Why Harmonize the Guidelines for Infant and Young Child Feeding: Book Review

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INTRODUCTION
A recent book from the United States’ National Academies of Sciences, Engineering, and Medicine (NASEM 2020a) on Feeding Infants and Children from Birth to 24 Months: Summarizing Existing Guidance, might appear to have a clear purpose. NASEM’S Committee of Experts “was asked to collect, compare, and summarize existing recommendations on what and how to feed infants and young children from birth to 24 months of age” (NASEM 2020a, 1-2). The book can be downloaded at no cost from the NASEM website.

The study’s underlying premise was that:

Summarizing the current landscape of feeding recommendations for infants and young children can reveal the level of consistency of existing guidance, shed light on the types of evidence that underpin each recommendation, and provide insight into the feasibility of harmonizing guidelines. (NASEM 2020a, 1)

However, the reason for doing this is not entirely clear. NASEM’s primary function is to provide advice to the U.S. government on scientific matters. NASEM explains:

Although many of our activities are requested and funded by Congress and federal agencies, we do not receive direct appropriations from the federal government. Foundations, the private sector, and philanthropy from individuals enable us to address critical issues on behalf of the nation. (NASEM 2020b)

How are global inconsistencies in recommendations related to infant feeding a “critical issue” for the United States? This review explores what the underlying purpose might actually be.

INCONSISTENT RECOMMENDATIONS
Through a complex process they describe in detail, the researchers found several inconsistencies in national guideline documents’ recommendations for what to feed, such as:

- Not consistent in terms of the specific age to which breastfeeding should be continued

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• Not consistent in whether milk can be added to complementary foods before 12 months of age
• Some inconsistencies in the recommended limit for the amount of cow milk for children 12–24 months of age
• Some inconsistencies in explicitly mentioning a need for fortified products or nutrient supplements for vegans
• Not consistent in recommending when and how to introduce peanuts based on the infant’s risk for peanut allergy
• Some inconsistencies in duration of use of iron-fortified formulas for formula-fed infants, and suggested iron content of infant formulas
• Not consistent regarding the amount of infant formula intake that necessitates vitamin D supplementation. (NASEM 2020a, 6)

The book discussed some of the relevant scientific evidence on these issues but did not probe deeply. The inconsistencies might have occurred for good reasons such as differences in conditions in different places. The patterns of nutrient deficiencies is different in different circumstances. Some differences in guidelines might be explained by changes in scientific knowledge over time or diverse interpretations of the available scientific knowledge.

Some differences in guidelines can be reconciled, some are unimportant, and some should be respected as they are. Some recommendations are well suited for children who are generally healthy, but might not be appropriate for those with special physical conditions. There is always a need to accommodate diversity in the population (Affun-Adegbulu, Clara, and Opemiposi Adegbulu 2020; Binyaruka, Lohman, and de Allegri 2020; Fed is Best 2020). When designing new and improved guidance, understanding the dissensus is as important as understanding the consensus.

WHICH STAKEHOLDERS?
At the outset the book says:

The primary intended audiences for this report are governmental and nongovernmental agencies, organizations, and groups who develop or are planning to develop feeding recommendations for infants and young children. Findings related to the consistency of existing guidance may shed light on the potential for harmonization of recommendations across different entities. (NASEM 2020a, 18)

The “primary intended audiences” are not clearly identified. There are no signs of collaboration with any of them in the design or execution of the project. It is not clear how the book addresses high priority concerns for any intended audience.

There is a great deal of work done on guidelines for infant and young child feeding at the national level, the regional level, as in the European Food Safety Agency (EFSA 2013), and also the global level. The World Health Organization (WHO) is the only organization with a mandate to issue global normative standards in the field of health. WHO and the United Nations
Children’s Fund (UNICEF) play major roles in improving children’s nutrition globally. They are currently leading efforts to specify nutrition requirements of children as a component of the UN Decade of Action, a call for eradicating hunger and preventing all forms of malnutrition worldwide. Their statement on the Scope and Purpose of this updating of children’s nutrition requirements speaks about the importance of ensuring good nutrition for infants and young children and says, “A key component of optimal nutrition during childhood and beyond is the adequate (but not excessive) intake of important micro- and macronutrients” (FAO and WHO 2020a; also see FAO 2020).

The FAO and WHO are collaborating:

The FAO Nutrition and Food Systems Division (ESN) and the WHO Department of Nutrition and Food Safety (NFS) have established an expert group on nutrient requirements which will update nutrient requirements for children aged 0 – 36 months, following the WHO guideline development process and in line with Article 6 of the FAO Constitution. (FAO and WHO 2020a; FAO and WHO 2020b).

