



Call for authors – systematic reviews on prevention and treatment of wasting

Deadline of submission: 31 May 2021

Background

World Health Organization (WHO) has begun the guideline development process for prevention and treatment of wasting. The guideline will include four overlapping areas of focus including growth faltering/failure in infants younger than six months; moderate wasting in infants and children aged six months and older; severe wasting and oedema in infants and children aged six months and older; and prevention of wasting.

Growth faltering/failure in infants younger than six months

The 2013 WHO guidelines for severe acute malnutrition (severe wasting and oedema) included a limited number of recommendations for infants under six months of age. There is a key care gap in the treatment of infants with growth faltering/failure more broadly, which includes but is not limited to severe wasting or oedema.

Moderate wasting in infants and children aged six months and older

There are currently no WHO guidelines focusing specifically on the treatment of moderate wasting, including clinical and nutritional management. While certain treatment approaches for severe wasting may be applicable for children with moderate wasting, it is possible that differentiated treatment approaches are needed because of different physiological thresholds in children with moderate wasting.

Severe wasting and oedema in infants and children aged six months and older

The most recent WHO guideline updates for treatment of severe wasting and oedematous malnutrition were published in 2013, and therefore the new recommendations will build on this existing guidance. Many of the remaining key care gaps relate to clinical management of children with severe wasting or oedema, as mortality remains high particularly in inpatient settings and following discharge.

Prevention of wasting

Prevention is a new area for WHO guideline development around wasting in infants and children. It can include prevention of wasting incidence, or of progression from moderate to severe wasting for instance. Importantly, appropriateness and effectiveness of prevention approaches may differ by setting, context, and other factors which will be considered for this guideline.

Scope

To inform the guideline on prevention and treatment of wasting, WHO will commission multiple systematic reviews across the four areas of focus to retrieve, synthesize, and assess all available evidence for the following priority questions:

- 1A) In infants <6 months, what are the criteria that best inform the decision to initiate treatment in an outpatient/community setting for growth failure/faltering? (*Prognostic question*)
- 1B) In infants <6 months, what are the criteria that best inform the decision for referral to treatment in an inpatient setting for growth failure/faltering? (*Prognostic question*)
- 1C) In infants <6 months admitted for inpatient treatment of growth failure/faltering, what are the criteria that best inform the decision for transfer to outpatient/community treatment? (*Prognostic question*)
- 1D) In infants <6 months receiving outpatient/community treatment for growth failure/faltering, what are the criteria that best inform the decision for discharge from outpatient/community treatment? (*Prognostic question*)

Note: Applicants for question 1 must select all of the above components.

- 2A) In infants and children >6 months, what are the criteria that best inform the decision to initiate treatment in an outpatient/community setting for wasting and/or oedema? (*Prognostic question*)
- 2B) In infants and children >6 months with wasting and/or oedema, what are the criteria that best inform the decision for referral to treatment in an inpatient setting for wasting and/or oedema? (*Prognostic question*)
- 2C) In infants and children >6 months admitted for inpatient treatment of wasting and/or oedema, what are the criteria that best inform the decision for transfer to outpatient/community treatment? (*Prognostic question*)
- 2D) In infants and children >6 months receiving outpatient/community treatment for wasting and/or oedema, what are the criteria that best inform the decision for discharge from outpatient/community treatment? (*Prognostic question*)

Note: Applicants for question 2 must select all of the above components.

- 3. In mothers/caregivers of infants <6 months with growth failure/faltering who are experiencing difficulties with breastmilk intake, which interventions to manage problems with breastfeeding/lactation can improve breastfeeding practices and increase breastmilk intake? (*Intervention question*)
- 4A) In infants <6 months with growth failure/faltering, which criteria best determine if and when an infant should be given a supplemental milk formula (in addition to breastmilk if the infant is breastfed)? (*Prognostic question*)

4B) In infants <6 months with growth failure/faltering meeting the above criteria, what is the most effective supplemental milk formula (commercial infant formula, F-75, or diluted F-100) and for how long should these feeds be given to improve outcomes such as anthropometry? (***Intervention question***)

Note: Applicants for question 4 must select all of the above components.

