



JULY 2020

Feeding Infants and Children from Birth to 24 Months

Summarizing Existing Guidance

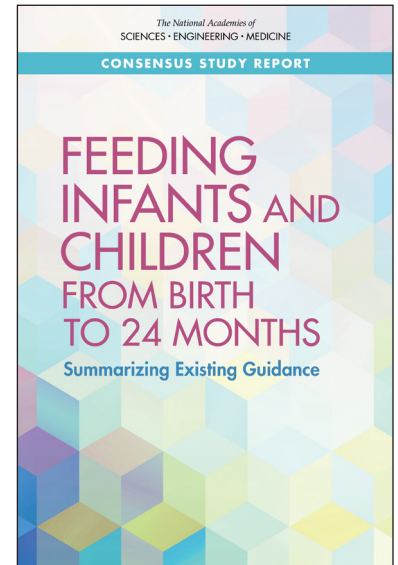
Every day, people make decisions about what and how to feed infants and young children. To inform these decisions, parents, healthcare providers, and others have a wide array of advice publicly available to them, ranging from social media posts to position statements by authoritative groups. Even when guidance comes from authoritative groups, including government, professional, and non-profit organizations and agencies, there can be inconsistencies in advice due to differences in approaches taken to develop feeding recommendations. Little information exists on the breadth and consistency of current guidelines for feeding children under two years of age, as well as the types of evidence that are used to support specific recommendations.

To study this issue, the National Academies of Sciences, Engineering, and Medicine, with support from the Centers for Disease Control and Prevention and from the National Institutes of Health, convened an ad hoc consensus committee that was tasked with collecting, comparing, and summarizing existing recommendations on what and how to feed infants and children from birth to 24 months of age. The committee was asked to compile a comprehensive list of the topics addressed across relevant documents, note the type of evidence cited in support of each recommendation, and assess the documents for strategies to support communication and dissemination of feeding guidelines.

CONSISTENCY OF EXISTING FEEDING RECOMMENDATIONS

The committee identified and reviewed 43 guideline documents from governmental and nongovernmental agencies, organizations, and groups in the United States, several high-income countries, and the World Health Organization.

The guideline documents varied by type (e.g., position statement, clinical practice reports), level of collaboration across organizations, scope of topics covered, target audiences, stated methodologies, presentation of recommendations, and mapping of evidence to each recommendation. Few guideline documents graded the evidence for their recommendations and those that



did often use different rating systems. These differences likely contributed to inconsistencies across recommendations.

Most of the abstracted recommendations provided guidance on *what to feed* infants and children from birth to 24 months, while approximately one third of the recommendations provided guidance on *how to feed*. The committee grouped the recommendations into 18 *what to feed* topics (see Box 1) and eight *how to feed* topics (see Box 2). Recommendations were consistent or generally consistent for most of the topics. Inconsistencies that did emerge tended to relate to the age or age range specified in the recommendations. Most recommendations mapped to narrative reviews.

COMMUNICATION AND DISSEMINATION OF FEEDING RECOMMENDATIONS

The feeding guideline documents reviewed by the committee generally did not describe complex, multisector implementation strategies. Rather, the documents provided information related to changing knowledge, attitudes, and behaviors, and the channels used to spread feeding guidance. Most of the guideline documents were specifically developed for one or more target audiences, with a large majority aimed at health care providers (e.g., physicians, nurse practitioners, nurses, dentists, registered dietitian nutritionists, and other nutrition professionals). Other target audiences included parents and guardians, early care and education providers, program administrators, and policy-makers. Communication and dissemination approaches were varied across these different target audiences:

- **Health care providers:** The guideline documents primarily focused on health care providers and encouraged practitioners to promote awareness, create changes in attitudes and knowledge, drive adoption of recommendations, and engage in advocacy.
- **Parents and guardians:** Few documents were targeted directly at parents and guardians. A host of online resources is available to parents and guardians, but these materials are sometimes inconsistent in directly pointing back to a guideline document.
- **Early care and education providers:** Often not the target audience of the guideline documents the committee reviewed, this stakeholder group has access to other publications that provide national health and safety performance standards, including those related to nutrition, and draw on feeding recommendations from authoritative organizations.

