

## The World Health Organization (WHO) and Knowledge Translation in Maternal, Newborn, Child and Adolescent Health and Nutrition

The Strategic and Technical Advisory Group of Experts (STAGE) for Maternal, Newborn, Child, and Adolescent Health and Nutrition.\*

Email: [stagemncahn@who.int](mailto:stagemncahn@who.int)

\* STAGE members are: Fadia Al Buhairan, Koki Agarwal, Narendra Kumar Arora, Sabaratnam Arulkumaran, Zulfiqar A. Bhutta, Fred Binka, Arachu Castro, Mariam Claeson, Blami Dao, Gary Darmstadt, Trevor Duke, Mike English, Fadi Jardali, Mike Merson, Rashida Abbas Ferrand, Alma Golden, Michael Golden, Caroline Homer (Chair), Fyezah Jehan, Caroline Kabiru, Betty Kirkwood, Joy Lawn, Song Li, George Patton, Marie Ruel, Jane Sandall, Harshpal Singh Sachdev, Mark Tomlinson, Peter Waiswa, Dilys Walker, Stanley Zlotkin.

### Abstract

The Strategic and Technical Advisory Group of Experts (STAGE) for Maternal, Newborn, Child, and Adolescent Health and Nutrition (MNCAHN) was established in 2020 to advise the Director-General of WHO on issues relating to MNCAHN. STAGE is made up of people from multiple low-middle income and high-income countries, has representatives from multiple professional backgrounds, and with diverse experience and interests.

To achieve universal health cover and the Sustainable Development Goals (SDGs), MNCAHN services must be improved in quality and equity of access and be responsive to evolving technical guidance. This requires knowledge translation and implementation of WHO and other guidelines. Countries need effective and responsive structures for adaptation and implementation, strategies to improve guideline uptake, education and training, and mechanisms to monitor quality and safety. This paper outlines some areas that could be considered.

## Introduction

To achieve the Sustainable Development Goals (SDG), maternal, newborn, child and adolescent health and nutrition (MNCAHN) services must improve in quality and in equity of access. This is relevant in all countries and is multifaceted in its requirements. A common thread is knowledge translation: across the health system and the community. Knowledge translation is needed for implementation of national, local and WHO guidance. A working outline of knowledge translation is offered in the Panel.<sup>1,2</sup> Knowledge translation is a two-way iterative learning process, requiring engagement and learning with policy-makers, national and sub-national governments and health managers, health care workers, families and the community, sectors outside health that are crucial to health of mothers, children and adolescents. Knowledge translation often requires engagement with media. It should utilise existing experience and evidence, explore new technologies, and maintain and build on knowledge of past successes and failures. This paper, from the Strategic and Technical Advisory Group of Experts (STAGE) for MNCAHN,<sup>3</sup> proposes some areas that WHO and countries can act upon to improve this. The opinions were generated through four online meetings of a Knowledge Translation Working Group between April and October 2020, presented to the whole STAGE group for discussion and refinement, and documented in a report that was presented to WHO in November 2020. This paper summarises the report.

## Translation of WHO technical and program guidance

For the implementation of WHO's technical guidance and improving quality of MNCAHN care, there are several challenges:

