ABSTRACT

The World Health Organization (WHO) Department of Nutrition for Health and Development (NHD) develops evidence-informed guidance on effective actions to address all forms of malnutrition; establishes standards and harmonizes methodologies; and increases public awareness about the WHO policy recommendations.

In order to decrease the time necessary to develop nutrition-related WHO guidelines while maintaining the high quality of the guidelines, several actions have been implemented by NHD and partner programmes and departments. These include working with academic institutions in capacity-building, working with Cochrane in producing and updating systematic reviews, and maintaining a global network of institutions for scientific advice on nutrition.

This document outlines the continuous quality improvement being implemented by NHD in its normative and technical work to address country needs and optimize impact at that level.

1 BACKGROUND

2 MEASURES TO IMPROVE THE EFFICIENCY AND IMPACT OF GUIDELINE DEVELOPMENT

3 THE IMPACT OF WHO NUTRITION-RELATED NORMATIVE WORK
1.1 NORMATIVE WORK IN THE CONTEXT OF THE WORLD HEALTH ORGANIZATION NUTRITION STRATEGY

The World Health Organization (WHO) Department of Nutrition for Health and Development (NHD) continues to implement the WHO 2016–2025 Nutrition Strategy (1) and aims to support Member States and other partners in accelerating progress towards achieving the Global Targets 2025 for nutrition (2) and nutrition- and health-related Sustainable Development Goals (3). To achieve its aims, WHO is focusing on the following six strategic priorities:

1. shape the narrative of the global nutrition agenda;
2. leverage changes in relevant non-health sectors, to improve and mainstream nutrition;
3. leverage the implementation of effective nutrition policies and programmes in all settings, including in situations of emergencies and crisis;
4. define healthy sustainable diets and guide the identification and use of effective nutrition actions;
5. improve the availability of nutrition actions in health systems;
6. support the establishment of targets and monitoring systems for nutrition.

As part of the fourth objective, WHO is developing evidence-informed guidance on effective actions to address all forms of malnutrition; establishing standards and harmonizing methodologies; and increasing public awareness about the WHO policy recommendations.

1.2 WHO GUIDELINE DEVELOPMENT PROCESS

The guideline development process, described in detail in the WHO handbook for guideline development (2nd edition) (4) is overseen by the Guidelines Review Committee (GRC) (5), established by the WHO Director-General in 2007. The GRC ensures that WHO guidelines are of high methodological quality and developed using a transparent and explicit process.

Guidelines have different levels of complexity, including rapid advice guidelines, produced in response to public health emergencies; standard guidelines, produced in response to a request for guidance in a single clinical or policy area; and full guidelines, providing complete coverage of a health topic or disease.

In brief, the guideline development process includes the following steps: priority questions and outcomes are identified; the evidence is retrieved, assessed and synthesized; and recommendations are made, including research priorities. Actions are then taken for the dissemination, implementation, impact evaluation and updating of the guideline.
Independent assessors have evaluated the WHO guideline development process using the Appraisal of Guidelines for Research and Evaluation II instrument (AGREE II) (6–8), and have identified positive changes, as well as areas for further improvement. In an assessment of 124 GRC-approved guidelines released prior to 23 May 2013, the overall quality of guidelines was moderate but highly variable: the mean overall quality score was 4.8 on the 7-point Likert scale (median 5; range 3–6). Among these guidelines, those that were related to nutrition (n = 16) had a high mean score for overall quality of 5.7 (median 6; range 4–6) (7).

1.3 NUTRITION-RELATED GUIDELINES

In the period 2009–2017, WHO developed or updated over 40 nutrition guidelines.

NHD and their internal partners continue to monitor, evaluate and improve the processes and impact of WHO’s nutrition-related guidelines, as part of the quality-improvement cycle (9, 10). A recent assessment of the methodological quality and implementability of nutrition-related guidelines highlighted strengths such as the appropriate management of conflicts of interest and the systematic use of high-quality evidence to inform recommendations. The assessment also recommended areas for improvement, such as the lack of explicit implementation advice (11). This is an area for which NHD has had success for topics such as micronutrients (12–14) and dietary goals for the prevention of obesity and diet-related noncommunicable diseases, such as goals for consumption of sodium and potassium, and recently sugars, though more research is needed on effective intervention delivery (15).

Development of nutrition-related guidelines (standard/full guidelines) has taken between 2 years and 7 years from planning to publication. In the first years since the establishment of the guideline development methodology in 2007, development of nutrition-related guidelines has required a certain degree of methodological adaptation. By 2017, this development time was shortened to 2–5 years. Bottlenecks are the time needed to undertake high-quality systematic reviews and the capacities of the WHO Secretariat to handle the multiple demands, which at the beginning have been very broad, covering a large spectrum of nutrition-related conditions.
2 MEASURES TO IMPROVE THE EFFICIENCY AND IMPACT OF GUIDELINE DEVELOPMENT

2.1 GUIDELINE DEVELOPMENT PLANNING

- It is important to continue discussions with the GRC on ways to efficiently update existing nutrition guidelines, for instance in considering systematic approaches to the decision-making process for when and how to update existing systematic reviews (16).

