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What's New?

Innovative Nutrition Social and Behavior Change Design Approaches

June 2023

About USAID Advancing Nutrition

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Contents

Photo by Alina Paul-Bossuet

Introduction

Social and behavior change (SBC) is fundamental to solving global nutrition challenges. While we continue to strengthen core SBC best practices, behavioral science and design thinking offer new tools and insights to improve outcomes. Nutrition SBC program planners and practitioners can learn from other sectors that have experience applying these innovations to strengthen nutrition results.

USAID Advancing Nutrition and Breakthrough ACTION applied two user-centered design approaches to find new solutions to common nutrition challenges:

- Behavioral design: applies behavioral science to understand how people interact with their environment and each other under different conditions and builds solutions from these insights.
- Human-centered design (HCD): centers users' perspectives in all parts of problem solving to meet their needs.

This guide describes how we used these approaches to identify ways to improve child feeding during and after illness and children's dietary diversity through community health worker (CHW) counseling.

Who is this guide for?

This guide is for any nutrition program planners and implementers who—

- want to design more effective nutrition SBC solutions
- hope to tap into creative local solutions
- face a hard-to-resolve issue in their service or program.

You can also use the guide to answer questions about these design approaches and their utility for nutrition SBC, and to access related resources. The examples in this guide are specific to children's diets, but the approaches can be used to design or adapt any nutrition SBC topic.

Questions and Answers about Design Approaches for Nutrition SBC

The excitement about design thinking and the potential for its use in global health has led to a variety of approaches, terms, and guides. It is understandable that programmers may have some questions.

Rest assured that the core principles and techniques of these new design approaches are an opportunity for SBC to evolve. Let's begin by answering a few tough questions:

Is this approach truly different from what we already do?

Yes, these design approaches offer insights and techniques that are new for nutrition SBC. You can adhere to these user-centered approaches in their entirety or include them in established formative research without changing your process; they will still add value. For example, rapidly iterating solutions with participant groups is useful for any design, even when pretesting new products, services, and communication materials.

Participatory research is the same as human-centered design, correct?

Yes and no. Human-centered design processes can use participatory research, but adding prototyping of solutions with rapid testing and refining of prototypes makes HCD distinct from participatory research.

Are there certain times when design approaches are better than others?

Yes. Use these approaches within a high-quality nutrition SBC process, which begins with prioritizing behaviors. These approaches can be used as or integrated with formative research to understand the factors that drive priority behaviors and identify solutions to address those factors.

Doesn't this lead to creative ideas that are impossible to implement?

Not necessarily, especially if you, as nutrition or nutrition SBC practitioners, are part of the process. Your involvement can ensure that decisions align with intended outcomes.

How can this guide help you?

Use the guide to identify how and when you will apply the approach or techniques, and where to get more information and resources.

Part 1 describes the two new approaches that can be applied to the design of a nutrition SBC activity on any topic (i.e., infant and young child feeding [IYCF], wasting, maternal nutrition, quality diets). Part 2 contains "solutions" specific to IYCF that can be adapted rapidly for your context.

PART I	**Innovative Design Approaches to Try for Any Nutrition SBC Challenge**	Step-by-step guide for two approaches that have been effective in health programs and could be applied to any nutrition activity or topic. Use this part to decide how to apply one or both, with considerations and examples geared to nutrition-related challenges.
PART II	**Tested IYCF Solutions to Adapt**	Suggestions for how to assess and adapt tested solutions (in this case, health worker job aids, community activities, and communication materials) to improve IYCF.

Photo by S.M. Zafrullah Shamsul

Photo by ACDI/VOCA via the Feed the Future Bangladesh Livestock Production for Improved Nutrition Activity

Part I. Innovative Design Approaches to Try for Any Nutrition SBC Challenge

The Approaches in a Nutshell

Social and behavior change is fundamental to achieving nutrition outcomes. Programs could do more to help people achieve and sustain behavior change. Health programs such as Breakthrough ACTION, USAID's global flagship SBC program, increasingly apply user-centered, iterative, and flexible—but also systematic—design approaches to overcome nutrition challenges.

Nutrition SBC program practitioners can apply behavioral design approaches to accelerate results. These approaches can mitigate entrenched problems, such as suboptimal breastfeeding, poor childhood feeding practices, and limited efficacy of nutrition counseling that require understanding of both client and provider perspectives. The full approaches described below, especially the two key steps of co-creating solutions with the intended users and iteratively testing and refining them, add value to the design of any nutrition activity.