- **Number and complexity of guidelines.** Countries receive a significant number of technical guidelines, from WHO and other sources. Strategies change quickly, leaving many countries behind. This can be confusing to health care workers and program managers. The guidance development process is often cumbersome and bureaucratic, directed by donors and non-transparent in relation to prioritization of topics. The process should be more country and region driven, and ministries of health need processes for choosing and prioritising guidelines and standards of relevance and adapting to their context. Consistent support for programs is essential.
- **Limited resources at a country level for knowledge translation and dissemination.** Resources are often limited to determine policy, adapt technical guidance and operational tools, and provide training. Consequently, new guidelines are slow to reach health-care workers, managers, and the people for whom they are intended. There are deficits in sharing WHO guidelines and evidence in appropriate forms for pre-service and in-service education of health-care workers; integration of WHO guidelines within courses offered by colleges and schools of health care worker training is often slow or not done at all.
- **Health system constraints.** Health systems limitations make guideline implementation challenging, with gaps and competing priorities that must be simultaneously addressed. These include inadequate numbers, rapid turnover and inequitable distribution of health care staff; irregular supplies of drugs, equipment and other commodities in order to implement guidelines; lack of mentoring, supervision, and continuing professional development programs for health care workers. In addition, there are limited auditing or quality improvement processes to monitor guideline uptake, adherence, and programme effectiveness.
- **Limited community engagement and communication.** Communication to health care workers and the community should be in appropriate languages and using accessible media; this is a lesson from COVID in many countries. Communication strategies are best designed in-country and WHO has a role in supporting this. For more generic online health communication, until recently WHO's social media presence has been mostly high-level communication; videos were mostly in English, and many of those on the WHO YouTube channel are press conferences by senior WHO officials.<sup>4</sup> Understanding the media that is the most common source of news and information by local health care workers and the community is essential.

## STAGE Recommendations on Knowledge Translation

- **Limited engagement of non-health sector actors.** Engagement of government and non-governmental stakeholders outside the health sector – education, agriculture, finance, community development, urban planning – is important for the implementation of health programs aimed at addressing the social and economic determinants within the SDGs.

WHO acknowledges their role in knowledge translation and the need to build more efficient processes to review data and revise recommendations, and to create guidelines and tools that are accessible to health care workers. WHO has made recent progress in this area: some new WHO guidelines are digital and modifiable, which prepares the pathway for them to be incorporated into country digital platforms. WHO developed a specific toolkit for guideline adaptation, trialled for antenatal care guidelines.<sup>5</sup> WHO is establishing practice networks to support peer learning and exchange. And WHO is introducing the living guidelines concept, which facilitates rapid updating when new evidence become available.<sup>6</sup> Many of these initiatives are embryonic and need consistent support, the newly developed WHO Academy will hopefully help these, and facilitate more engagement on health care worker training continuing professional education.<sup>7</sup>

### Recommendation 1: National and regional technical advisory groups and sub-national committees

At a national and sub-national level many countries have committees that oversee policy in Maternal and Child Health. Such committees may be an overarching MNCAHN technical advisory groups or committee (TAG), or several committees each with a focused remit: such as for Maternal and Newborn health; Child Health and Nutrition; Immunization advisory committees. These have often evolved based on the limited resources available for MNCAHN, and many have minimal statutory endorsement and resources. Based on these experiences, STAGE recommends that WHO and other partners should support ministries of health to strengthen these and build on the structures that already exist, and a global or regional resource centre could be established.<sup>8</sup>

Sub-national MNCAHN committees are also important, as sub-national health authorities (states, provinces or districts depending on the political structures) are often the drivers of implementation in devolved states and closer to where health services are delivered for the majority of women and children.

WHO can play a normative, technical, enabling and capacity building role in the functions of such TAGs. WHO has a role in ensuring all external partners recognise the authority of such national and local committees, this can foster alignment and respect for national autonomy.

The criteria and terms-of-reference below are principles and indicative only, and local needs will dictate local approaches. It is important that TAGs are established within national regulatory structures to support the credibility of TAG recommendations and their accountability to national governments.

**National MNCAHN TAGs** should be the peak technical and monitoring bodies for MNCAHN in the country. They provide advice to the management or key personal of the Ministry of Health or directly to executive government, and they provide policy and practice updates and recommendations to health managers, health care workers, and other stakeholders. They are ultimately accountable to the Ministry of Health which sets the terms-of-reference. The set-up and functions may include the following:

- Endorsement from the National government as a 'statutory or standing body', existing for the long term, with properly defined terms of reference and governance.
- Develop a comprehensive plan for MNCAHN that can act as a blueprint for national, sub-national and local levels. Such a plan should guide annual implementation plans, and inform program managers, health workers, the community and the government's partners about maternal and child

## STAGE Recommendations on Knowledge Translation

health priorities and the approaches being adopted. The plan can be informed by WHO's Redesign process.<sup>9</sup>

