures of micronutrient deficiency and recommended intake should be harmonized to balance the benefits of supplementation with risks. Predictive and promotive biomarkers could be used in setting nutrition policy.

The second theme was the risk to nutrition of the food environment, including the food supply chain. The food industry has a significant negative impact on diets and the related health issues in the poorly regulated food environments of many low- and middle-income countries.

The third theme was better alignment of the terminology and frameworks to include the broader determinants, outcomes and intergenerational consequences of interventions for health and nutrition. This theme involves many fields beyond nutrition and where and how this work should be framed requires more reflection.

The next step should be a detailed update from WHO on the current landscape of the issues raised by the group for STAGE to discuss.

Discussion

Discussants stressed the importance of the double burden of malnutrition as a critical component of health throughout the life-course. A global approach to nutrition should also include humanitarian contexts and conflicts, in which nutrition and health indicators are reversing. A life-course approach to nutrition must therefore also ensure delivery of interventions in emergency, humanitarian and conflict settings.

It was acknowledged that the “missing middle” are an important group that could be influenced and have thus far been neglected in terms of health policies and interventions. Interventions for girls and women before pregnancy, including delaying pregnancy and
marriage, were cited as having a critical impact on the health of the next generation. Consideration of the 100 days before pregnancy would complement consideration of the first 1000 days of life. Boys and men should not be neglected in the discussion, as the nutritional environment, with epigenetic effects, can be transmitted to offspring.

Other critical issues in nutrition and health are related to the sociocultural environment, gender, religion and local and family issues. Change must therefore be granular, with a combination of bottom–up and top–down approaches. Human nutrition is related to genetic metabolism, interaction with the environment and diet, and all three should be addressed, as food is only one factor, although the current emphasis is mainly on interventions to provide food.

It was highlighted that the that health platforms may identify nutritional needs, but nutrition platforms should identify health needs, such as chronic and infectious diseases resulting in malnutrition. Training of health personnel in nutrition should emphasize such opportunities. School is an important platform for health and nutrition interventions, and especially for children aged 5–14 years. Consideration should also be given to who leads the work, as it will include behaviour and mental health.

Biological markers have been identified for conditions such as stunting and obesity, enabling early identification of harmful trajectories. The reflections of the working group indicated that the current approach to measurement and intervention in nutrition should be reconsidered by including new methods beyond anthropometry and intervening at an individual rather than a population level. This would be a more precise approach to the promotion, prevention and treatment of child malnutrition and might eliminate risks or redundant population interventions. Similarly, maternal weight gain, especially early in pregnancy, is not a good indicator of maternal nutrition, and new analyses and data should be used to find more effective indicators and ultimately new approaches.

Participants discussed integration of nutrition with health. Many considered that the two should be integrated but warned that integration should not dilute or subsume elements that are important and specific to nutrition. Integration of nutrition has been proposed for a number of sectors, including health and agriculture.

The importance of breastfeeding was discussed, and concern was raised that the International Code of Marketing of Breast-milk Substitutes was being breached further since the beginning of the COVID-19 pandemic in several countries. It was suggested that breastfeeding be discussed by national and regional TAGs. STAGE acknowledged that breastfeeding is critical and had been selected for discussion by working group 3 because it was a gap in the current focus of WHO and partners.

WHO commended the breadth and depth of the discussions, noting that the consequences of some of the recommendations would be significant. Some activities are under way, and WHO would provide STAGE members with a clear, comprehensive overview of current activities in the areas discussed.
WHO Child Health Redesign

Dr Wilson Were, Medical Officer, Department of Maternal, Newborn, Child and Adolescent Health, described WHO’s work in redesigning child health in the 21st century, moving from a “survive” agenda to “survive and thrive”. He said that programming for the health and well-being of children and adolescents is crucial for building human capital and requires a life-course approach, with the involvement of many sectors. The objective is that every person aged 0–19 years be optimally healthy, raised in a safe, secure environment, appropriately prepared physically, mentally and emotionally to accomplish developmentally appropriate tasks, will reach adulthood successfully and will eventually contribute socially and economically to their society.

Six domains have been identified in which action is required for child and adolescent health and well-being: (1) good health; (2) adequate nutrition; (3) responsive relationships and connectedness; (4) opportunities for learning and education; (5) security, safety and a supportive, clean environment; and (6) realization of personal autonomy and resilience. Together, these domains indicate where action is required, recognizing that investment and early intervention along the life-course have large returns. The necessary interventions are grouped as either universal, for all children everywhere, or situational, depending on the context. Delivery of the interventions should be family-centred, and they could either be integrated into existing programmes or provided alone on various platforms. Other aspects of such programmes include infrastructure, human resources, monitoring and evaluation. Work to advance the programme include synthesis of evidence on different approaches, monitoring of children and adolescents, interventions and delivery strategies for children aged 5–9 years, guidelines for health-promoting schools and school health services, early child development and home records.

Dr Were asked STAGE members to comment on the strategic direction and to identify any challenges and policy issues for the initiative. Specifically, he asked for comments on whether the six domains are suitable for identifying appropriate interventions for different age groups and on the criteria for prioritizing universal interventions to be promoted in all countries.

STAGE members agreed that the work of WHO and partners on “child health redesign” was an excellent basis for discussions on intersectoral interventions throughout the life-course, including nutrition. They noted that the discussion included topics such as obesity and urbanization through a health lens. They considered that STAGE’s role would be to review the work critically as an external body and to provide recommendations, taking into consideration the work of other partners. Specifically, they would review and comment on the current document and request WHO to report on progress, identify gaps, provide information on the “missing middle” and discuss operationalization of child health redesign at country level. Operationalization of the WHO strategy in countries should concur with local plans and designs. Different models of care will be required for rural and urban areas and for children in and out of school, while ensuring that disadvantaged groups are not left behind. Implementation throughout the life-course implies an integrated approach for several age groups rather than specific programmes for e.g. pregnant women, newborns or adolescents. A more holistic population health approach might be preferable, with seamless provision of services for all age groups. For example, mental health issues identified in adults often start in pre-adolescence; therefore, identification of such issues at that time would be important. As a multisectoral approach will be necessary, it is important to consider how WHO plans to work and coordinate with various sectors and agencies.

