Effective actions for improving adolescent nutrition

30 October 2017
The updated Global Strategy includes adolescents because they are central to everything we want to achieve, and to the overall success of the 2030 Agenda.

- United Nations Secretary General
  Ban Ki-moon
Use of evidence in WHO recommendations

Arleen Oomen, John Wiles, Alzheimer

Summary
Background: WHO regulations, dating back to 1951, emphasise the role of expert opinion in the development of recommendations. However, the organisation’s guidelines, approved in 2003, emphasise the use of systematic reviews for evidence of effects, processes that allow for the explicit incorporation of other types of information (including values), and evidence-informed dissemination and implementation strategies. We examined the use of evidence, particularly evidence of effects, in recommendations developed by WHO departments.

Methods: We interviewed department directors (or their delegates) at WHO headquarters in Geneva, Switzerland, and reviewed a sample of the recommendation-containing reports that were discussed in the interviews (as well as related background documentation). Two individuals independently analysed the interviews and reviewed key features of the reports and background documentation.

Findings: Systematic reviews and concise summaries of findings are rarely used for developing recommendations. Instead, processes usually rely heavily on experts in a particular specialty, rather than representatives of those who will have to live with the recommendations or on experts in particular methodological areas.

Interpretation: Progress in the development, adaptation, dissemination, and implementation of recommendations for member states will need leadership, the resources necessary for WHO to undertake these processes in a transparent and defensible way, and close attention to the current and emerging research literature related to these processes.

Introduction
Every year, WHO develops a large number of recommendations aimed at many different target audiences, including the general public, healthcare professionals, managers working in health facilities (e.g., hospitals) or regions (e.g., districts), and public policymakers in member states. These recommendations address a wide range of clinical, public health, and health policy topics related to achieving health goals. WHO’s regulations emphasise the role of expert opinion in the development of recommendations. In the 56 years since these regulations were initially developed, research has highlighted the limitations of expert opinion, which can differ both across subgroups and from the opinions of those who will have to live with the consequences.™

Experts have also been known to use non-systematic methods when they review research, which frequently collection, analysis, and interpretation of the results. However, systematic reviews are only as good as the evidence that they summarise. There might be no evidence. When there is evidence, judgments are still needed about the quality and, especially for public health and health policy topics, its applicability in different contexts.™

Evidence of effects needs to be complemented by information about needs, factors that could affect whether effectiveness will be realised in the field, such as the available resources, costs, and the values of those who will be affected by the recommendations. Processes that allow for the explicit incorporation of these types of information, particularly values, have (like systematic reviews) emerged as central to the development of recommendations.™

Moving from evidence to recommendations requires judgments, particularly judgments about goals and about

WHO’s Advisory Committee on Health Research (ACHR)

- 2005: established the Subcommittee on the Use of Research Evidence (SURE)
- 2006: 14 articles in Health Research Policy and Systems
WHO guideline development process

Procedures and standards for WHO guidelines

- Evidence-informed
- Transparent

Guidelines Review Committee Secretariat

Peer review feedback

Quality assurance process
WHO Guideline development process

Scope the guideline
DOI and COI management
Set up GDG and External Review Group
Formulate PICO questions
Select outcomes
Evidence retrieval, assessment, synthesis
GRADE – certainty of the body of evidence
Formulate recommendations
Include explicit consideration of:
- Benefits and harms
- Resource use
- Feasibility, equity, acceptability
Disseminate, implement
Evaluate impact

GRC Secretariat support

GRC approval - Proposal

GRC approval
Final guideline
What is a WHO guideline?