- A process for prioritization of guidelines has also been established, based on a call for public submissions, followed by a systematic assessment by the WHO Secretariat and Nutrition Expert Panel. The new priority-setting process for development of nutrition guidelines was launched in April 2017.

2.2 IMPROVING CAPACITIES TO DEVELOP EVIDENCE ANALYSIS AND SYNTHESIS

The following actions have been implemented by NHD and partner programmes and departments, in an effort to decrease the time necessary to develop nutrition-related WHO guidelines while maintaining the high quality of the guidelines:

- capacity-building in the methodology for systematic reviews among nutrition scientists and practitioners. An example of one such endeavour is the WHO/ Cochrane/Cornell University Summer Institute for Systematic Reviews in Nutrition for Global Policy Making (17) – training carried out annually since 2014 in partnership with Cochrane and the Division of Nutritional Sciences at Cornell University, a WHO/Pan-American Health Organization (PAHO) collaborating centre on implementation research in nutrition and global policy (18). This has been strengthened by identification and involvement of multi-country younger professionals partnering with senior experts in undertaking the systematic reviews for ongoing work of guideline development groups;

- work with Cochrane in producing or updating systematic reviews for WHO nutrition guidelines (19). This collaboration has been ongoing since February 2010 (20) and allows for faster and prioritized completion and publication of systematic reviews that contribute towards guideline development;

- continued work with and support of the Cochrane Nutrition Field (established in May 2016) (21), as well as with other relevant Cochrane review groups, such as the Heart, Public Health, Pregnancy and Childbirth, Neonatal, and Infectious Diseases Groups. This allows for a more effective and timely synthesis of evidence for nutrition (22);

- allowing full access to systematic reviews, as well as systematic review summaries via WHO’s e-Library of Evidence for Nutrition Action (eLENA) (23) (since August 2011), as well as through the eLENA mobile phone application (eLENAmobile) (24) (since December 2015). This enables evidence to be easily accessible to guideline users;

- inviting the authors or representatives of the systematic review teams to attend the guideline development group meetings (since 2010); this allows the reviewer(s) to address questions from the guideline development group or to recalculate data in real-time, as necessary;

- maintaining a global network of institutions for scientific advice on nutrition, bringing together national institutions that are developing national dietary guidelines.1 This facilitates information-sharing on ongoing and planned development and updating of nutrition and dietary guidelines, as well as possible harmonization of the methods for undertaking evidence reviews and assessing the quality of evidence, and allows the use of existing systematic reviews for development and updating of WHO guidelines, where possible;

- ensuring that specifically designated funds are made available for undertaking the systematic reviews required for guideline development (since 2015). This facilitates not only the timely undertaking of systematic reviews, which are required as part of the WHO guideline development process, but also increasing efficiencies in conducting the required systematic reviews for multiple guidelines simultaneously.

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1 These include the European Food Safety Authority (EFSA), Food Standards Australia New Zealand (FSANZ), the National Health and Medical Research Council (NHMRC), Agence française de sécurité sanitaire des aliments (Afssa), Health Canada, the Norwegian Food Safety Authority, the UK (United Kingdom of Great Britain and Northern Ireland) Public Health Agency, the US (United States of America) Institute of Medicine (IOM), the US Food and Drug Administration (FDA), the US Department of Agriculture (USDA), etc.
Additional measures to improve capacities to develop evidence analysis and synthesis are being considered, such as:

- expanding the scale and reach of capacity-building efforts on the methodology for systematic reviews to all WHO regions, by promoting existing online courses provided by Cochrane Training (25). This could save time in the review of evidence;
- supporting maintenance of the International Prospective Register of Systematic Reviews (PROSPERO) (26), a global inventory of planned and ongoing Cochrane and non-Cochrane systematic reviews, maintained by the National Institute for Health Research, United Kingdom of Great Britain and Northern Ireland. This could save time in the review of evidence.

2.3 IMPROVING THE EFFICIENCY OF GUIDELINE DEVELOPMENT

The following actions have been implemented:

- development and maintenance of a roster of potential members of the nutrition guideline development group from all WHO regions (since 2015). This allows for an efficient selection of potential guideline development group members from a wide range of experiences and from different WHO regions. The current roster contains more than 90 individuals;
- extension of the term limit for members of the guideline development group to 3 years or more (since 2010). This decreases the time required to learn or relearn the WHO process of guideline development, the Grading of Recommendations Assessment, Development and Evaluation (GRADE) (27) methodology and the Developing and Evaluating Communication strategies to support Informed Decisions and practice based on Evidence (DECIDE) framework (28).