The floor was opened for comments from partners. They discussed strengthening and integrating nutrition programmes into child health, which would also help to reduce mortality of children under 5. They proposed that, instead of introducing a new cadre, the programme should strengthen the existing workforce as a team and build bridges with community groups in order to use community support as much as possible. They also stressed the importance of using digital platforms, including multi-media and software applications. While the group commended the breadth and depth of the

13 All presentations are available on the STAGE website. (https://www.who.int/maternal_child_adolescent/stage/en/)
proposed programme, they noted some gaps, such as the preconception period and the care of small and sick newborns.

**WHO MNCAHN Measurement Groups**

Dr Theresa Diaz, Coordinator, Department of Maternal, Newborn, Child and Adolescent Health, listed the various groups that have been constituted to provide independent expert advice on measurement, metrics and monitoring on MNCAHN issues.

- Mother and Newborn Information for Tracking Outcomes and Results (MONITOR)
- Child Health Accountability Tracking (CHAT)
- Global Action for Measurement of Adolescent health (GAMA)
- MNCAHN Quality of Care Measurement
- Technical Expert Advisory group on nutrition Monitoring (TEAM).

These groups could provide periodic updates to STAGE on areas relevant to STAGE's workplan. They could also respond to any measurement-related questions from STAGE.

STAGE members welcomed future input and regular updates from these groups.

**WHO Strategic Advisory Group of Experts on Immunization (SAGE)**

STAGE welcomed dialogue with SAGE on vaccines and looked forward to further collaboration. In the current unprecedented times, huge numbers of people must be vaccinated, including where platforms do not exist, and cooperation and alignment are essential. STAGE and partners were given an overview of work in progress by Dr Katherine O’Brien, Director, Department of Immunization, Vaccines and Biologicals, and by Dr Joachim Hombach, Executive Secretary, Secretariat of the Strategic Advisory Group of Experts on Immunization (SAGE). Some highlights are presented here; background documents are available on the SAGE website.\(^\text{14}\)

SAGE has concentrated on the impact of the COVID-19 on vaccination activities and recorded large setbacks in all six WHO regions. There have been constraints in supply and demand, including reassignment of health workers, travel restrictions, shortage of personal protective equipment and fear of seeking services. Modifications have been made to ensure infection, prevention and control, and there are signs of recovery. The speakers emphasized the importance of catching up missed vaccinations, further integration of immunization with primary health care, reaching children who have never been vaccinated and ensuring a gender lens. They emphasized the importance of preserving immunization as an essential health service\(^\text{2}\) in major disruptions. Access to and delivery of COVID-19 vaccine are new priorities, and SAGE supports a three-step process to guide decisions: a values framework for allocating and prioritizing a COVID-19 vaccine\(^\text{15}\), a prioritization road map to support country decisions on public health strategies and vaccine-specific recommendations.

SAGE recommended that the groups who receive influenza and pneumococcal vaccines should be extended but emphasized that coverage of the existing target groups should be a priority to alleviate the burden of pneumococcal disease on the health system.

SAGE had endorsed the 2021–2030 multi-partner Measles and Rubella Strategic Framework to guide strategic priorities and programme work to eliminate measles and rubella; and use of novel oral poliovirus vaccine type 2 as the vaccine of choice for response to circulating vaccine-derived poliovirus type 2 outbreaks after all approvals and requirements for use have been met. SAGE reaffirmed that rotavirus vaccines should be included in all national immunization programmes in a comprehensive strategy to control diarrhoeal diseases, particularly in high-burden countries.

**World Bank Group and Global Financing Facility**

Dr Muhammad Pate, Global Director for Health, Nutrition and Population, World Bank Group, and Director, Global Financing Facility (GFF) provided an update on work related to reproductive and MNCAHN (R-MNCAH-N), which includes policy commitment and investments in various thematic

---


areas, including population and human capital, the current focus on COVID-19 and key partnerships. The policy commitments of the International Development Association reflect the World Bank Group’s continued emphasis on RMNCAH-N. For example, in 2019, financing was directed to increasing access to high-quality primary health care in at least 15 of the 30 countries with the lowest human capital index and the highest maternal and child mortality. World Bank Group investments during 2018–2019 included US$ 2.6 billion on MNCAH and US$ 3 billion on nutrition, thus targeting the most vulnerable populations, especially women and the elderly, in universal health coverage; supporting countries in creating fiscal space for key RMNCAH-N interventions throughout the life-cycle; ensuring that health interventions in situations of fragility, conflict and violence include RMNCAH-N; multisectoral work to empower women and girls; and leveraging nutrition interventions. In nutrition, both undernutrition and overweight and obesity are addressed, as 70% of overweight and obese people live in middle- and low-income countries. The main goal of GFF (launched in 2015 and now working in 36 countries) is to end preventable maternal, child and adolescent deaths by 2030, with country-led financing.

With regard to COVID-19, Dr Pate summarized an analysis of data from 63 000 health facilities up to June 2020 on disruption of RMNCAH-N services. Immunization services were reported to be the most affected. The World Bank Group’s work in the pandemic response included routine health and essential services, including RMNCAH-N. GFF is supporting countries in protecting and promoting delivery of essential health services with a knowledge and learning programme (telehealth, community health workers, role of the private sector), data analysis, monitoring and advocacy and technical and financial support.

In answer to questions from STAGE members and other partners, Dr Pate replied that GFF investments in fragile countries represent one third of GFF funds; country investments and programmes are evaluated by a structured, independent evaluation group within the World Bank Group; new country investments of US$ 18 billion have been made within 4 months as part of the response to COVID-19; and stillbirths remain a gap in the work of the Group.