Why didn’t NASEM’S study recognize the role of the UN and other global agencies and connect with the normal process for reaching consensus on global recommendations? There is a long history of efforts to harmonize nutrition policies worldwide that should be taken into account (CODEX 2019; CODEX 2020; SCN 2020). Why were no representatives of global agencies invited to participate in NASEM’S harmonization project? Some parts of NASEM’s book appear to be global in scope, but the work was done by people in the US, working on their own, not together with representatives of other countries and agencies. All members of the Committee of Experts are or were based in US universities (NASEM 2020a, 325-331).

It appears that there was a lack of coordination not only with agencies outside the US but also with agencies within the US. The NASEM study mentioned the Dietary Guidelines for Americans and acknowledged that the version for the 2020-2025 will, for the first time, include guidelines for children up to 2 years of age (NASEM 2020a, 2; also see USDA 2020a; USDA 2020b). The Dietary Guidelines for Americans project was discussed in an earlier NASEM book (NASEM 2017), but it was not cited in this 2020 NASEM book. As indicated in its title, the 2017 book was mainly about the process for establishing guidelines, which makes it even more surprising that it was not cited in this new book.

Although this study was about food, not pharmaceuticals, the authors might have adapted some of the methods developed by the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH 2020). A recent study on trials of breastmilk substitutes drew on the Council’s guidance (Jarrold et al 2020).

At its beginning this 2020 NASEM book said:

The committee acknowledges that there are a host of topics and population groups (e.g., middle- and low-income countries, premature infants) that are of interest to the field that could not be addressed in this scoping study, and it views this report

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as providing a foundation for future scoping reviews of other types of feeding guidelines. (NASEM 2020a, 19)

Which population groups did this study examine, and which did they hope would be examined in the future, perhaps by others? Why did their search for broad global guidance lead them to focus on guidelines from high-income countries? The focus of the NASEM study was not decisively on the US or low-income countries or high-income countries or the world as whole. The “intended audience” and applicable population” were not clearly identified.

WHY FOCUS ON CONSISTENCY?
Who would benefit from this study? The book did not mention any call for it from relevant US or global agencies.

The Section on Scope of the Report said:

Recognizing that differences in the applicable population for guideline documents could lead to apparent inconsistencies across recommendations, the committee limited its search for international sources to broad, global guidance and to guideline documents from high-income countries. The health, food safety, and resource issues in lower-income countries differ substantially from those in high-income countries, which has implications for feeding recommendations. (NASEM 2020a, 19)

Some people talk about the need for different sorts of feeding guidance for high-income countries and low-income countries. This obscures the simple fact that many countries have both high-income people and low-income people. They are diverse in other ways as well. The basic metabolic needs of infants and young children are universal, but the response to those needs should be based on a good understanding of their individual physiological conditions and their surrounding conditions.

The book’s authors recognized there are different population groups and they could not address the concerns of all of them. They should have specified which groups were the focus of their attention and what concerns they wanted to address.

They said, “differences in the applicable population for guideline documents could lead to apparent inconsistencies across recommendations.” They did not make a clear distinction between unwelcome inconsistencies and differences that might be in place for good reasons. Assessment of variations in guidelines should be anchored in a broad understanding of the issues and could be linked to UNICEF’s conceptual framework for dealing with malnutrition in infants and young children (Black, Lutter, and Trude 2020).

The purpose of this study might have been to help improve global guidelines in order to improve children’s health, but the book did not say that. In fact, the project was not explicitly tied to any process for moving from the search for inconsistencies to finding ways to improve children’s health.
SPECULATION

There are many important concerns relating to infant and young child feeding, so it is not clear why harmonizing guidelines would rise to the top of any agency’s priority list. Much of the scientific evidence cited in the book is questionable. There was little discussion of the fact that the evidence and its interpretation is often skewed to support promotion of commercial food products (Changing Market Foundation 2019; Farr 2019; Furneaux 2020; Granheim et al. 2017; Munblit et al. 2020; Nestle 2018; WHO 2016). In the food business, there is often a conflict of interests, with the pursuit of private wealth and the pursuit of public health pulling in different directions.

The Institute of Medicine, renamed the National Academy of Medicine and now part of NASEM, played an important role in the design of infant formula and its additives in the US. (Institute of Medicine 2004). That work is not mentioned in this new book from NASEM. As indicated in its title, the 2004 study emphasized the safety of infant formula and additives to it. They gave little attention to their effectiveness, whether they do what they are supposed to do (Kent 2017, 123-132). This approach served the interests of the food manufacturing industry more than it served public health or the interests of infants and young children.