WHO guideline

- is any document, whatever its title, that contains WHO recommendations about health interventions, whether they be clinical, public health or policy interventions

WHO recommendation

- Provides information about what policy-makers, health-care providers or patients should do.
- It implies a choice between different interventions that have an impact on health and that have ramifications for the use of resources.
Figure 1: Nutrition adolescents girls determinants framework

Outcomes in adolescence and adulthood
- Prevention of adolescent and adult malnutrition in all its forms
- Prevention of noncommunicable diseases
- Optimal maternal health and birth outcomes
- Increased work capacity and productivity

Improved adolescent health and nutrition
- Adolescents are well-nourished
- Adolescents are protected from disease, injury, infection and early pregnancy

Adolescents are able to access a nutritious diet
- Adolescents are able to contribute to their health through positive behaviours
- Adolescents are able to access essential health services

Promoting healthy diets
- Provision of micronutrients including fortification and targeted supplementation
- Management of severe acute malnutrition

Physical activity
- Promotion of preconception and antenatal nutrition

Reproductive health programmes to delay pregnancy
- Providing access to safe water, sanitation and hygiene
- Disease prevention and management

Adolescents’ peers and interpersonal networks positively influence the adolescents’ social competence, understanding and development
- Families and communities are empowered and engaged in supporting actions towards better adolescent nutrition
Effective actions for improving adolescent nutrition

Recommendations for health and wellbeing

01 Promoting healthy diets in adolescents

02 Provision of micronutrients including fortification of staple foods and targeted supplementation in adolescents

03 Management of severe acute malnutrition in adolescents

04 Reproductive health programmes to delay adolescent pregnancy

05 Promoting preconceptional and antenatal nutrition in adolescents

06 Providing access to safe water, sanitation and hygiene for adolescents

07 Promoting physical activity for adolescents
Promoting healthy diets

Sugar (2015)

Guideline:
Sugars intake for adults and children

Potassium (2012)

Guideline:
Potassium intake for adults and children

Sodium (2012)

Guideline:
Sodium intake for adults and children
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Micronutrients

Fortification of maize flour (2016)

WHO GUIDELINE: FORTIFICATION OF MAIZE FLOUR AND CORN MEAL WITH VITAMINS AND MINERALS

Salt iodization (2014)

GUIDELINE: Fortification of food-grade salt with iodine for the prevention and control of iodine deficiency disorders

Serum and RBC folate (2015)

GUIDELINE: OPTIMAL SERUM AND RED BLOOD CELL FOLATE CONCENTRATIONS IN WOMEN OF REPRODUCTIVE AGE FOR PREVENTION OF NEURAL TUBE DEFECTS
Micronutrients

Daily iron supplementation

**Adolescents (2016)**

**GUIDELINE**

**DAILY IRON SUPPLEMENTATION**

in adult women and adolescent girls

2016

**Children (2016)**

**GUIDELINE**

**DAILY IRON SUPPLEMENTATION**

in infants and children

2016

**Postpartum women (2016)**

**GUIDELINE**

**IRON SUPPLEMENTATION**

in postpartum women

2016
### Micronutrients

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<tr>
<td>Guideline:</td>
<td>Implementation in preschool and school-age children</td>
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<td>Intermittent iron and folic acid supplementation in menstruating women</td>
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<th>MNP for pregnant women (2015)</th>
<th>Vitamin A for postpartum women (2011)</th>
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<tr>
<td>Guideline:</td>
<td>Guideline:</td>
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<tr>
<td>USE OF MULTIPLE MICRONUTRIENT POWDERS FOR POINT-OF-USE FORTIFICATION OF FOODS CONSUMED BY PREGNANT WOMEN</td>
<td>Vitamin A supplementation in postpartum women</td>
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Management of SAM

Management of severe malnutrition: a manual for physicians and other senior health workers
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Outcomes:

- Reduce marriage before the age of 18 years
- Reduce pregnancy before the age of 20 years
- Increase use of contraception by adolescents at risk of unintended pregnancy
- Reduce coerced sex among adolescents
- Reduce unsafe abortion among adolescents
- Increase use of skilled antenatal, childbirth and postnatal care among adolescents
Delay adolescent pregnancy

**Policy brief (2012)**

**Policy and programmatic actions**

- **Policy brief** requires the provision of accurate, age-appropriate, and comprehensive sexuality education for all adolescents.
- **Frameworks** and non-medical information on the provision of contraceptive services to adolescents.
- **Engage adolescents**: In building, designing, implementing, and delivering reproductive and contraceptive information and services programs. Adolescents' views are drawn upon by parents, and other health adults for the provision of contraceptive information and services.
- **Provide adolescents** with a full range of contraceptive methods, including oral contraceptives, implants, condoms, and surgical sterilization, in addition to sexual and rural health centers, and the health worker role.