He highlighted WHO’s role as the agency that provides normative guidance and said that the World Bank Group and GFF looked forward to its continued leadership.
Next steps and closure

The closing session was led by Professor Caroline Homer, Dr Anshu Banerjee and Dr Francesco Branca (Dr Ian Askew sent apologies). Professor Homer thanked all STAGE members and partners for their time and contributions during the virtual meeting and opened the floor for comments from partners.

Several partners expressed their appreciation for the advice provided by STAGE, especially the role of WHO in leading coordination during emergencies, not just for the response but also for better integration at all levels, improving the collection and transmission of information on MNCAHN services. One partner requested that STAGE focus further on gaps in evidence for research and guidelines.

Dr Branca thanked the STAGE members and partners for their comments and asked STAGE to advise the department on nutrition throughout the life-course, and particularly on maternal nutrition. He said that the department would study the suggestions and recommendations of STAGE. Dr Banerjee also expressed his appreciation to all STAGE members for their recommendations and to partners for their comments, which, he said, would be discussed in all three departments. WHO would report to STAGE on how the recommendations would be taken forward. He stressed that, although the recommendations are made to the Director-General of WHO, WHO would require support from partners and global stakeholders in meeting the recommendations globally and at country level.

Professor Homer closed the meeting.
Annex 1

Background information on disruption of essential services and mitigation strategies used by countries during the COVID-19 pandemic.

Working group 1
Co-chairs: Koki Agarwal and Arachu Castro; STAGE Chair: Caroline Homer; members: Dily Walker, Fadia Albuhairan, Gary Darmstadt, Joy Lawn, Marie Ruel, Song Li, Peter Waiswa, Zulfi Bhutta

Background and rationale

The COVID-19 pandemic continues to affect both population health and economies. The early phase of the epidemic was marked by nationwide lockdowns, which led to disruption of essential services, including maternal, newborn, child and adolescent health and nutrition (MNCAHN). The evolution of the pandemic differs by country. In many places, restrictions have been reduced; nonetheless, COVID-19 continues to have an impact on the delivery and use of health services and on the health workforce. Lockdown measures and continued restrictions on various activities have resulted in job losses and more poverty and food insecurity, which significantly affect both health and nutrition.

Countries have established several types of governing bodies to guide COVID-19 decision-making, which, in the first instance, may not have included measures to safeguard MNCAHN services. In making decisions, countries have used and adapted guidance from WHO, UNFPA, UNICEF and other sources to orient services to meet the direct and indirect impacts of COVID-19. In making decisions on strategies, countries use information about the local characteristics of the pandemic and service coverage and feedback from service users and providers. Some strategies have been innovative, and others are extensions of existing strategies; however, information on the effectiveness of strategies in mitigating the impact of COVID-19 is unclear or difficult to obtain. The changing nature of the pandemic and responses make the situation a continued learning process for all.

Measuring disruptions to use of services in a timely manner and understanding their impact on health outcomes, with relevant disaggregation, is essential for allocating resources and advocating for and providing a rapid response to the worst-affected sub-populations. Data from surveys and routine health information systems have been used to model and assess changes during the pandemic and to estimate impacts. Early modelling was valuable for advocacy about the potential indirect health impacts of COVID-19; however, such analyses depend on accurate, up-to-date data, which may not be available.

Methods and tools for measuring disruption

Many partners have conducted pulse surveys and rapid assessments among health officials, providers and key informants, which provided some information on the degree of disruption of all essential health services. Many of the pulse surveys and rapid assessments were conducted in the same overburdened countries, indicating lack of coordination. WHO identified over 30 of these types of survey at all levels of the Organization and close to 20 conducted by other United Nations agencies and partner organizations. The surveys often captured similar information by using differently phrased questions or different definitions, so that it is difficult to compare the results for different countries. Lack of comparison with previous years or months makes it difficult to estimate the true degree of disruption of services and actual changes in outcomes. Household surveys were conducted by the World Bank to estimate the social and economic impact of COVID-19 on households; however, they included few indicators of health service utilization (1).

Guidance from multiple sources has also been issued on the importance of maintaining essential health services, and is collated in a website developed by PATH. Some guidance documents from WHO

Annex 1
suggest lists of indicators that could be monitored but provide little detail on how to measure them and even less guidance on how to analyse, visualize or use such data. Many dashboards have been set up on the direct impact of COVID-19 (e.g. WHO, Johns Hopkins University, McKinsey, Zoho), but there is no central site on which information on the indirect effects of COVID-19 on essential health services can be visualized.

Routine health information systems are the best source for timely national data; however, despite increasing digitalization at points of data collection, compilation and reporting have a time lag of 2–3 months, reducing the usefulness of the data for making decisions in a rapidly evolving situation. In addition, during an external shock, a routine health information system may itself be under increasing pressure, with inadequate human resources and technology to report in a timely or complete manner.

Disruption of essential health services

The most recent WHO pulse survey on the impact of COVID-19 on health systems (2), a key informant survey in May–June in 105 countries, showed that almost every country (90%) experienced disruption to almost all its health services, including MNCAHN. Those most frequently disrupted were routine immunization services (outreach services, 70%, and facility-based services, 61%). Reports by UNICEF in August of information compiled from data, surveys and other sources from 159 countries also indicated some level of service disruption in 80–85% of primary to tertiary care facilities and almost 90% disruption of outreach services by community health workers. Family planning services were the most severely affected, followed by immunization and maternal health services. UNFPA estimated that a 3-month lockdown could result in 325 000 (low health service disruption) to 1 000 000 unintended pregnancies (high disruption), while a delay in scaling up of prevention could result in 2 000 000 additional instances of intimate partner violence in 2020–2021. The latest reports from the Global Financing Facility for 63 000 health facilities in 10 countries through June 2020, as compared with the same periods in 2018 and 2019, show drops in immunization rates ranging from 11% in Afghanistan to 35% in Liberia. A similar decrease was seen in outpatient consultations for children < 5 years of age in Liberia. The report also noted that service delivery improved after June, suggesting that, as lockdowns eased in these countries, both demand for and supply of services improved. With new waves of infection in several countries, it is unclear whether, how and when health services will return to normal.