5. In infants <6 months with growth failure/faltering, should an antibiotic be routinely given (as per the 2013 guidelines for severe wasting and oedema) to reduce risk of outcomes like mortality? (***Intervention question***)

6. In mothers/caregivers of infants <6 months with growth failure/faltering, do maternal nutritional supplementation and/or counselling and/or maternal-directed mental health interventions improve infant outcomes such as nutritional recovery? (***Intervention question***)

7. In infants and children >6 months with moderate wasting across settings and contexts, which children require specially formulated foods; also what is the effectiveness of specially formulated foods (including RUSF, RUTF, CSB++, MD CF) vs non-specially formulated food interventions vs other approaches for outcomes such as nutritional recovery? (***Intervention question***)

8. In infants and children >6 months with moderate wasting, what is the appropriate dietary treatment in terms of optimal type, quantity, and duration to improve outcomes such as nutritional recovery? (***Intervention question***)

9. In infants and children >6 months with severe wasting or oedema, what is the optimal quantity and duration of RUTF to improve outcomes such as nutritional recovery? (***Intervention question***)

10. In infants and children with growth failure/faltering or severe wasting or oedema who are not tolerating F-75 or F-100, what is the effectiveness of hydrolyzed formulas during inpatient care to improve tolerance of feeds and reduce risk of outcomes like clinical deterioration? (***Intervention question***)

11A) In infants and children >6 months with moderate or severe wasting or oedema, how can dehydration be identified? (***Diagnostic question***)

11B) In infants and children >6 months with moderate or severe wasting or oedema and dehydration but who are not shocked, what is the effectiveness of standard WHO low-osmolality ORS compared with ReSoMal during inpatient care to reduce risk of mortality and other adverse outcomes? (***Intervention question***)

Note: Applicants for question 11 must select all of the above components.

12A) Which infants and children with growth failure/faltering, moderate or severe wasting, or oedema require post-discharge interventions? (*Prognostic question*)

12B) In infants and children with growth failure/faltering, moderate or severe wasting, or oedema meeting the above criteria, which post-discharge interventions are effective in improving outcomes such as anthropometry? (*Intervention question*)

Note: Applicants for question 12 must select all of the above components.

13. In infants and children with wasting without co-morbidities, what is the effectiveness of the identification and treatment of wasting by community health workers (in community settings) to improve outcomes such as nutritional recovery? (*Intervention question*)

14. In communities with infants and children up to five years old at risk of wasting, what community characteristics increase or mitigate risk of wasting for individual children? (*Prognostic question*)

15. In communities with infants and children up to five years at risk of wasting, what is the effectiveness of community prevention interventions (e.g. nutritional supplementation, social protection programs, cash transfers, etc.) for prevention of wasting? (*Intervention question*)

16. In communities with infants and children up to five years at risk of wasting, what is the effectiveness of population-based interventions (e.g. blanket supplementary feeding programs) compared to targeted interventions for primary and secondary prevention of wasting? (*Intervention question*)

For further details of any of the above questions please contact nutrition@who.int. Responses will be posted to a living document linked to this page.

Concept note and budget

Interested author(s)/teams are invited to submit a concept note (5-6 pages) by sending an email to WHO at nutrition@who.int no later than **31 May 2021**. The subject heading of the email should read as, **“Systematic reviews on prevention and treatment of wasting”** plus the question number(s) of the review(s) being proposed.

The concept note should include a proposal containing (in a single document) the following:

- The question number(s) and title(s) of the review(s) being proposed, lead author and host institution with overall responsibility for the review, and contributors. Please note that authors/teams may choose to apply for one or multiple reviews.

- The specific competencies and contributions of each author or team member should be explicitly stated. Interested author(s)/teams must have experience with conducting complex reviews and should provide references of reviews that they have published in peer-reviewed journals. Proposals should specify experience with GRADEPro software and application of the following risk of bias assessments relevant to the type of question: ROB 2.0, ROBINS-I and QUIPS. Interested author(s)/teams should have members with complementary skills and competencies including knowledge of the technical area, statistical analysis and excellent writing capabilities.
- Proposed question(s) to be addressed through the review(s), outlining the background and justification for the review, the search strategy and databases to be searched, the definition of inclusion/exclusion criteria, the process of data extraction and analytical approach. This description should reflect the scope of work described below. Author(s) teams may undertake one or more reviews. However, they should need to demonstrate capacity to conduct the review(s) within the timeline below. Successful authors will be required to submit a protocol prior to performing the review. They will also be required to engage with WHO in finalizing the required GRADE outputs in preparation for the guideline development meetings.
- Budget (US \$). This should outline the total amount for the review including an approximate breakdown of personnel vs. institutional/other costs. If the author/team proposes to undertake multiple reviews, the budget should specify costs for each separate review as well as the total for the package of reviews since savings may be possible when conducting multiple reviews jointly. It is expected that WHO will provide technical input on the final protocols that will govern the reviews. For the purpose of the concept note, it is not necessary to describe every detail of the review.

Timeline

31 May 2021 – Interested authors or teams submit concept notes and budget to WHO

WHO review of proposals complete and authors/teams contacted and contracts agreed (subject to WHO conditions including review of declarations of interest to members of the review teams) in June 2021

12 July 2021 – Protocols submitted to PROSPERO

27 September 2021 – Draft reviews submitted to WHO

25 October 2021 – Final reviews submitted to WHO (with access to final GRADE SOFs in GRADEPro)