Behavioral Design

Behavioral design "leverages insights from behavioral economics, social psychology, HCD, and other disciplines to develop and test innovative solutions that reshape people's environment to positively influence their behavior" (Datta 2014). Breakthrough ACTION's partner, ideas42, uses behavioral science to study human behavior and applies insights to improve health. Behavioral design can help nutrition program implementers understand the mindsets and mental models of people who practice or influence nutrition behaviors (e.g., caregivers, health workers). This deeper understanding of decision-making and choices enables nutrition SBC activities to resolve specific resistances to behavior change than does standard formative research.

Nutrition Example

Behavioral design guide tools such as job aids, print materials, and experiential activities to improve child feeding during and after illness in the Democratic Republic of Congo (DRC). See Part 2 of this guide for the tested materials developed for both health workers and caregivers that could be adapted and applied to other activities.

Human-Centered Design

HCD contributes to solutions by focusing on the needs and requirements of system, product, and service users. How HCD is defined and applied globally varies widely, yet there are common principles, especially the importance of integrating the user perspective into all design phases (Bazzano et. al. 2017). HCD can help nutrition program designers work with intended users to develop solutions to design acceptable products, services, and materials for context-specific challenges through iterative experimentation. The iteration includes brainstorming ideas, testing, and rapidly refining what works and discarding what does not, according to the end user. HCD can be used as a stand-alone process for a hard-to-resolve challenge, or within any design process, including behavioral, to identify and test solutions from the user's perspective.

Table 1 (next page) summarizes each design concept and key considerations.

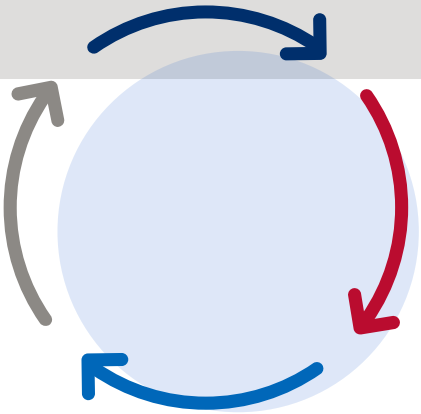
Nutrition Example

HCD guided community members' exploration of challenges and solutions for counseling by CHWs in Nigeria. See Part 2 of this guide for a description of the tested materials developed for CHWs that could be adapted and applied to other activities.

Table 1. Comparison of the Design Approaches

	BEHAVIORAL DESIGN	HUMAN-CENTERED DESIGN
WHAT?	Applies behavioral science to understand how people interact with their environment and each other under different conditions.	Puts user perspectives into all parts of problem-solving to meet their needs.
WHEN?	When teams or an activity needs solutions to a specific problem.	
	As part of formative or other research or adaptation processes to deepen insights.	Can be applied throughout an entire program.
WHY OR WHAT IS DIFFERENT FROM THE USUAL APPROACH TO SBC?	Helps designers create activities based on insights into people's mindsets, choices, and decision-making processes to overcome behavioral barriers.	Helps designers create and iterate local solutions with and based on intended users' perspectives and needs. Allows transitions to new ideas or solutions without major financial or technical investment in one idea.
CHALLENGES TO KEEP IN MIND FOR NUTRITION	Requires expertise in both behavioral design thinking and nutrition. Behavioral design also requires some background in behavioral science. Focus on a specific challenge for design, rather than a broad issue. Start with priority behavior(s), and set parameters to stay focused on achieving those outcomes.	

Tip 1 for Nutrition: Prototyping and Iterating



A hallmark of behavioral design and HCD is prototyping to rapidly test, refine, and narrow ideas, whether a service, product, or tool to overcome a specific challenge (e.g., suboptimal breastfeeding counseling). Prototyping makes ideas concrete and tangible for intended users, whether health workers, family members, or market actors.

Prototyping and iterating can help all nutrition SBC practitioners, even those who are not ready to use a full behavioral design process. They can be part of a formal phase in design or a rapid learning step. Prototyping enables quick feedback and ideas from users before they invest time and resources in the service, product, or materials. It can take a few days to a few weeks, depending on the challenge and needs. During prototyping, you can test several concepts at once, using very simple designs, even rough illustrations. As feedback comes in, continue to improve those that seem promising and drop those that do not. The IDEO design kit has more information on prototyping.

For example, in DRC, Breakthrough ACTION and USAID Advancing Nutrition co-created 12 prototypes or tangible representations of ideas and solutions to test with health workers and families to improve sick child feeding. Each of the 12 started with basic illustrations or models, ("low fidelity" prototypes).

It's not about getting it "right;" it's about getting feedback and improving. Don't fall in love with your prototypes! The team showed the prototypes to intended users, observed their interactions, and conducted live trials of the materials. The team also interviewed family members and health workers on the prototypes to gauge interest, understanding, and relevance, and get recommendations.