A UNDP–UNICEF report on the indirect impacts of the pandemic on the health of women, children and adolescents in Latin America and the Caribbean (3) found that only three countries (Costa Rica, Cuba and Uruguay) have maintained access to all health services; all three have well-coordinated public health systems based on a primary health care strategy that is equitable, with high resolution capacity and linked with the hospital network. Although emergency obstetric care has been the least affected service in most countries in Latin America and the Caribbean, services such as antenatal check-ups, non-emergency obstetric care, postnatal care, essential newborn care, immunization, wellness checks for children, clinical care for victims of gender-based violence, sexual and reproductive health (including contraception), treatment for infectious and chronic diseases and nutrition programmes have been suspended or limited to a greater or lesser extent.

The WHO pulse survey (see above) found that the main reasons for disruption of services were widespread lockdowns (48%), household financial difficulties (33%), reassignment of staff to COVID-19 relief (49%), closures of health services (33–41%) and interruptions in the supply of medical equipment and health products (30%). The UNICEF report indicated that widespread lockdowns and fear of infection were the main reasons for disruption of services. Krubiner and colleagues (4) also highlighted interruptions of essential medicines and supplies, diversion of health resources to COVID-19 and paused provision of certain services as primary supply-side factors. Demand-side factors include inability of patients to access health care because of transport restrictions during lockdown, reduced health-seeking because of fear of infection and increasing poverty that is limiting the capacity of households to pay for health care. A recent survey of the impact of COVID-19 on health care workers (5) showed that almost half had insufficient knowledge on childbirth for women with COVID-19, and almost
all reported increased stress. Formal processes must be established for sharing information with providers and mental health support is critical.

**Mitigation strategies used by countries**

*WHO operational guidelines* provide information for national and regional providers to maintain essential health services during the pandemic. Countries should adapt these guidelines to their context. The *PATH policy tracker* provides guidance on adapting WHO and other guidelines and on establishing specific national policies, strategies and operational guidance. Currently, information from 37 countries is available. Most of the policies used during COVID-19 have consisted of adapting or continuing services by changing the health workforce, service delivery and medical equipment, with minimal attention to governance, information-sharing or research. The degree of implementation of these policies at national and sub-national levels is unclear. Decision-makers should have guidance not only on policy but also on the opportunity costs (based on disease burden and resource availability) of choosing a strategy to manage the pandemic while providing essential health care services. This will require data on the degree of disruption of services at various stages of the pandemic, information on the mitigation strategies used and, most importantly, on their impact on service delivery, utilization and health outcomes.

It has been difficult to document the mitigation strategies used by governments and implementing partners during the pandemic though some preliminary information is available. It would also be important to understand the governance structures and decision-making processes, including who was involved in national working groups (6) and how MNCHN needs were addressed. Results of rapid assessments and feedback from key stakeholders would be helpful for governments and partners for use in making decisions. Preliminary information from an ongoing scoping review\(^6\) of measures taken to maintain the provision and use of essential MNCAH services from past crises indicates that most of the material referred to adaptations of health services and changes in delivery settings and platforms, community-based health services, the health workforce and medical supplies and equipment. Less information was reported on adolescent health services, governance, financing, financial barriers or monitoring.

The WHO pulse survey reported on health system-specific strategies adopted by countries to mitigate service disruptions, which include: triaging to screen and prioritize (76%); shifting to online or telemedicine patient consultations (63%) (examples from the *Primary Health Care* Initiative in Bangladesh, India and Sri Lanka show how digital health technologies were used to ensure the continuity of services during COVID-19); task-shifting and role delegation (57%); changes to prescribing practices and supply chains (54%) (longer-course medication and multi-month refills, especially for HIV and tuberculosis programmes are in place in many countries); provision of information to communities (53%); (Global Financing Facility) webinars highlighted the role of community health workers in providing services in Bangladesh, Brazil, Ethiopia, Liberia and Rwanda); redirection to alternative health facilities (52%); waiving of user fees (14%); and others, including use of mobile medical teams, transport and financial support to patients, additional training and guidelines, increased communication and strengthening of laboratory capacity.

Other reports have shown how social protection measures and financial incentives have been used in past crisis, such as the Juntos Programme in Peru (7), a conditional cash transfer programme for education, health and basic nutrition services for children. In Kyrgyzstan, a monthly benefit to poor families with children was found to be important in reducing stunting between 1997 and 2012 (8). The World Bank has reported that, since March 2020, US$ 589 billion have been spent on social protection programmes in 114 countries, per capita spending ranging from US$ 121 in high-income countries to US$ 1 in low-income settings (9).

The impact of the spending on use of and access to health and nutrition services is still unknown.

The mitigation strategies used in 20 countries are being analysed in more detail. Preliminary analysis indicates that the state of the economy and health systems in countries before the pandemic, the response of governments and implementing partners to COVID-19, community attitudes and

\(^6\) Institute of Tropical Medicine Antwerp, Scoping review of measures taken to maintain the provision and use of essential services for MNCAH. A report commissioned for WHO/MCA. In progress.
the availability of health workers (e.g. shortages, numbers of infections and deaths, unwillingness to work) all affect the delivery and use of essential services. Some of the key interventions identified were use of digital health, task-shifting and involvement of community health workers and of the private sector. The analysis also indicates that many of the responses used may provide lessons in terms of success but also indicates a number of concerns to be addressed. For example, rapid expansion of digital health has often been reported, but it is not known who is left out and whether contacts become less interactive as more information is provided through these platforms. Community health workers may have been asked to undertake tasks for which they are not prepared. Additional information and more granularity will be vital to determining which of these actions could be sustained and adapted in the long term or in another disaster or shock.

