

Views

An innovative feeding tool to improve young children's diets

Using the bowl to serve a portion of food. State of Palestine, 2022



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For young children, the 6-23 months period represents a critical window for setting growth and developmental trajectories for the rest of their lives. Children require a variety of nutrients from a wide range of food sources, at the right time, and in the right way.

The caregiver: A central figure to improving young children's diets

The role of the caregiver is integral to determining the timing of feeding, the modality, and the choice of foods offered to the child (Schmied et al, 2020). A caregiver's knowledge and behaviour can therefore be seen as the gatekeeper to adequate infant and child nutrition. Knowing what and how to prepare foods – including appropriate food hygiene and storage requirements – and how to stimulate and interact with the child before, during, and after mealtime will all influence a child's nutritional outcomes.

This plethora of responsibilities highlights the importance of a supportive environment to the primary caregiver – typically the mother. Adequate services are required at the community and primary healthcare levels to foster such a supportive environment. As health workers continue to be the trusted recipient of mothers' and families' questions on first foods for their children (Schmied et al, 2020), quality counselling services provided by health workers on what, when, and how to feed infants and young children should be more readily available. Through counselling, they can receive support and take away key nutrition messages to apply optimal practices at home. Caregivers are also then in a better position to discuss good practices with their neighbours, increasing knowledge transfer throughout the community.

Depending on where they reside, caregivers may face additional constraints to obtaining adequate and appropriate foods. This is a concern for marginalised rural communities where absolute food accessibility remains a key factor; or for those residing in food poverty areas or increasingly obesogenic environments where access to a diverse diet that is nutrient-dense and stems from a wide range of food sources may be difficult to come by and not financially accessible. This is particularly true in humanitarian emergencies where access to nutritious food becomes challenging and assistance may not always provide access to adequate or appropriate foods for young children.

One can easily understand how a caregiver may feel overwhelmed, isolated, and potentially lonely when making the best decisions for their

child. The Feeding My Child report (Schmied, 2020) highlights what mothers clearly voiced: A need for better and more accessible support from all levels, at home, at the community, and at the health centres.

Enabling caregivers – whose prominence in shaping infant and young child feeding (IYCF) is clear – is not only warranted, but essential. This is especially true in more challenging circumstances such as in emergency settings where healthcare systems are often overburdened, human resource capacity is reduced, and normal services and support mechanisms may be disrupted.

A 'bowl and spoon' to support caregivers

The complementary feeding 'bowl and spoon', developed by UNICEF (Figure 1), contributes to addressing the two main pillars of infant and young children's diets: what children eat (complementary foods) and when and how they are fed (complementary feeding practices).

This innovative project was born out of a need to strengthen IYCF counselling programmes with a tool that could serve as an easy reminder for caregivers on nutrition messages. The bowl and spoon draws on initial prototype research from Emory University, which explored and documented the impact of using a feeding bowl to support key messaging around young children's diets and a slotted spoon to emphasise the right food consistency. Prototypes of bowls and spoons were tested for acceptability in India (Collison et al, 2015) and Kenya (Kram et al, 2015). Increases in meal frequency, the quan-

tity of food consumed, and the improved thickness (and therefore nutrient density) of food were observed in India. In Kenya, mother to mother knowledge sharing was also observed. In addition, a cluster randomised trial conducted in Malawi (Kedera et al, 2016) found that meal volumes increased significantly, and food consistency improved within food insecure households when using a comparable child feeding toolkit.

Building on these initial findings, UNICEF conducted a series of comprehensive consultations and engaged in an innovation process to further develop the product. As a result, the design was modified to incorporate new features that address dietary diversity and hygiene while implementing a more child-friendly and inclusive design, in line with UNICEF's [Programming Guidance for improving young children's diets](#) (page 34).

On the bowl, the caregiver is reminded of the four key nutrition messages: quantity, frequency, dietary diversity, and hand-hygiene. Detailed features of the bowl and spoon are described in Box 1.