Based on the feedback from the first round of testing, the team revised 10 tools that had promise and dropped two. The team then re-tested the revised tools, redesigning, and eliminating ideas that did not work. The next round tested six tools. In the end, five were acceptable to users and feasible to integrate into existing health and community services.

This process took six months, but had there not been movement restrictions as a result of COVID-19, it could have taken one-to-two months.

Decide

Start by deciding whether one or both approaches would benefit your program. Note that they are not mutually exclusive; HCD can be used to test solutions developed through behavioral design.

Are you planning research, or would the program benefit from understanding and overcoming behavioral barriers, especially people's choices and decision-making processes?

YES

Use behavioral design

Is there a specific challenge that would benefit from solutions developed by and with users themselves?

YES

Use human-centered design

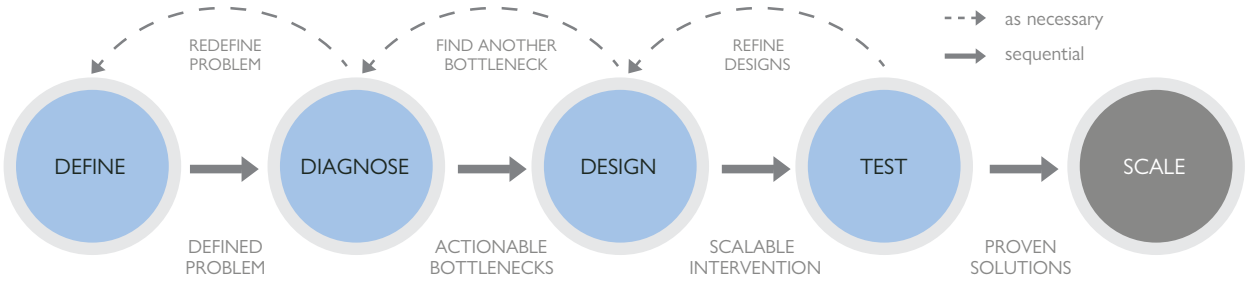
Apply Innovative Design Approaches to Nutrition SBC

Approach A: Behavioral Design for Nutrition

Process

Behavioral design supports the development of informed, sensitive, inclusive, and appropriate solutions that meet users' needs through the process shown in figure 1.

Figure 1. The Behavioral Design Process



Source: Adapted from Breakthrough ACTION/ideas42

Why?

Nutrition behaviors require multiple daily decisions. Usual formative research identifies general factors or barriers, such as lack of self-efficacy or poor attitudes, to adopting behaviors. SBC often requires a deeper and more nuanced understanding of barriers to change.

When?

Use this approach as your formative research, or integrate these perspectives into formative research and SBC strategy design. The approach could also be used during a collaborative learning and adaptation process to accelerate change in behaviors that are not shifting as expected.

What resources are needed?

- Expertise and Skills

  In addition to nutrition expertise to achieve outcomes, this approach requires expertise in behavioral science to design research questions and analyze or synthesize the findings. Skills are also needed to co-create and test solutions based on the research insights. These could be included in a project team, or sought through a partnership with a specialized organization or expert.

- Time
  - Formative and other research that includes a behavioral design perspective do not require additional time.
  - Developing and testing solutions based on the research findings follows the HCD steps (see the HCD section). This can be done in 2 to 8 weeks, depending upon the nature of the behaviors and associated factors.

- Costs

  Costs relate to technical assistance to use the behavioral design perspective in designing and analyzing research findings.

How to use?

The behavioral design approach helps practitioners uncover and overcome behavioral barriers. Such insights add depth to a formative research study and help practitioners translate the research into a strategy. For example, behavioral design brings a deep understanding of people's cognitive biases about food and care decisions, which offers a critical perspective on the internal factors in a behavioral analysis. Consequently, the resulting SBC strategy, tools, and resources may more fully overcome barriers to change.

Read about how Breakthrough ACTION and USAID Advancing Nutrition used behavioral design in the DRC in the following example.

Real-World Example: Steps to Applying Behavioral Design in Nutrition

Objective: Use behavioral design approaches to generate insights and solutions to improve child feeding during and after illness in DRC.

Activity location: The field research was conducted in four health areas within two health zones (one≈peri-urban and one rural per zone) near the city of Bukavu in South Kivu Province.

Photo by Theodora Kachingwe, Feed the Future Malawi Ag-Diversification Activity

Step 1. Define the Problem

Review data to understand the problem: The first step in defining the problem required assessing and understanding the nutrition situation in the DRC. To do this we used existing secondary data sources, including peer-reviewed and gray literature and national- and regional-level data.