**Summary**

The COVID-19 pandemic has shown that, although health systems are struggling, they remain nimble and agile and many adapted quickly to the crisis; however, the impact of the changes on delivery and use of services and health outcomes is still unclear. The agility should nevertheless be used to make sustainable changes that improve service delivery in different types of health systems. While the response and mitigation activities should match the scale, duration and phase (early, late and after) of crises, the focus should be on identifying mitigation strategies that improve the resilience of health systems and protect the health workforce, to ensure uninterrupted delivery of MNCAHN services, including mental health services for women, children and adolescents during and beyond the pandemic. The sources of information on response and mitigation strategies may range from social media to health care workers to public health institutions to national and sub-national policy-makers in various countries. Analysis of this information would enable early identification of examples, which should be shared rapidly. The effects of mitigation strategies on service delivery and health outcomes may be difficult to gauge. In preparing for the next crises, however, it is important to document, share and learn what works in different settings at different phases. Methods for both short- and long-term analyses should be used. In the short term, the focus should be on rapid evaluation to identify strategies that work best to mitigate the immediate impact of a crisis. In the long term, implementation research could be planned, including evaluation of whether strategies are sustainable and would improve the resilience of health systems. It would also be important to assess the impact on longer-term health outcomes. The global health community must learn from this unprecedented situation, not just to better prepare for the next pandemic but also to transform the way in which health services are delivered, making them data-led, equitable, people-centred and effective. The global community must also coordinate and strengthen data collection systems, to avoid the unnecessary burden on countries of capturing information on disruption and mitigation.
References


Annex 2

Background information on knowledge translation

Working group 2
Chair: Trevor Duke; STAGE Chair: Caroline Homer
Members: NK Arora, Jane Sandall, Blami Dao, Michael Golden, Fadi El Jardali, Mike English, Mike Merson, S Arulkumaran, Song Li, Fyezah Jehan, Caroline Kabiru

WHO has a rigorous process for guideline development that ensures transparency in evidence-based processes, independence, clarity about the target audience and diverse technical input through diverse regional, gender, discipline and professional representation into guideline development. The process is well described and is not repeated in this document; however, we encourage updating of guideline development processes as new technologies emerge and that they be communicated well. This document focuses on optimizing the translation of knowledge and recommendations. Some of the factors are inherent to guideline development and others are myriad subsequent actions and conditions.

Knowledge translation has many components, including:

- knowledge synthesis (analysis of research, guidelines, policy briefs, investment cases) and user-friendly guidance;
- dialogue and exchange (deliberative dialogue for guideline development, adoption and budget allocation);
- adaptation to the context, so that formulation of policies and guidelines takes account of local feasibility, affordability, social and cultural values and preferences, including those of health care users, and equity;
- evidence-informed programme design, monitoring and evaluation;
- use of knowledge, guidelines or recommendations in the provision of health care and other services;
- appropriate training and incorporation of new guidelines into the health culture and local health education;
- behaviour change to enhance the use of a guideline or recommendation to improve individual and population health; and
- evaluation of reach, uptake, acceptability and effectiveness.

Effective knowledge translation requires actions at various levels of the health system and the population. These actions are described in knowledge translation frameworks (1,2). The people and organizations involved often have to confer widely: with policy-makers, national and sub-national governments and health managers, health care workers, families and the wider community, sectors outside health that are crucial to the health of mothers, children and adolescents, and often with the media (formal and increasingly social).

WHO cannot translate its guidance on maternal, newborn, child and adolescent health and nutrition (MNCAHN) alone. Effective knowledge translation requires the investment and commitment of ministries of health and education, sub-national government departments, other United Nations agencies, academic and public health institutes, professional associations and donor partners. Knowledge translation should be based on experience and evidence and use of new technologies and should maintain corporate knowledge of past examples of success. WHO should set not only technical standards and norms but also standards for collaboration among stakeholders, ensuring that the interests of countries are paramount.

Constraints to translation of WHO technical and programme guidance
To improve health outcomes and achieve the Sustainable Development Goals (SDGs), evidence-based practice in maternal, newborn, child and adolescent health and nutrition (MNCAHN) services must be scaled up, with a focus on reducing inequity and improving the quality of service delivery. The discrepancy between knowledge and implementation is well known and is sometimes
referred to as the “know–do gap”. Measuring understanding and bridging the gap is critical and will involve addressing multidimensional influences (3). Implementation of MNCAHN guidance and improving the quality of care, especially in resource-limited settings, has a number of constraints:

- Complexity and number of guidelines: Countries receive large amounts of technical, evidence-based guidance from WHO and other sources, which varies in quality, relevance, affordability and local adaptability. The absence of alignment among organizations that support similar activities and discrepancies among guidelines can create confusion about the correct course of action. Countries should have processes for choosing relevant guidelines and standards for adaptation to their contexts. Often, however, they do not have the resources for this technical work.

- Lack of resources for knowledge translation and dissemination: Resources to determine policy, adapt technical guidance and operational tools and provide training are often limited. Therefore, new knowledge or guidelines are slow to reach the health care workers, managers and others for whom they are intended. WHO guidelines and evidence are often not shared in appropriate formats for pre-service and in-service education of health care workers, and they are often included in courses offered by colleges and schools for health care worker training only slowly or not at all.

- Health system constraints: As limitations to health systems make implementation of guidelines challenging, all gaps should be addressed simultaneously. The constraints include inadequate numbers, rapid turnover and inequitable distribution of health care workers, absence of continuing professional development programmes, no mentoring or supervision of health care workers and unreliable supplies of drugs, equipment and other commodities necessary to implement guidelines. In addition, there is limited auditing or quality improvement programmes to monitor guideline uptake, adherence and effectiveness. Poor-quality or poorly targeted data complicate monitoring of interventions and their implementation.

- Lack of community engagement: Community engagement is necessary for their understanding of the health care services that are available. Lack of engagement may limit demand for and access to essential services. Communication must be in local languages and through media appropriate for the community. Lack of engagement that limits incorporation of guidelines or evidence into practice also applies to informal health care providers, who are frequently consulted in low- and middle-income countries, such as traditional birth attendants, unregistered pharmacists and healers who are not a part of the formal health system. Most of WHO’s online media presence provides high-level communication. Most WHO videos are in English, and many of the videos on the WHO YouTube channel are of press conferences by senior WHO officials (4). They provide information that is useful at a high level but less so to communities, families and health care workers in the field.