Bowl and spoon programming

Although innovative, the complementary feeding bowl and spoon set remains a simple tool that is not intended to be a stand-alone product. Instead, this tool should be anchored within existing programmes that focus on improving young children's diets. As well as a direct aid to counselling, the bowl and spoon can also provide a practical tool to support advocacy campaigns that target behaviour change, reinforcing their long-term effect.

Following the programming guidance (UNICEF 2020) recommendations, embedding the bowl and spoon within a systems approach can maximise both reach and positive outcomes:

Health system

Included during nutrition counselling sessions, the bowl and spoon provide support to the counsellor to convey key messages by illustrating the main recommendations. The set can also be used as a complement to existing community IYCF counselling packages. The provision of quality counselling using the bowl and spoon will support the caregiver towards adapting to changes in feeding care and practices.

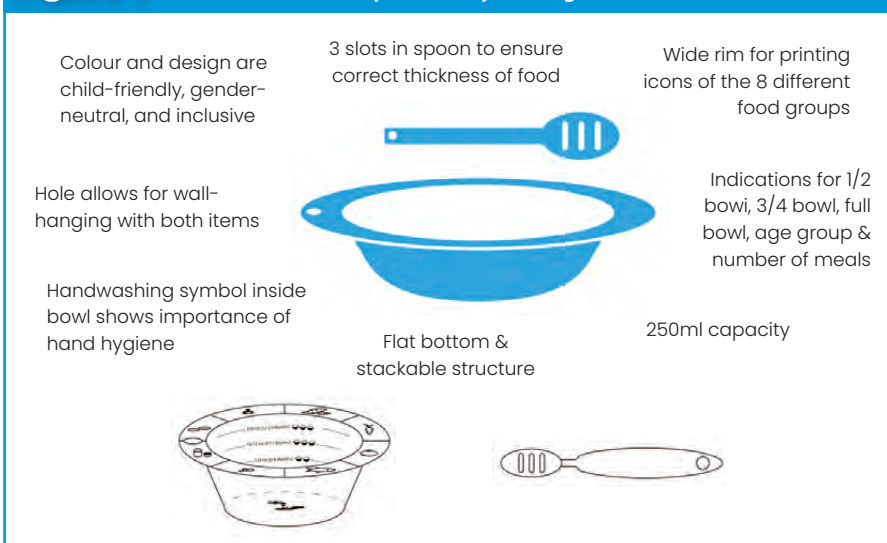
Social protection system

Since availability and affordability are important factors for both the coverage and ultimate success of any intervention, social protection schemes such as cash, vouchers, or foods to families can also serve as platforms where the bowl and spoon can be used as part of an integrated package of interventions, maximising the positive outcomes for young children.

Food system

Agriculture initiatives that facilitate access and

Figure 1 Features of the complementary feeding bowl



availability to a diverse range of foods serve as useful platforms to reinforce nutrition messages alongside the tool – as is planned in Liberia, where farmer-based organisations provide one of the delivery platforms. In food insecure contexts, the bowl and spoon can form part of a point-of-use fortification programme with the addition of micronutrient powders or small quan-

tity lipid-based nutrient supplements forming part of an integrated package of interventions to improve young children's nutritional status.

Water, sanitation, and hygiene (WASH) system

The bowl includes hygiene features such as the handwashing icon and holes to facilitate the

Box 1 Form follows function

Demarcation lines are included inside the 250 ml bowl. These are age specific and adapted to the needs of 6-8, 9-11, and 12-23 months respectively, written in French, English, and Arabic.

During the complementary feeding period, the number of meals fed to children throughout the day will increase as they get older. Above each of the quantity lines, the caregiver will be able to see small bowl icons, each referring to the number of meals necessary per day for the age group.

Young children need to be fed a variety of foods that will meet their nutrient needs. The rim of the bowl features context-specific food icons representing food groups that need to be consumed on a daily basis including breastfeeding. Based on government policies on complementary feeding and existing food habits, the bowls were customised with culturally appropriate food groups represented on the rim of the bowl. Some countries opted for a regional design reflecting several food groups while some countries chose a national design.