**Background**

Adolescents, both married and married, are the most sexually active and reproductive health risks, including both sexually transmitted and unwanted activity. Adolescents are expected to use contraception when they become sexually active, but only a small proportion of them use contraceptives, which limits their potential for sexual and reproductive health risks. The prevalence of adolescents using contraceptives has been increasing in recent years, although not at the desired rate. Adolescents are faced with many challenges, including lack of access to contraceptive services, lack of knowledge about contraception, and lack of economic resources. The prevalence of adolescents using contraceptives in sub-Saharan Africa is still low, and the use of contraception is still low in many regions.

**Implementation guide (2015)**

**Framework for ensuring human rights in the provision of contraceptive information and services**

**Ensuring human rights within contraceptive service delivery: implementation guide**

**World Health Organization**

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Preconceptional and antenatal nutrition

Maternal health (2015)

Positive pregnancy (2016)

Vitamin A for HIV (2011)

WHO recommendations on health promotion interventions for maternal and newborn health

2015

WHO recommendations on antenatal care for a positive pregnancy experience

Guideline:

Vitamin A supplementation in pregnancy for reducing the risk of mother-to-child transmission of HIV
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Access to safe WASH

The World Health Organization’s
INFORMATION SERIES ON SCHOOL HEALTH: DOCUMENT 2

The Physical School Environment
An Essential Component of a Health-Promoting School

This document is a joint effort of the Department of Protection of the Human Environment and the Department of Noncommunicable Disease Prevention and Health Promotion.

It is jointly published with partner organizations working together in the international initiative to Focus Resources on Effective School Health (FRESH). It is also intended to support the objectives of the Healthy Environments for Children Alliance.

World Health Organization
Geneva, 1998

Healthy Nutrition:
An Essential Element of a Health-Promoting School

World Health Organization
Geneva, 1998
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Physical activity

Age group: 5–17 years

Children and young people aged 5–17 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily.

Physical activity of amounts greater than 60 minutes daily will provide additional health benefits.

Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least three times per week.

Age group: 18–64 years

Adolescents and adults aged 18–64 years should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
Physical activity

1. Recognizing the heavy and growing burden of noncommunicable diseases, Member States requested the Director-General to develop a global strategy on diet, physical activity and health through a broad consultation process. To establish the content of the draft global strategy, six regional consultations were held with Member States, and organizations of the United Nations system, other intergovernmental bodies, and representatives of civil society and the private sector were consulted. A reference group of independent international experts on diet and physical activity from WHO’s six regions also provided advice.

2. The strategy addresses two of the main risk factors for noncommunicable diseases, namely, diet and physical activity, while complementing the long-established and ongoing work carried out by WHO and nationally on other nutrition-related areas, including undernutrition, micronutrient deficiencies and infant- and young-child feeding.
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Adolescent nutrition

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Implementation research

Implementation Research in Health
A Practical Guide

David H. Peters, Nhu T. Tran, Tughrur Adam

Figure 3. The continuum of implementation research

INNOVATION

Research question: Susceptible to implementation variables, but not considered
Context: Largely controlled, highly selected population, factors affecting implementation
Implementation strategies: None or one type only, not considered in research
Implementation variables: Can influence results but assumed to be controlled or not relevant

Examples: Basic science; Phase I & II clinical trials; Qualitative studies unrelated to implementation issues (e.g., perceptions of illness)

Implementation relevant but not considered

Research question: Secondary question, e.g., average effectiveness of a program
Context: Real-world setting with partially controlled intervention
Implementation strategies: Identifiable and described, but uses one type only and effects are controlled
Implementation variables: Assumed to be equal orunchanging, or effects controlled (e.g., adjusted as confounding factors)

Examples: Efficacy studies, Phase III randomized controlled clinical trials; Qualitative study on health service use that does consider how well the services are provided.