- Limited engagement of non-health sector actors: Engagement of government and non-government actors outside the health sector – in education, agriculture, finance, community development and urban planning – are important for implementation of health interventions that address the social and economic determinants of MNCAHN that are essential for achieving the SDGs.

Recent progress in WHO guideline development

STAGE commends the many efforts made by WHO to increase the uptake of updated MNCAHN guidelines, notably:

- recent investments in making WHO guidelines digital and modifiable, preparing the path for guidelines to be incorporated into national digital platforms;
- a toolkit to support guideline adaptation, developed for antenatal care guidelines (5);
- development of end-user products to accompany guidelines, such as the manual for oxygen therapy (6);
- practice networks to support peer learning and exchange (7); and
- introduction of the “living guidelines” concept, which facilitates rapid updating of guidelines when new evidence become available (8).
STAGE expressed appreciation for these developments, but, given the urgency revealed by recent mortality estimates (9)\(^1\) and the increasingly complex nature of morbidity among children and adolescents, determined, focused investments from Member States, United Nations agencies and partners are needed to address knowledge translation initiatives to improve MNCAHN health outcomes and achieve the SDGs.

References


\(^1\) As these are estimates of mortality, they do not capture all the components relevant for the WHO definition of “health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (9,10).
Annex 3

Background information on health in the missing middle (5–9 years) and early adolescence and nutrition throughout the life-cycle

Working group 3
Co-Chairs, Zulfi Bhutta and HPS Sachdev; STAGE Chair, Caroline Homer
Members: Gary Darmstadt, George Patton, Fred Binka, Alma Golden, Betty Kirkwood, Rashida Ferrand, Mariam Claeson, Mark Tomlinson

STAGE working group 3 (based on a priority setting exercise) addressed health in the missing middle (5–9) years and early adolescence and nutrition throughout the life-course, two topics that significantly influence human capital and could influence WHO child health redesign.

1. The missing middle (5–9) years and early adolescence

Background
The age from 5 to 14 years encompasses developments such as the start of puberty, school transitions and evolving autonomy and identity. These are critical transitions in a child’s development, which can significantly influence later life and even the next generation. There is a remarkably poor understanding of this age group, the impact of these transitions on later life, possibilities for mitigating early disadvantages and how to alter harmful trajectories.

Knowledge gaps
Limited knowledge on the health of children over 5 years and of young adolescents has been synthesized and collated, with scarce source data, especially for low- and middle-income countries (LMIC) (1,2). The data required would include the burden of disease, the etiology of mortality and morbidity in different regions and social determinants of health in this group, especially for those with intersectional disadvantages. The design of most current data systems (such as surveys and routine health information systems) does not capture information for this age group, especially those for who do not access services. Cohort studies have focused mainly on early childhood development, and follow-up is often conducted only at adolescence, ignoring the middle years. Studies of the burden of disease in this age group are weak because of the poor systems for collecting data and the absence of good-quality primary data. Some information from a recent analysis (3) shows that, while the contribution of this age band to overall mortality may be low, there are differences among regions and in the proportions of causes of death. In most regions, there is an increase in the proportion of deaths due to injuries and noncommunicable diseases. There may well be an increasing burden of mental health issues over time, which also contributes to loss of disability-adjusted life years (Figs 1 and 2).
Fig. 1. Mortality rates by age group

Note: All figures are based on unrounded numbers.

Fig. 2. Proportions of deaths and disability-adjusted life years (DALYs) by cause and age, 2016
Puberty dominates these years, but little is understood about its impact on health, growth and development. There is considerable interest in the fact that this is an age at which trajectories can be altered, for example in metabolic status, and a possibility of mitigating a disadvantage in growth from earlier in life (see also section 2). Identity is shaped at this age by the immediate social environment of families, communities and peers and includes not only the perception of personal attributes but also values such as gender norms that are carried forward into later life.

A study in the USA showed that about 50% of mental disorders during the life-course begin before 14 years of age, most starting in later childhood or early adolescence (5). There is very limited understanding of mental health issues in children of this age in LMIC, let alone in more vulnerable contexts. Abuse, gender-based violence and gender inequality may start or become apparent in this age group. Further areas of neglected exploration are the prevalence of modifiable risks such as smoking, abuse of alcohol and other substances and sexual behaviour and understanding how to influence them. There are some exceptions to the dearth of data. India has collected nationally representative data on nutritional status from 1 to 19 years of age through interviews, anthropometrics and biochemical indicators to estimate the prevalence of malnutrition and to identify factors associated with the nutrition transition (6). Despite some exceptions, this review showed that there is inadequate information for evidence-based interventions and programmes for this age group.

Possible intervention platforms
School is a platform for providing interventions for health and well-being for this age group. There is some evidence from high-income countries but little from LMIC and disadvantaged areas to date. (8) Currently used school health interventions for these ages are narrow and often sponsored commercially (e.g. de-worming programmes and nutrition supplements). Furthermore, when delivering packages of health interventions at school, the role and burden on teachers must be considered.

Ways should be found to serve children who drop out of school or who never go to school. A series of population-based nutrition surveys in school-age children in Pakistan showed that almost 30% of children in some areas were out of school and that they had relatively worse health and nutrition indicators. (9) It is critical to identify all vulnerable groups and subgroups in this age range (including by gender and whether living in urban slums or on the street), especially when exploring risks (7), targeted interventions and possible service delivery platforms, including those related to social protection or outreach to communities and families. It is also important to determine what pulls children out of school, as examples include trafficking and child labour to reduce household poverty.

Next steps for the missing middle (5–9) years and early adolescence
This age group is generally not a focus for national policy-makers or donors, as mortality in this group is low. It is therefore important to demonstrate the severity of the issues they face, especially for those who are already marginalized, to increase opportunities for modifying risks, altering harmful trajectories and enhancing human capital, beyond the era of the Sustainable Development Goals (SDG) into the next generation.