Prioritize behaviors: From the list of global complementary feeding behaviors, the team prioritized behaviors for this design: caregivers continue to feed and breastfeed children during illness and provide recuperative feeding for two weeks after illness.

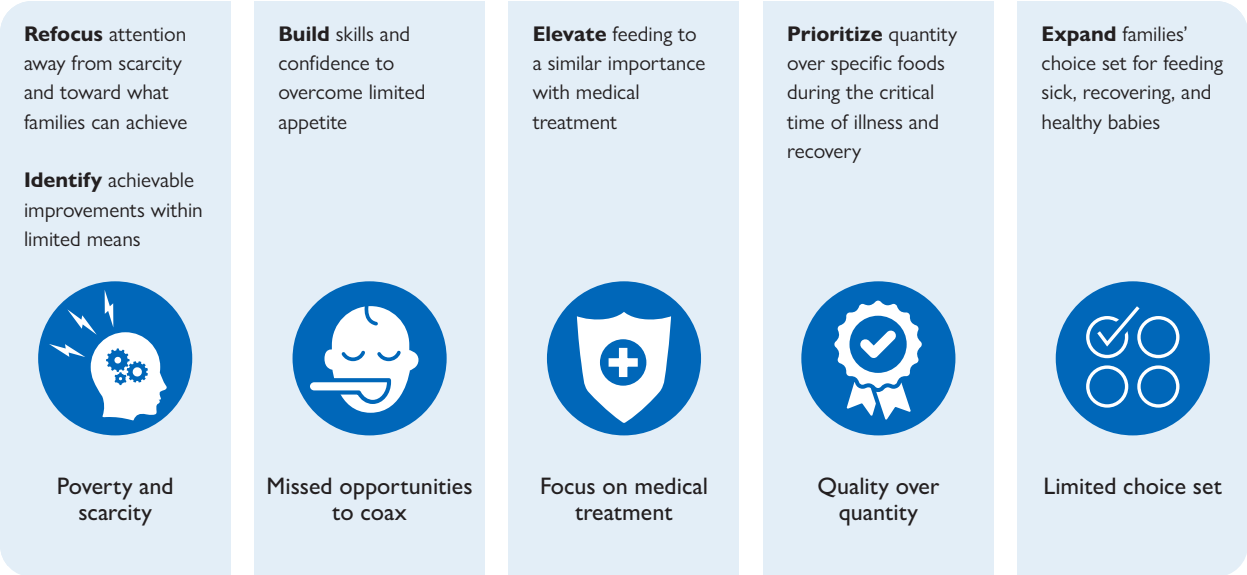
Step 2. Diagnose the Problem

The team conducted qualitative research to understand which factors prevent or support families from practicing priority behaviors in South Kivu, DRC.

- **Interviews** with mothers, fathers, grandmothers, health providers, and community leaders.
- **Health visit observations** during sick-child, postnatal, and vaccination visits.
- **Health facility and market assessments** to describe and confirm features of the six sites and their relevance to operationalize designs.

Five key insights, framed as barriers, emerged to guide design objectives (see figure 2). The critical feature of this behavioral design approach is the analysis of barriers in light of behavioral science insights (see the behavioral design brief for more information).

Figure 2. Implications for Behavioral Design on Sick Child Feeding, DRC



Source: Adapted from Breakthrough ACTION/ ideas42

Step 3. Design the Solutions

The design process used the objectives based on research insights to rapidly identify potential solutions with end users (figure 3).

Figure 3. The Behavioral Design Approach

Generate ideas	Reduce to the essentials	Build prototypes
Use structured individual and group activities to brainstorm ways to overcome the identified barriers.	Get stakeholder feedback on ideas and use specified criteria to identify top ideas.	Build real versions of the ideas to define the details and iterate.
Generated 62 distinct design ideas targeting the barriers.	Filtered ideas based on impact, feasibility, and innovation. DRC stakeholders provided feedback on the shortlist.	Built prototypes (including multiple alternative versions) of 12 designs.

Source: Adapted from Breakthrough ACTION/ideas42

When generating ideas, the team and partners—including PRONANUT (Nutrition Division of the Ministry of Health)—brainstormed ideas based on the design objectives and research insights. Overall, the team discussed **62** distinct design ideas. The team filtered these ideas to a more manageable number based on feasibility, potential for impact, and innovation. Partners then provided input on the short list, and the team selected **12** ideas to prototype.

EXAMPLES OF DEPRIORITIZED IDEAS

Labels on medications reminding of the importance of food for recovery.	**Wearable snack pouch to encourage feeding throughout the day.**	**Savings club to pool and distribute money for more food when a child falls ill.**

The team created prototypes for the 12 ideas. The prototypes started with multiple versions, with some but not full graphic design ("medium fidelity").