Implementation relevant but effects reduced

Research question: Co-primary or secondary question, e.g., effectiveness of program in all its variation
Context: Real-world settings and population
Implementation Strategies: One or more studied
Implementation variables: May be used as independent variables

Examples: Pragmatic trials, Quasi-experimental study with intervention and comparison areas; Observational studies with implementation as secondary issue

Implementation studied as contributing factors

Research question: Primary question, e.g., How do parts of a program change and why? What are the effects of implementation strategies?
Context: Real-world setting and population
Implementation strategies: May be primary focus
Implementation variables: May be primary outcomes or determinants

Examples: Mixed methods and quasi-experimental studies to determine the changes in delivery or acceptability of a program; Observational studies on adaptation, learning, and scaling-up of a programme

Informing Scale-Up: Health systems integration and sustainability

Proof of concept: Is it safe and does it work?

Proof of implementation: How does it work in real-world settings?
Adolescent-friendly health services need to be accessible, equitable, acceptable, appropriate, comprehensive, effective and efficient.
Adolescent-friendly health services

Quality assessment (2009)

Quality standards (2012)

Global standards (2015)

Making health services adolescent friendly
Developing national quality standards for adolescent-friendly health services

GLOBAL STANDARDS FOR QUALITY HEALTH-CARE SERVICES FOR ADOLESCENTS
A GUIDE TO IMPLEMENT A STANDARDS-DRIVEN APPROACH TO IMPROVE THE QUALITY OF HEALTH-CARE SERVICES FOR ADOLESCENTS
Volume 2: Implementation guide
Global Accelerated Action for the Health of Adolescents (AA-HA!)

Guidance to Support Country Implementation
Adolescent health

WHO and partners recommend actions to improve adolescent health

16 May 2017 -- More than 3000 adolescents die every day from largely preventable causes, according to a new report from WHO and partners. Global accelerated action for the health of adolescents (AA-HAI): Guidance to support country implementation – assists governments in what to do – as well as how to do it – as they respond to the health needs of adolescents in their countries. Case studies show that what is being recommended actually can be done. The full document with case studies, a summary document, a comic book, brochure and infographics are available below.

Read the Global AA-HAI Guidance

News release: More than 1.2 million adolescents die every year, nearly all preventable
Adolescent nutrition

Welcome to eLENA

The WHO e-Library of Evidence for Nutrition Actions (eLENA) is an online library of evidence-informed guidance for nutrition interventions.

eLENA is available in all six official languages of WHO. To view eLENA content in another language, click on the appropriate link at the top right of the web page, directly above the social media icons.

More about eLENA
Adolescent nutrition

iTunes App Store

WHO ELENAmobile app
By AngloMediaSA
This app is only available on the App Store for iOS devices.

Description
Access the latest WHO nutrition guidelines and evidence-informed guidance for nutrition interventions, wherever you are, with eLENAmobile.

WHO ELENAmobile app Support

What's New in Version 1.2.14
- Addition of links between interventions and WHO global nutrition and diet-related NCD targets
- Addition of systematic review summaries
- Updated intervention category headings

iPhone Screenshots

Google Play

WHO eLENAmobile nutrition app
World Health Organization - Media Frontier Medical 5.0.02

PEGI 3
This app is compatible with your device.

Add to Wishlist Install

Access the latest WHO nutrition guidelines and evidence-informed guidance for nutrition interventions, wherever you are, with eLENAmobile.
Adolescent nutrition

World Health Organization
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1211 Geneva, Switzerland
www.who.int/nutrition