NASEM has another project underway on nutrition during pregnancy and lactation. It shows a particular interest in commercial products, as indicated by its sponsorship by the Office of Dietary Supplements in the National Institutes of Health (NASEM 2020c). The researchers recognize that there is a delicate balance to be found between adjusting diets and relying on commercial supplements. While dietary supplements are regulated for their safety, they are not regulated for their effectiveness in achieving the outcomes they promise.

Similarly, questions could be raised about the motivations for NASEM’s Scanning for New Evidence on the Nutrient Content of Human Milk (NASEM 2020d). Why do this? Could the underlying objective be to explore potentials for new additives to infant formula?

The communication strategies discussed in NASEM’s book on guidelines for feeding infants and young children include those used in advertising and other forms of promotion for commercial foods meant for infants and young children (Shoup 2020). One purpose of this harmonization project might have been to support the marketing of commercial foods for infants and young children. Companies that market infant foods on a global scale prefer to face only one set of standards in all countries. Harmonization of standards promotes trade (Esty and Efrat 2016; FDA 2019; Geradin 1997).

The rapid growth of the market for commercial foods for infants and young children provides motivation for standardization of the products (Baker et al. 2016). Some observers expect the infant formula market will reach more than US$100 billion by 2026 (Fortune Business Insights 2020). Perhaps the major purpose of the study was to support the efforts of manufacturers of foods for infants and young children, based in high-income countries, to promote sales of their products to people with relatively high incomes in middle- and low-income countries. Thus this might have been more of a business project than a public health project.
In its 2019 report on *The State of the World’s Children*, UNICEF said:

> Ninety countries have developed food-based dietary guidelines, often based on recommendations from international organizations, into clear, understandable dietary advice that can also be visualized to aid communication. However, these guidelines are often not specific to the different phases of children’s development and rely on recommendations that are not harmonized globally. Countries also struggle to provide clear guidance in the context of rapidly changing modern food environments, with ultra-processed, packaged foods taking up more of children’s daily diet. Dietary recommendations can also become politicized, with food producers pushing back if government recommendations urge the public to eat less of their products. (UNICEF 2019, 90)

The industry pushes back when governments urge the public to eat less of their products, and it is supportive when governments appear to endorse their products. UNICEF’s critical view of the industry might help to explain why NASEM did not partner with them in doing this work. UNICEF’s headquarters are in New York, so collaboration would not have been difficult.

**CONCLUSION**

The NASEM book reviewed here centers on developing guidelines for feeding infants and young children. This work on how these foods are used should be carefully coordinated with the development of regulations of how these foods are sold.

There is a need for more discussion on whether and how the manufacturers of foods for infants and young children should participate in shaping the regulation of the industry. Which countries and which agencies should be involved in what ways in dealing with national, regional, and global nutrition issues (Call to Action 2020; IBFAN 2020; Lee and Freudenberg 2020; Richter 2001; SCN 2011; Sharfstein and Silver 2017)? This is a central issue in the ongoing debate over global governance relating to food and nutrition.

Many of the questions raised in this review could be applied to a similar NASEM project on nutrition during pregnancy and lactation. It too is US-centered, but ambiguous about whether its findings are to be understood as applying worldwide and to all income levels. It says little about breastfeeding and feeding with infant formula. The section on the use of dietary supplements is the only one that explicitly focuses on the US (NASEM 2020c, 57).

Who should get to participate in making what guidelines and what rules? The US Department of Agriculture’s Global Nutrition Coordination Plan lists eight US departments and agencies that are involved, and no global agencies (USDA 2020c). Why does the US have a global coordination plan?

In *Intake*, the US-based Center for Dietary Assessment, says, “We need to know who is eating what, where and how much.” (Gates 2020; also see Pattilo, Ali 2019). Who is “we”? Why do they want that information? Why are these agencies with extensive global reach so thoroughly controlled by the US?
NASEM’s recent study focused on the consistency of guidelines. It would have been more useful if it was part of a broader plan for the improvement of guidelines meant to improve children’s health. That might have been the experts’ hope or intention, but that was not evident in their actions. This sort of project should be done together with relevant agencies and organizations throughout the world, especially those committed to improving health. In this work, there is a need for real clarity of purpose. If it was not a veiled attempt to help expand markets for the US commercial infant food industry, what was its major purpose?

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