Step 4. Conduct User Testing and Refine Solutions

The research team returned to communities and facilities to test the 12 prototypes. This step used techniques from HCD to test and iterate solutions, ensuring a user perspective in the final selections. Breakthrough ACTION again requested and received ethical approval for this phase from Johns Hopkins University and the DRC government. The team used in-depth interviews, role play, and live trials to understand experiences of 85 family members and health workers and volunteers. With initial feedback, the team revised the prototypes, redesigning some ideas and eliminating others (see more in the Behavioral Solutions to Child Feeding During and After Illness Brief).

After the second round of testing, the team identified five final prototypes that could be used in tandem to support and reinforce the others, or as separate tools integrated into existing platforms.

A prototype tested in both rounds but eventually dropped was related to tracking the number of feeds a child is given in a day. This tracker aimed to help families increase feeds during and after illness. The tracker could be made with local resources such as knots in a banana leaf. Health workers were enthusiastic about the approach and thought it useful, but when tested with caregivers it didn't work as hoped. Families could not understand or distinguish between the frequency and quantity of feeding needed during and after illness, so the concept of celebrating every bite was used instead.

The prototypes addressed each barrier to continuing feeding during illness. Overall, they elevate the importance of feeding during illness; divert attention from scarcity; emphasize a focus on food quantity; boost providers' confidence to help caregivers; and boost caregivers' abilities and confidence to improve feeding practices when a child is recuperating from illness.

In DRC, a large USAID-funded health and nutrition project is incorporating these solutions in its facility- and community-based activities. In addition, a national SBC communication campaign is incorporating key concepts.

Additional Tools and Resources

Behavioral Barriers and Solutions for Child Feeding During and After Illness | Breakthrough ACTION and RESEARCH

Webinar Recap: Improving Feeding of Young Children During and After Illness, Breakthrough ACTION

The New Science of Designing for Humans, Stanford Social Innovation Review

Behavioral Design: A New Approach to Development Policy - Datta - 2014 - Review of Income and Wealth - Wiley Online Library

Approach B: Human-Centered Design for Nutrition

Process

HCD is a set of processes and tools to collaboratively generate solutions to a specific problem, for example related to a service or behavior. Definitions vary by organization; some practitioners describe HCD as "a deliberate and thoughtful process of co-creating different ideas and testing them with users early and often, to converge on the most effective solutions" (IDEO 2015).

Most commonly, HCD is used as a "spark" to design a solution with users to a very specific challenge. This is best at the beginning or middle of a program; as a light touch to generate new ideas, thinking, or concepts; or to deliver a specific output as part of a larger program.

HCD can also be an "ingredient" within a program, such as building implementation support across partners to co-create solutions to specific challenges. It can be included at the start or during a program to embed the HCD way of thinking; generate ideas, thinking, or concepts; or to deliver specific outputs across a program cycle. Figure 4 shows the general phases of HCD.

Figure 4. Human-Centered Design Phases

Source: Adapted from Breakthrough ACTION, 2021

Why?

We often have assumptions from experience about what people want and need. More importantly, we use the same activities over and over, even when they are not effective. By listening to the people who use the services, products, and materials, we can develop effective activities collaboratively. Similarly, testing solutions with users and rapidly dropping those that do not work well and refining those that do saves time and resources in the long run.

When?

Use as part of formative research. HCD can also be used during collaborative learning and adaptation to identify solutions to a specific challenge. The approach can be part of a full program cycle.

Resources Needed

- Expertise and Skills
  - In addition to nutrition expertise to ensure solutions achieve nutrition outcomes, this approach requires expertise in behavioral science to oversee the process, ensuring that the HCD way of thinking guides each step. Skills are also needed to co-create and test solutions based on the research insights. These could be included in a project team, or sought through a partnership with a specialized organization or expert.
- Time
  - The research or "discover" phase of HCD can be conducted in the same timeframe as formative research that nutrition programs are familiar with.
  - The co-creation and prototype testing phase can be done within two weeks to two months, depending upon the nature of the challenge and the topics.
- Costs
  - Costs relate to technical assistance to create the structure for the process and iterate solutions.

How to use?

Use HCD when designing a new service, product, or tool. It is especially useful for a "sticky" or entrenched challenge. An HCD way of thinking can also be useful in a program or activity to keep users' needs and perspectives at the front of every decision.

Real-World Example: Steps to Applying HCD to Nutrition

Objective: Use an HCD process to develop counseling job aids for CHWs to improve the quality of counseling on complementary feeding.