- Review and oversee the collection of essential primary data on MNCAHN and use this to guide policy and recommendations.
- Support capacity building for monitoring and evaluation, data synthesis, and implementation research.
- Provide leadership on adoption, adaptation, and dissemination of evidence-based guidelines.
- Initiate and oversee a MNCAHN Quality Improvement Program. Such a program may cover all aspects of quality improvement, including health facility accreditation, education and continuing professional development, standards and assessment, audit, small group problem solving, communication of local initiatives in order to improve quality of care. This could include supporting "Centers of Excellence in MNCAHN", including health facilities at a district or sub-national level.
- Oversee an annual "State of the Nation's Mothers, Newborns, Children and Adolescents" report that brings together data on health, education, and other SDG targets. This would be an important monitoring and evaluation exercise leading to follow-up and actions at national and sub-national level, and accountability.
- Strategic thinking at country level on how often to update guidance and how to do it: 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 adequate funding and resource mobilization for recommendations to be implemented.

The functions that a national TAG takes on will depend on its existing capacity but WHO should be able to help countries to grow these capacities, and support resource mobilisation across partners.

**Membership.** The membership of the national TAG should be determined in-country. It should ensure intellectual independence, allow for a range of perspectives, and support the alignment and dissemination of key decisions. Members could include personnel skilled in epidemiology and MNCAHN disease burden knowledge, professional associations, key academic / university personnel, sub-national representatives, UN agencies (WHO and Unicef), and sectors beyond health, such as education, finance and law, and the private health sector where relevant. Membership should also include consumer, community, and civil society representatives, such as women's groups, a community youth leader, and indigenous groups where they exist. Membership should also include frontline health workers who will be tasked with implement the guidance and policies, such as a midwife, child health nurse, or allied health professional.

**Regional TAGs for MNCAHN** would provide WHO Regional Directors and countries in the respective regions with MNCAHN strategic priorities and technical recommendations considering new global guidance and its regional relevance. Regional TAGs would support regional exchange and national capacity building. The regional TAG structure and procedures would reflect the needs and capacities of its member states. Links between national and regional TAGS are important. One way to enable this may be that national TAG chairs are represented on the regional TAG.

**Sub-national** (state, province, or district) **MNCAHN committees** are needed to operationalise recommendations and the National Plan for MNCAHN in countries with devolved systems, to contextualise it to local priorities, and to oversee local operations and monitoring. 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: such as a community leader, women's group), or representatives of other sectors such as a teacher.

## Recommendation 2: Strategies to improve guideline uptake

STAGE recommends that WHO:

- **Produce a limited number of comprehensive MNCAHN guidelines combining linked recommendations, which are regularly updated as new evidence becomes available, and are consistently supported.** This would reduce confusion as to which guidelines or recommendations health care workers should follow, and assist countries put resources into prioritization and implementation. This approach would strengthen longer-term incorporation of WHO guidelines and recommendations into the health system culture. Such consolidated guidelines should be easily adaptable to promote ownership, for example, enable co-branding by national ministries of health or professional associations. They may be in digital forms, in addition to the traditional concept of guideline books. Such consolidated guidelines would be the go-to for all technical norms in that discipline. There are examples of this already that could be built upon.<sup>10,11</sup> In the development of such resources, the input of frontline workers, such as a midwives, paediatric nurses or community health workers should be sought, as these health care workers will be asked to implement such guidance. There should be education and training resources linked to guidelines, for use by health services, ministries of health and schools and colleges of health worker training for pre-service education and continuing professional development.
- **Develop a comprehensive operational handbook for MNCAHN that provides programmatic and training guidance for implementation which can be adapted and owned at national level.** Such a handbook could include guideline adaptation tools, programmatic advice, decision-making tools for frontline staff, training aides, and recommendations on management, training, supervision, monitoring and evaluation, integration of services, quality improvement and implementation research.
- **Support guidelines produced or adapted by national ministries of health and national health care professional associations.** While other international NGOs and other UN agencies also develop guidelines, those developed nationally and locally should be supported. National health care professional associations are the most important group to support for implementation, ideally brought together (paediatricians, obstetricians, nurses, midwives, and allied health). WHO can make their guidelines more easily adaptable with provision for co-branding with WHO, and in formats that are modifiable.
- **Encourage and support national ministry of health guideline websites,** to house locally adopted and endorsed guidelines and operational handbooks. Many ministries of health in LMIC have rudimentary and outdated websites, so capitalising on digital needs to address this local need is important. Work is also needed to support digital platforms for mobile phone and other app-related approaches to find ways to enable health care workers to have easy access to the guidance. Ministries of health should have a specific person responsible for keeping track of new guidelines coming out across MNCAHN.
- **Support National MCH Quality Improvement Programs.** A quality improvement program may be multi-faceted, including health facility accreditation, health care worker education and continuing professional development, standards and assessment, audit, small group problem solving, communication of local initiatives, in order to address the health system bottlenecks in improving quality of care. It is not WHO's role to initiate such a national program, but technical support and endorsement will be invaluable. There may be QI programs in other areas (e.g. HIV, immunisation) where there could be synergies and lessons shared.
- **Develop a new WHO program of support to institutions of health care worker training in low- and middle-income countries** to increase the teaching of WHO guidelines and address health care worker deficiency. In many low-income settings, colleges of nursing, midwifery, medical, allied health training are underfunded and under resourced, and output is inadequate to meet demands. This stifles progress in all the health-related SDG targets. The inequities in health worker numbers, distribution and training, and the tragic consequences, have been starkly