Additional measures to improve the efficiency of guideline development are being considered, such as:

- further broadening the roster of potential guideline development group members to include a wider range of technical expertise, methodologists, ethicists, policy-makers, end-users, beneficiaries, academicians, and other stakeholders, in particular from low- and middle-income countries. This would make selection of guideline development group members more efficient and save time during the planning phase of guideline development;
- prospectively assessing potential conflicts of interest of the roster of potential guideline development group members, as established in the regulations for expert advisory panels and committees published in the WHO Basic documents (29). This would save time during the planning phase of guideline development. Periodic reassessment of potential conflicts of interest of the potential guideline development group members in the roster needs to be conducted, since their activities and involvements may change over time;
- exploring the feasibility of advancing guideline development work outside of face-to-face guideline development group meetings (e.g. WebEx or other videoconferencing applications), when possible. This would save time during the evidence review and assessment;
- exploring new technologies and approaches to increase the efficiency of the systematic review methodology itself, including automation of publication identification and data extraction (30) and use of the Systematic Review Data Repository, a repository of primary studies grouped by topic (31).
2.4 PUBLIC INFORMATION ON GUIDELINE DEVELOPMENT PROCESSES

- A public website listing WHO guidelines that are under development, describing the planned scope, contributors and timeline, has been established (32). This tracking tool shows the progress of nutrition guideline development, in order to further enhance transparency and increase public awareness of nutrition-related guidelines. A revised version of the tracking tool is being coordinated by the WHO GRC Secretariat. The tool will allow WHO to better monitor the length of time taken to produce guidelines and further improve the efficiency with which the steps to guideline development are carried out.

- When possible, public consultations on the guidelines’ scope and draft guidelines are carried out, in parallel with the required peer-review of draft guidelines. This contributes to improvement of the language and qualities of the guidelines. It also contributes to increased updating of the recommendations and application of the guidelines.

2.5 DISSEMINATION OF GUIDELINES

- WHO nutrition-related guidelines are posted on the WHO website, including the WHO Nutrition website (33) and eLENA (23).

- Dissemination is also done through social media and a mailing list of nutrition professionals around the world. As of 1 March 2018, the Nutrition mailing list (34) was reaching over 6400 subscribers worldwide. In addition, announcements on recent publications are made through a broad network of WHO regional and country offices, as well as through international partners, including ministries of health of Member States, WHO collaborating centres, universities, other United Nations agencies and nongovernmental organizations, including but not limited to those in official relations with WHO.

Additional methods of dissemination include:

- presentation of guidelines at United Nations coordination fora (e.g. the United Nations Standing Committee on Nutrition (35));

- capacity-building workshops on the tools for translating WHO guidelines into policy actions (e.g. workshops held at subregional and national level);

- presentations at scientific fora;

- inclusion of reference to WHO guidelines in policy documents (e.g. strategies and policy documents referring to global targets for nutrition and diet-related noncommunicable diseases);³ joint United Nations documents (e.g. Compendium of actions for nutrition (36) and the commitments of the United Nations Decade of Action on Nutrition 2016–2025 (37)); policy implementation tools (e.g. regional nutrient profile models in five WHO regions); and health-planning tools (e.g. the OneHealth Tool (38));

- inclusion in Codex Alimentarius (39) guidelines and standards, which are largely used by countries to implement nutrition labelling and various other regulatory measures.

³ eLENA (24) currently includes a feature linking nutrition interventions – many of which are recommended by WHO in WHO guidelines – to the WHO global targets for nutrition and diet-related noncommunicable diseases.
A measure of the impact of the WHO normative work is the incorporation of WHO nutrition recommendations into national dietary guidelines and policy actions (e.g. use as nutrient reference values for nutrition labelling, taxation of sugar-sweetened beverages, salt-reduction strategies).

Monitoring of uptake is done through the WHO Global database on the Implementation of Nutrition Action (GINA) (40) and through comprehensive surveys such as the second Global Nutrition Policy Review 2016–2017. This survey questionnaire was designed to monitor country uptake of WHO nutrition recommendations in the areas of maternal, infant and young child nutrition; school health and nutrition programmes; healthy diets and prevention of diet-related noncommunicable diseases; vitamin and mineral nutrition; acute malnutrition; and nutrition and infectious disease. A draft report based on 177 country responses (91% of Member States) is available online (41). The report documents implementation of actions (i.e. uptake of guidelines) by region, as well as further analyses on, for example, the policy environment in countries with and without a significant gap related to the status of achieving the Global Targets 2025 for nutrition (2) (based on current status, as well as progress in making improvements). For example, this latter analysis shows that while 79% of countries with anaemia rates of 20% or more in women of reproductive age provide iron to pregnant women, only 29% of these countries target all women of reproductive age.

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