Activity location: Kebbi State, Nigeria

Step 1. Uncover Challenges

Start with the priority behavior to decide what issue(s) to address. Breakthrough ACTION Nigeria first identified a priority nutrition behavior: "caregivers feed children 6–23 months a diverse diet through meals and snacks." This behavior showed the greatest potential benefit to nutrition outcomes based on a review of data from DHS in the program area and alignment with the program mandate.

Next, the team defined the problem or "design challenge" to solve with the people who were intended to use the service, product, or tool. A design challenge should be short and easy to remember, a single sentence that conveys the goal. This is usually phrased to be solution-oriented so that teams will generate lots of ideas and consider the context (IDEO 2015). For example, "How can Nigerian CHWs educate and motivate caregivers to improve dietary diversity for children 6–24 months?"

Tip 2 for Nutrition: When the scope is wide and many solutions are possible, this focus is critical to ensure that the approaches lead to useful outputs.

To overcome the design challenge, gather information through secondary and/or primary research with the potential users. This research identifies patterns of behavior, pain points, and places where users have a difficult time doing something; what works or not from their perspective; and their desires and aspirations. Participatory research methods such as peer observations, card or pile sorts, collages, and guided tours can engage users in this exploration (IDEO).

To help frame the design challenge, the team conducted a desk review to collate existing experiences and recommendations related to improving dietary diversity among children 6–23 months. We found that CHWs are expected to deliver nutrition counseling but receive inadequate training and support and have high workloads. They lack the time, motivation, and support to encourage behavior change, and families do not trust them (Zelee et al. 2020).

With this background information, the team conducted primary research to understand the design challenge from the users' perspectives without making too many assumptions too early. Breakthrough ACTION received ethical approval for the research from Johns Hopkins University and national review committees. The research team interviewed 183 people through phone and in-person interviews. Specifically, they talked with 63 CHWs, 60 caregivers, 31 community and peer group leaders, and 29 family members, to explore—

- factors related to feeding children a diverse diet
- which relationships and social support networks can be leveraged to improve feeding children a diverse diet
- how CHWs engage with caregivers to promote complementary feeding practices.

General factors that prevent or support feeding young children a diverse diet in these communities:

- **Perceptions of local foods**. Although local affordable nutrient-rich foods are available, caregivers prefer and value those that are expensive and inaccessible.
- **Food-based norms** guide what caregivers—and importantly, their mothers-in-law— expect children to eat. For example, people expect that children under one year eat plain porridge or pap, and think they will be harmed if they eat solid foods.
- **Limited caregiver time and energy** reduces willingness/ability to prepare separate meals for the young child.
- **Confidence** to try foods that others do not give children is low among mothers.

Relationships key to improving feeding practices are mothers-in-law and husbands at the household level and community leaders and peers at the community level.

The findings confirmed that caregivers do not value CHW counseling, possibly due to a lack of connection or trust, combined with the one-way, information-heavy message delivery currently used. Counseling in this context often resembled nutrition education (simply relaying information to clients) instead of discussion. CHWs asked for non-financial incentives to motivate caregivers to attend counseling sessions, and wanted interactive, entertaining, and visual mediums to teach them. They also noted the usefulness of incorporating religious and cultural beliefs into counseling and using an empathic focus on the child.

Step 2. Develop Solutions

The next step is to generate as many ideas as possible. This starts with making sense of the data collected through exercises such as listing, sharing stories, and identifying "top 5" ideas. From these, the team creates insight statements, which become opportunities for design by reframing them as "how might we" questions.

In Nigeria, starting with a validation workshop with partners including local government, health workers, CHWs, and community members, the team brainstormed prototypes for job aids. They prepared eight partially designed (medium fidelity) print materials with some graphic design in the local language, along with videos.

Table 2. Prototypes Tested to Improve CHW Counseling, by Factor

FACTOR	Connection and engagement with CHW	Low perceived value of local foods	Food-based norms	Time and energy to make separate meals for children	Confidence to try new foods
PROTOTYPE	• Empathways • Choose your own adventure	• Choose your own adventure • Price comparison game	• Card game • Trivia	• Tips and tricks • Meal planner	• Choose your own adventure • Diving deep in mother's truth exercise

Breakthrough ACTION West Africa had designed and tested a counseling innovation for youth reproductive health called Empathways (Breakthrough ACTION 2023b). Empathways starts with a few simple questions for the health worker to get to know the client and build a relationship based on empathy. The team adapted this innovation for testing based on the insights in Nigeria, where caregivers and CHWs did not have a trusted connection. Because both the CHWs and caregivers are mothers, the prototype asked both to discuss experience as mothers, building on the "sharing histories" experience in Peru (Altobelli 2020). Introductory questions tested:

- How has your experience been as a mother?
- Have you experienced any challenges feeding your child?
- What do you love most about being a mother?