highlighted by the Covid-19 pandemic, which risks leaving a seismic gap in health care worker numbers in the coming decade. A WHO program of support to schools and colleges of health care worker training could lead to greater incorporation of WHO guidelines into curricula, increased capacity of educators, argue for more funding for health worker training institutions through global projects and local budgets, facilitate links with other organisations that would support such institutions, including accreditation bodies, and produce curricula for nursing and other health professional training that could be adapted locally. New online teaching methods (such as through MOOCs) and the WHO Academy will play a role.<sup>7</sup> It will be important to pair this with standards and certification for continuing professional education and the professional accreditation body keep track and maintain accountability.

- **Develop child health nurse training as a post-graduate course supported by WHO**, in the same way that WHO and other agencies have promoted midwifery training globally. Child, neonatal and adolescent health is far more complex in the SDG era; there is so much more to be learned than can be taught in pre-service general nursing courses. A generic curricula could be developed, based around WHO guidelines, which would bring together all the relevant guidelines and consolidate the many ‘short-courses’ into a 1-2 year practical post-graduate course (Primary child health care, Nutrition, Hospital care, Newborn care, HIV, Tuberculosis, EPI, Adolescent health, Care of children with chronic conditions, Child protection, Disability, Quality improvement). It would encompass prevention and treatment and teach principles of family centred care and equity. Many countries need an accreditation process for any new course and health worker credentialing.<sup>12</sup>
- **Develop more multi-media outputs such as videos in multiple languages to be shown through the WHO YouTube channel and other platforms.** WHO should explore capacity to be more creative, engaging and multi-lingual in its communication using this medium to communicate science-based public health information. More videos could target an audience that includes health care workers in the field, families, and communities. This would take resources: skilled people and time, helped by an adolescent understanding social media sites (e.g. YouTube). WHO endorsed YouTube clips could also tell local stories of successful implementation – even encourage end-users to make videos of their own lessons learnt; these could be developed at a local or national level, and reviewed or endorsed by WHO if suitable. WHO may also develop or evaluating and endorse digital mobile Apps that are linked to WHO guidelines.

### Recommendation 3. Monitor gaps in knowledge translation at a national and local level, and report lessons learned from operational research in implementation of MNCAHN care

Countries need well-functioning processes to identify the gaps in implementing recommendations for MNCAHN. The MNCAHN TAGs have a role in reviewing data, including health system implementation data. Identification of such gaps needs to be grounded in problems faced by those who directly manage and deliver services in the field, supported by routinely collected MNCAHN data, and recognise countries autonomy to decide on metrics and methods of measurement that are feasible, meaningful, valid, and sustainable.