Working group 3 will attempt to identify gaps in the global evidence on burden, epidemiology and impact on health outcomes to support the case for country investments in data collection and research on children aged 5–14 years. Work at WHO will be analysed first. A scoping review of current evidence and gaps, with sampling to focus on conflict and fragile settings, could be followed by further prioritization by STAGE in April 2021. The working group will consider how to identify critical issues that might be specific to this age group to guide interventions, especially for vulnerable groups such as street children and those living in slums and conflict zones. Important areas for reflection include how to reach these groups through existing and new platforms and identifying critical outcomes that could drive programmes.

18 A series of systematic reviews of evidence-based interventions for school-age children (the “missing middle”), which are almost complete, demonstrate the limited evidence on interventions in this age group in low- and middle-income countries and that much of the research has been conducted in non-representative populations.
2. Nutrition throughout the life-cycle

Background

Policies to optimize nutrition and prevent harm against the backdrop of rapid nutrition transition

Some definitions of nutrition-related metrics were constructed decades ago and are used to determine the burden, plan interventions and rank countries, especially for progress towards the SDGs. Emerging evidence suggests, however, that some of those definitions are no longer precise, which may have harmful consequences. Widespread public health interventions without nuance, in the context of the triple burden of malnutrition and potential harm, require a paradigm shift.

Anthropometry to define undernutrition and overnutrition

In public health settings in LMIC, anthropometry is the sole tool used to diagnose undernutrition and overnutrition in infants, children, adolescent and even adults. The current measures of undernutrition are wasting or thinness (acute undernutrition) and stunting (chronic undernutrition). Nutrient supplementation with energy-dense supplements is a core strategy for moderate and severe wasting in 6–59-month-old children. Similarly, body mass index-for-age or weight-for-height (for children < 5 years) are used to diagnose overweight and obesity, and management involves dietary modifications and life-style interventions.

The “metabolically obese normal weight” adult phenotype was first described in 1981 for individuals in the range of healthy standard body weight (or body mass index) who had metabolic abnormalities commonly associated with adult-onset obesity. This phenotype with at least one cardiometabolic risk factor is reported in up to two thirds of children and adolescents in China, India and the Islamic Republic of Iran (8–10). This phenotype, which may be amenable to preventive interventions, will not be detected in anthropometry-based screening programmes (11).

The paradoxical co-occurrence of metabolic obesity in children and adolescents who are conventionally considered to be acutely undernourished was noted in a national survey in India. Metabolic obesity (at least elevated blood cholesterol, low-density lipoprotein cholesterol, triglyceride, fasting glucose or glycosylated haemoglobin) was present in 43% of thin and 47% of stunted children (5,12). Similarly, published and unpublished data on urban poor, rural and unselected urban populations in India indicated that 7.5–13.8% of thin (body mass index < 18.5 kg/m2) pregnant women developed gestational diabetes mellitus, which has serious acute, long-term, transgenerational health consequences, including a perpetuating cycle of diabetes (13). To date, there is still no comprehensive understanding of what these metabolic markers mean for long-term health outcomes.

Defining and addressing anaemia

WHO thresholds for defining anaemia were derived predominantly from studies of white adult populations; in 2000, the haemoglobin cut-off point for anaemia was lowered for children aged 5–11 years. Examination of the cut-off for defining anaemia in healthy people (with no major causes of anaemia at population level) in various countries indicated wide heterogeneity (14), which suggests that a single threshold may not be appropriate and that pooling thresholds by age and sex for convenience may lead to misclassification. Such misclassification may explain the static prevalence of mild anaemia in some countries, despite decades of anaemia control programmes; furthermore, excessive reliance on iron to correct a benign condition may be harmful.

Many interventions to address micronutrient deficiencies

Several LMIC have initiated interventions to address micronutrient deficiency, such as mega-dose vitamin A supplementation, mandatory fortification of oil or sugar with vitamin A or iron fortification of staple foods or salt coupled with pharmacological iron supplementation to address anaemia. Such approaches entail the risk that the tolerable upper intake level will be exceeded by a proportion of the population, with potential adverse effects. This is a particular risk in LMIC that do not have the resources for continued surveillance of biomarkers. A risk of hypervitaminosis A is increasingly being seen in countries where there is simultaneous fortification and supplementation, with the associated harm (15,16).
Nutrient reference values
Over the past 25 years, many high-income countries have adopted a panel of nutrient reference values rather than a single recommended intake or dietary allowance (17). The average requirement and the tolerable upper intake level are the two core nutrient reference values necessary to obtain accurate, comparable estimates of population-level nutrient deficiency or excessive intake, which are indispensable for planning and evaluating food fortification and other nutrition support programmes globally. Nevertheless, most LMIC often use a recommended intake or dietary allowance, even though they are inappropriate benchmarks for population groups because there is no global harmonization, resources, local expertise or tools for a context-specific evidence base.

Nutrition throughout the life-cycle
Alignment of terms and frameworks for broader determinants and outcomes, including intergenerational consequences, and strategies for delivering nutrition interventions are essential. The nutrition transition is under way, with obesity and micronutrient deficiencies replacing wasting and stunting, resulting in a triple burden of malnutrition in many LMIC. Gaps in knowledge (and therefore interventions) on malnutrition and related health outcomes throughout the life-cycle (before and during pregnancy, the first 1000 days and the middle years and adolescence of males and females) include upstream determinants (e.g. the food environment) and critical influences such as mental health. Furthermore, although nutrition frameworks have been proposed, with recommendations, there is limited advice on strategies for implementing the recommendations.

Nutrition risk associated with the food environment, including the food supply chain
The possibility of securing a healthy diet in LMIC, especially for vulnerable groups, is shrinking. Fortunately, many LMIC have not yet borne the full brunt of this systemic change, but mounting evidence indicates that this is fuelling the burden of noncommunicable diseases. Analysis of this problem should be developed, but the contributing factors include a poorly regulated food environment in LMIC and replacement of traditional diets and food systems by processed and ultra-processed foods.