Step 3. Test Solutions

In this phase, users apply the prototype to their real lives. Once users give feedback, change or refine the prototypes. Keep iterating, testing, and integrating user feedback for one or more rounds. Finally, select the most effective solution.

In Nigeria, the research team returned to ask 66 people (22 mothers, 22 CHWs, 16 community leaders, and 6 family members) to test the eight prototypes using focus group discussions, interviews, shadowing, and co-design sessions.

This round of testing to refine prototypes based on acceptability, feasibility, and potential for impact took five days because of project timeline and constraints. Had there been more time, it could have lasted up to two weeks and included more monitoring and iterations.

Feedback on the prototypes was highly positive. Mothers said that it was the first time they spoke in a counseling session with CHWs and liked it very much.

> "That was the first time I was asked something during the session, and that is the first session that I think I will remember what was said."
>
> — CAREGIVER

CHWs noticed that the simple opening questions helped mothers talk. However, they noted that they are trained to give information and messages and would need updated training and support to change how they interact with caregivers.

> "It has never been so easy to talk to them. In fact, they talked a lot."
>
> — COMMUNITY HEALTH WORKER

Step 4. Improve and Develop Final Solutions

The team captured and synthesized feedback from users as they tested each prototype. They asked about understanding, interest, relevance, and recommendations. The full team provided input on the short list to finalize seven of the refined ideas. Four of the ideas merged into one job aid for CHWs, and three became supporting tools.

The counseling job aid, Nourishing Connections, describes four of the tested ideas:

- Empathways to open the counseling session
- Revised set of questions
- Counseling flow
- Action planner (Breakthrough ACTION 2023a).

The supporting tools are the price comparison tool and the interactive card and trivia games, which when time permits can be played with an individual caregiver or groups to support family and community-wide acceptance of the recommendations (Breakthrough ACTION 2023a).

Additional Tools and Resources

IDEO.org: Design Tools and The Design Kit

Development Impact & You (DIY) Toolkit

UNICEF: HCD4health (immunization focus)

Creative Reaction Lab: Equity-centered Community Design Field Guide

Photo by Herve Irankunda, CNFA, USAID Feed the Future Rwanda Hinga Weze Activity

Part II. Tested IYCF Solutions to Adapt

The Solutions in a Nutshell

Behavior	Solution		
	HOUSEHOLD-LEVEL ACTIVITIES	COMMUNITY-LEVEL ACTIVITIES	FACILITY-LEVEL ACTIVITIES
Caregivers ensure children 6–23 months continue to breastfeed and eat during illness	Community volunteer sick child visits: • counseling with concept of every bite counts • food activity	Coaxing workshops for families	Health worker job aids during sick child visits: • food prescription form • new counseling pages • reminder stickers
		DRC Behavioral Solutions Brief	
Caregivers feed children 6–23 months a variety of food in meals and snacks	Nourishing Connections job aid	Games for groups: card game, trivia	

Decide

If your program or service has prioritized one of these behaviors, you may want to try solutions developed through an innovative design approach. Start by reviewing the factors that prevent or support the priority behavior. Then assess if you work in any of the settings and platforms.

Adapt

If one or more solutions seem feasible for testing and adapting to your context, use How to Adapt SBCC Materials by The Compass for SBC (HC3 2014). Be sure to consult with potential users on concepts, as well as the format, tone, and visuals.

Photo by Root Capital

References

Altobelli Laura C, José Cabrejos-Pita, Mary Penny, and Stan Becker. 2020. "A Cluster-Randomized Trial to Test Sharing Histories as a Training Method for Community Health Workers in Peru." *Global Health: Science and Practice.* 8(4):732-758. https://doi.org/10.9745/GHSP-D-19-00332

Bazzano, Alessandra N, Jane Martin, Elaine Hicks, Maille Faughnan, and Laura Murphy. 2017. "Human-centered design in global health: A scoping review of applications and contexts." *PLOS ONE*. 12(11): e0186744. https://doi.org/10.1371/journal.pone.0186744

Blynn, Emily, Emily Harris, Melanie Wendland, Courtney Chang, Dyness Kasungami, Monisha Ashok, and Metsehate Ayenekulu. 2021. "Integrating Human-Centered Design to Advance Global Health: Lessons From 3 Programs." *Global Health: Science and Practice*. 9:S261-S273. https://doi.org/10.9745/GHSP-D-21-00279