There is value in reporting where implementation of MNCAHN guidelines and models of integrated care have been successful. This could for example include exemplar case studies of models of care or guideline implementation that are clearly articulated and explore objectively the elements of that success and the challenges. Policy makers, system managers and clinicians would benefit from such examples. Sharing of lessons supports continuous long-term learning, so that there is a memory and cumulative strengthening of what works.

## Conclusion

Adaptation and implementation of WHO and other guidelines is important to improve the quality and fair access to MNCAHN services, towards achievement of universal health coverage and the Sustainable Development Goals (SDGs). Countries need effective and responsive structures to improve guideline uptake, training and continuing professional education for maternal and child health care workers, and mechanisms to monitor quality and safety. A governance structure with a technical advisory committee, a unified national plan that acts as a blueprint for progress, and a feasible monitoring strategy are the building blocks. WHO has an important role in supporting these processes at global, regional, national and local levels, and remains a trusted collaborator for MNCAHN knowledge translation.

## References

1. Leeman J, Birken SA, Powell BJ, Rohweder C, Shea CM. Beyond “implementation strategies”: classifying the full range of strategies used in implementation science and practice. *Implementation Science* 2017;12:1-9.
2. Taxonomy E. Effective Practice and Organisation of Care (EPOC). 2020.
3. Strategic, Experts TAGo. Creating the Strategic and Technical Advisory Group of Experts (STAGE) to advance maternal, newborn, child, adolescent health and nutrition: a new approach. *BMJ Global Health* 2021;6:e006726.
4. WHO You-Tube channel. 2020. (Accessed August 1, 2020)
5. Barreix M, Lawrie TA, Kidula N, et al. Development of the WHO Antenatal Care Recommendations Adaptation Toolkit: a standardised approach for countries. *Health Res Policy Syst* 2020;18:1-13.
6. Vogel JP, Dowswell T, Lewin S, et al. Developing and applying a 'living guidelines' approach to WHO recommendations on maternal and perinatal health. *BMJ global health* 2019;4:e001683.
7. WHO Academy. World Health Organization, 2020. (Accessed August 23, 2021)
8. National Immunization Technical Advisory Groups. 2019. (Accessed August 16, 2021,
9. World Health Organization. Redesigning child and adolescent health programmes. [https://www.who.int/docs/default-source/mca-documents/stage/child-health-redesign-report.pdf?sfvrsn=7f117c10\\_2](https://www.who.int/docs/default-source/mca-documents/stage/child-health-redesign-report.pdf?sfvrsn=7f117c10_2); World Health Organization; 2019.
10. World Health Organization. WHO recommendations on antenatal care for a positive pregnancy experience. <https://www.who.int/publications/i/item/9789241549912>; WHO; 2017.
11. World Health Organization. Hospital Care for Children: guidelines for the management of common illnesses with limited resources. Geneva: WHO, ISBN 789241548373; [http://www.who.int/maternal\\_child\\_adolescent/documents/child\\_hospital\\_care/en/](http://www.who.int/maternal_child_adolescent/documents/child_hospital_care/en/); 2013.
12. Salehi R, Asamoah A, de Young S, et al. Scaling up pediatric nurse specialist education in Ghana—a longitudinal, mixed methods evaluation. *BMC Nurs* 2021;20:1-12.



## STAGE Recommendations on Knowledge Translation

### Panel 1.

#### Knowledge translation components and processes:

- Knowledge synthesis (including analysis of research, guideline development, policy briefs, investment cases, development of user-friendly guidance)
- Dialogue / exchange (deliberative dialogue for guideline development, adoption and budget allocation)
- Adaptation to the context so that policy and guideline formulation takes account of local feasibility, affordability, social and cultural values and preferences, including those of health care users, and equity (is it fit for purpose in the environments where most needed)
- Evidence-informed programme design, monitoring and evaluation
- Activities where knowledge, guidelines or recommendations are used in the provision of health care or other services
- Appropriate training and incorporation of new guidelines into the health culture and local health education
- Behaviour change to enhance the use of such a guideline or recommendation in ways that enhances health at an individual and population level
- Evaluation of reach, uptake, acceptability and effectiveness