Summary and next steps
Recommendations on nutrition throughout the life-cycle should be prioritized. The working group acknowledges a tension between a narrow focus on nutrition and attention to the entire spectrum of influences on nutrition and health. Closer exploration of the landscape of investments with the WHO Nutrition and Food Safety department will be the next step, to ensure that STAGE contributes value. Thereafter, criteria for prioritizing areas of focus and for reaching consensus will allow recommendations to be made in April (and November) 2021. Prioritization could involve the entire membership of STAGE once more formal feedback on the issues has been received.

References


17. Yaktine AL, King JC, Allen LH. Why the derivation of nutrient reference values should be harmonized and how it can be accomplished. Adv Nutr. 2020;11(5):1102–
# Annex 4

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

2 – 4 November 2020
Agenda for Virtual meeting

## DAY 1: 2 NOVEMBER 2020 (CET)

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td>Opening remarks (15 min)</td>
<td>Welcome</td>
</tr>
<tr>
<td></td>
<td>Tedros A Ghebreyesus, Director-General, WHO</td>
<td>(Director, MCA)</td>
</tr>
<tr>
<td></td>
<td>Caroline Homer, Chair, STAGE</td>
<td></td>
</tr>
<tr>
<td>13:15</td>
<td>Update from SAGE, Covid Vaccine (15 min)</td>
<td>Welcome</td>
</tr>
<tr>
<td></td>
<td>Katherine O’Brien, Director IVB</td>
<td>(Director, MCA)</td>
</tr>
<tr>
<td>13:30</td>
<td>Indirect effects of COVID-19 on MNCAHN services: Working Group 1 (1 hr)</td>
<td>Discussion and Decision making</td>
</tr>
<tr>
<td></td>
<td>Background and Recommendations Koki Agarwal and Arachu Castro (Co-chairs) (10 min)</td>
<td>(Chair, STAGE)</td>
</tr>
<tr>
<td>14:30</td>
<td>Break (10 min)</td>
<td></td>
</tr>
<tr>
<td>14:40</td>
<td>Indirect effects of COVID-19 on MNCAHN services (30 min)</td>
<td>Discussion and Decision making</td>
</tr>
<tr>
<td></td>
<td>Discussion contd.</td>
<td>(Chair, STAGE)</td>
</tr>
<tr>
<td>15:10</td>
<td>Wrap up for the day (15 min)</td>
<td>Wrap up</td>
</tr>
<tr>
<td></td>
<td>Caroline Homer</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Finalizing Recommendations (closed session) (30 min)</td>
<td>Decision making</td>
</tr>
<tr>
<td></td>
<td>STAGE Members</td>
<td>(Chair, STAGE)</td>
</tr>
<tr>
<td>TIME</td>
<td>SESSION (Duration)</td>
<td>PURPOSE (Chair/Lead)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>13:00</td>
<td>Update from Partners: World Bank and Global Financing Facility (20 min)</td>
<td>Discussion (Director, NFS)</td>
</tr>
<tr>
<td></td>
<td>Muhammad Pate, Global Director for Health, Nutrition and Population, WB and Director GFF</td>
<td></td>
</tr>
<tr>
<td>13:20</td>
<td>Knowledge Translation – Guidelines to Implementation: Working Group 2 (1 hr)</td>
<td>Discussion and Decision making (Chair, STAGE)</td>
</tr>
<tr>
<td></td>
<td>Background and Recommendations: Trevor Duke (Chair) (10min)</td>
<td></td>
</tr>
<tr>
<td>14:20</td>
<td>Break (10 min)</td>
<td></td>
</tr>
<tr>
<td>14:30</td>
<td>Knowledge Translation discussion continued (30 min)</td>
<td>Discussion and Decision making (Chair, STAGE)</td>
</tr>
<tr>
<td>15:00</td>
<td>Wrap up for the day (15 min)</td>
<td>Wrap up</td>
</tr>
<tr>
<td></td>
<td>Caroline Homer</td>
<td></td>
</tr>
<tr>
<td>15:20</td>
<td>Finalizing Recommendations (closed session) (30 min)</td>
<td>Decision making (Chair, STAGE)</td>
</tr>
<tr>
<td></td>
<td>STAGE Members</td>
<td></td>
</tr>
</tbody>
</table>
### DAY 3: 4 NOVEMBER 2020 (GENEVA TIME)

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td>MNCAHN issues through Life Course: Working Group 3 (1h 10 min)</td>
<td>Discussion</td>
</tr>
<tr>
<td></td>
<td>Background and Next Steps: Zulfi Bhutta and HPS Sachdev (Co-Chairs) 15 min</td>
<td>(Chair, STAGE)</td>
</tr>
<tr>
<td>14:10</td>
<td>Break (10 min)</td>
<td></td>
</tr>
<tr>
<td>14:20</td>
<td>WHO Child Health Redesign (30 min)</td>
<td>Discussion</td>
</tr>
<tr>
<td></td>
<td>Wilson Were, Medical Officer, MCA, WHO</td>
<td>(Director, SRH)</td>
</tr>
<tr>
<td>14:50</td>
<td>Role of the MNCAHN measurement groups (10 min)</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td>Theresa Diaz, Coordinator, MCA, WHO</td>
<td>(Chair, STAGE)</td>
</tr>
<tr>
<td>15:00</td>
<td>Wrap up and Final STAGE Recommendations (20 min)</td>
<td>Closure of meeting</td>
</tr>
<tr>
<td></td>
<td>Caroline Homer; Anshu Banerjee, Director MCA; Ian Askew, Director SRH; Francesco Branca, Director NFS</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Closed session: Next Steps (30 min)</td>
<td>Discussion</td>
</tr>
<tr>
<td></td>
<td>STAGE Members</td>
<td>(Chair, STAGE)</td>
</tr>
</tbody>
</table>

**STAGE Members**

IVB: Immunization, Vaccines and Biologicals  
MCA: Maternal, Newborn, Child and Adolescent health and Ageing  
SRH: Sexual and Reproductive Health  
NFS: Nutrition and Food Safety

[https://www.who.int/maternal_child_adolescent/stage/en/](https://www.who.int/maternal_child_adolescent/stage/en/)