In addition to specific nutrition messages, at the bottom of the bowl there is a handwashing symbol to remind caregivers about the importance of having clean hands for food preparation. As the child gets older, this is also a cue to wash their hands before

and after they eat. In addition, the small holes on the rim of the bowl and the tip of the spoon allow caregivers to hang the set out to dry after washing and to store it hygienically off the floor.

Along with the bowl, the chunky slotted spoon serves as a consistency test, making sure that the initial porridge is not watered down, ensuring appropriate energy and nutrient density.

In addition to displaying easy-to-read cues, the bowl and spoon have also been designed to cater for people with disabilities. The tool features contrasting colours on the bowl rim and interior, tactile demarcations on the inside of the bowl, and a chunky handle for an easy to grip spoon.

The UNICEF version of the bowl and spoon are made of food-grade virgin plastic and ink with a smooth finish to allow for easy cleaning and to prevent the build-up of bacteria. The bowl can withstand regular use and exposure to frequent washing with dishwashing detergent and can maintain all features for a minimum of 24 months. The bowl and spoon are intended to be used by several children in the same family and/or subsequently passed on to neighbours and family members. When the product no longer serves its purpose, it can be recycled thereby giving the material a second life.



Complementary Feeding Bowl and Spoon with adapted counselling card at a Workshop launch in Burundi

drying of the tool off the floor. In addition, it is also possible for the bowl and spoon to be integrated within existing community WASH interventions as is being tested in Liberia.

Current implementation

This project is currently being implemented in five countries with UNICEF nutrition programmes: Liberia, Niger, Nigeria, Burundi, and Malawi. It is jointly implemented with the World Food Programme in the State of Palestine, Sudan, and Syria.

Following a country-level situation analysis, in line with government priorities, countries have each selected their preferred implementation strategies. As a result, the bowl and spoon have been included within a range of IYCF programmes, food fortification actions, and wider dietary diversity initiatives. Each country is offering a unique learning opportunity where the tool is integrated into existing platforms and networks ranging from primary healthcare facilities, community health and nu-

trition workers, mother-to-mother support groups, farmers groups, or IYCF counsellors.

In total, 400,000 bowl and spoon sets have been procured and are now in various stages of implementation.

Emergency settings

The application of the bowl and spoon to emergency contexts is also being tested in several areas. In the State of Palestine¹, where no more than 35% of children aged 6 to 23 months have a minimum adequate diet (Palestinian Central Bureau of Statistics, 2021), the tool is currently being distributed throughout the Gaza strip as part of a programme to improve young children's diets. It is expected to reach 10,000 of the most vulnerable families who, alongside the bowl and spoon, will benefit from IYCF counselling. In addition, the project includes the distribution of food parcels in certain areas and cooking demonstrations to reinforce key messages on the importance of first foods.



Demonstration of the bowl and spoon set. State of Palestine, 2022

In Kano, Northern Nigeria, the bowl and spoon have been integrated within a wider programme of stunting reduction where the bowls and spoons will become part of a package of interventions to ensure access and affordability to the recommended diverse diet a young child needs.

The way ahead

The bowl and spoon have an untapped potential for broader coverage and expanded use to contribute to improving the diets of young children. Discussions with country teams integrating the bowl and spoon into their programming reveal strong interest in using the tool and new opportunities are arising to extend its use into other countries and contexts.

Results to date suggest this tool can support efforts to improve feeding practices and foods for young children and maximise the impact of nutrition programmes for IYCF for a relatively small additional cost. Further, discussions are underway on wider emergency application and the possibilities for the tool to strengthen an adapted IYCF in emergency response to ensure that the diets of children aged 6-23 months are considered as part of any response package.

The first few years of this project, with implementation initially on a small scale, allow for robust data collection and the development of a greater understanding of the different delivery platforms employed and the ways to maximise impact. This learning will inform and support the subsequent scale-up of the project such as product iterations, applicability in emergency settings, and optimised efficacy, equity, and sustainability.

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¹ <https://www.enonline.net/fex/68/en>

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