BOX 1. TOPICS ON WHAT TO FEED INFANTS AND YOUNG CHILDREN

- Exclusive breastfeeding
- Continuation of breastfeeding
- Supplementary formula feedings
- Duration of formula use
- Type of infant formula
- Toddler milks and follow-on formulas
- Milk and milk-based products
- Fluids: Water, juice, sugar-sweetened beverages, and other non-milk beverages
- Substances to avoid or limit
- Variety and healthy, nutritious foods
- Fruits and vegetables
- Vegetarian and vegan diets
- Foods associated with food allergy and celiac disease
- Iron
- Vitamin D
- Iodine
- Other nutrient supplements
- Dietary fat

BOX 2. TOPICS ON HOW TO FEED INFANTS AND YOUNG CHILDREN

- Bottle use and propping
- Cup use
- Safety of foods and feeding practices
- Introduction of complementary foods
- Food consistency and texture
- Meal frequency
- Hunger and satiety cues
- Responsive feeding

- **Program Administrators:** Program administrators were also not a primary target audience for most of the included guideline documents. Although the committee did not find an eligible guideline document from or for key federal nutrition assistance programs, it did identify some recent resources that translated feeding recommendations, national policy, and federal regulations into programmatic guidance.
- **Policymakers:** Some of the guideline documents reviewed included recommendations targeting policymakers. The level of detail provided for this target audience varied. For instance, one organization expressed strong support for national policies and legislation related to the feeding recommendations, whereas another guideline document provided explicit guidance to the government.

CONCLUSIONS AND FUTURE DIRECTIONS

There is substantial potential for harmonization of feeding guidance for infants and children under 24 months using a collaborative approach. Many organizations had recommendations on the same topics, and many recommendations were generally consistent. Across the collection of guideline documents reviewed, the committee identified a wide range of methodological approaches, which both has implications for the consistency and quality of guideline documents and underscores the need to consider harmonizing these processes. Based on its review and comparison of feeding recommendations, along with its collective expertise, the committee offered a few insights to help align and improve future guidelines, including:

- Collaboration between organizations in the planning and development of guidelines, including the process of conducting systematic evidence reviews
- Utilization of best practices related to the guideline development process, review of evidence, and dissemination
- Timely and effective dissemination of evidence-based recommendations, based on the principles of dissemination and implementation science

The committee also issued one recommendation related to dissemination and implementation of feeding guidance for infants and children from birth to 24 months:

- **Agencies, organizations, and groups developing guideline documents related to feeding infants and young children should consider the principles of dissemination and implementation science as a means to enhance the reach and impact of the feeding recommendations that are developed.**

In spite of all the differences in the ways that guideline documents were developed, the committee noted that it is encouraging that there was consistency for the majority of recommendations across a variety of authoritative organizations. For the future, it is important to harmonize the guideline development process across organizations and to use more rigorous methods for developing, communicating, and disseminating recommendations for feeding infants and children from birth to 24 months of age.

Committee on Scoping Existing Guidelines for Feeding Recommendations for Infants and Young Children Under Age 2

Kathryn G. Dewey (*Chair*)
University of California, Davis

Stephanie A. Atkinson
McMaster University

Susan S. Baker
University at Buffalo-SUNY

Sara Benjamin Neelon
Johns Hopkins Bloomberg School of Public Health

Lisa M. Bodnar
University of Pittsburgh

Ronette R. Briefel
Mathematica Policy Research, Inc.

Frank Greer
University of Wisconsin-Madison

Debra Haire-Joshu
Washington University in St. Louis

Rafael Perez-Escamilla
Yale School of Public Health

Charlene Russell-Tucker
Connecticut Department of Education

Elizabeth Yakes Jimenez
The University of New Mexico Health Sciences Center

Study Sponsors

Centers for Disease Control and Prevention
National Institutes of Health

Study Staff

Megan Harrison
Study Director

Alice Vorosmarti
Associate Program Officer

Zaria Fyffe
Senior Program Assistant

Rebecca Morgan
Senior Librarian

Ann Yaktine
Director, Food and Nutrition Board

To read the full report, please visit
[nationalacademies.org/feeding-infants-and-children](https://www.nationalacademies.org/feeding-infants-and-children)

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The nation turns to the National Academies of Sciences, Engineering, and Medicine for independent, objective advice on issues that affect people's lives worldwide.

www.national-academies.org