Breakthrough ACTION. 2021. *How-To-Guide: Advanced Audience Segmentation for Social and Behavior Change.* Washington, DC: Johns Hopkins Center for Communication Programs. https://thecompassforsbc.org/how-to-guide/advanced-audience-segmentation-social-and-behavior-change

Breakthrough ACTION. 2022. *Behavioral Solutions to Child Feeding During and After Illness Brief.* Washington, DC: Johns Hopkins Center for Communication Programs. https://breakthroughactionandresearch.org/behavioral-barriers-and-solutions-for-child-feeding/

Breakthrough ACTION. 2023a. *Nourishing Connections: Community Health Worker Job Aid.* Washington, DC: Johns Hopkins Center for Communication Programs. https://breakthroughactionandresearch.org/nutrition-job-aid-for-chws/

Breakthrough ACTION. 2023b. *Empathways.* Washington, DC: Johns Hopkins Center for Communication Programs. https://breakthroughactionandresearch.org/empathways/

Creative Reaction Lab. 2018. *Field Guide: Equity-centered Community Design*. St. Louis, MO: Creative Reaction Lab. https://crxlab.org/shop/p/field-guide-equity-centered-community-design

Datta Saugato and Sendhil Mullainathan. 2014. "Behavioral design: A new approach to development policy." *The Review of Income and Wealth*. 60(1):7-35. https://doi.org/10.1111/roiw.12093

Design for Health. 2019. *Glossary of Design Terms.* Washington, DC: USAID Center for Innovation and Impact and The Bill and Melinda Gates Foundation. https://www.designforhealth.org/resource/glossary-of-design-terms

HC3 (Health Communication Capacity Collaborative). 2014. *How-To-Guide: How to Adapt SBCC Materials*. Washington, DC: Johns Hopkins Center for Communication Programs. https://thecompassforsbc.org/how-to-guide/how-adapt-sbcc-materials

HIP (High Impact Practices in Family Planning). 2022. *SBC Overview: Integrated Framework for Effective Implementation of the Social and Behavior Change High Impact Practices in Family Planning.* Washington, DC: HIP Partnership. https://www.fphighimpactpractices.org/briefs/sbc-overview/

References *(continued)*

IDEO.org 2015. *The Field Guide to Human-Centered Design*. Canada: IDEO. https://d1r3w4d5z5a88i.cloudfront.net/assets/guide/Field%20Guide%20to%20Human-Centered%20Design_IDEOorg_English-0f60d33bce6b870e7d80f9cc1642c8e7.pdf

Manoff Group. 2015. *Defining Social and Behavior Change Communication and Other Essential Health Communication Terms*. Washington, DC: The Manoff Group. https://www.manoffgroup.com/wp-content/uploads/DefiningSBCC.pdf

The Rockefeller Foundation. 2017. *Development Impact & You (DIY) Toolkit*. New York, NY: The Rockefeller Foundation. https://www.rockefellerfoundation.org/report/diy-toolkit-development-impact-you/

Tantia, Piyush, Jason Blade, Paul Brest, and Maeve Richards. 2019. *Changing Behavior to Improve People's Lives: A Practical Guide*. Washington, DC: ideas42. https://www.ideas42.org/wp-content/uploads/2019/10/I42-1152_ChangingBehaviorPaper_3-FINAL.pdf

Tantia, Piyuah. 2017. "The New Science of Designing for Humans." *Stanford Social Innovation Review*. 15(2), 29–33. https://ssir.org/articles/entry/the_new_science_of_designing_for_humans

Thaler, Richard H. 2016. "Behavioral Economics: Past, Present, and Future." *American Economic Review.* 106 (7): 1577-1600. https://doi:10.1257/aer.106.7.1577

UNICEF. n.d. *Human Centered Design 4 Health.* New York, NY: UNICEF. https://www.hcd4health.org/resources

USAID Advancing Nutrition. 2020. *Behaviors to Improve Nutrition.* Arlington, VA: USAID Advancing Nutrition. https://www.advancingnutrition.org/resources/behaviors-improve-nutrition

USAID Advancing Nutrition. 2021. *Prioritizing Multi-Sectoral Nutrition Behaviors.* Arlington, VA: USAID Advancing Nutrition. https://www.advancingnutrition.org/resources/prioritizing-multi-sectoral-nutrition-behaviors

Glossary

Audience segmentation is an analysis that "divides a population or market into subgroups that have, or are perceived to have, meaningfully similar characteristics, and significant differences from other subgroups" (Breakthrough ACTION 2021).

Behavioral design applies "behavioral science to understand how people interact with their environment and each other under different conditions and builds solutions from these insights" (Tantia et al. 2019).

Behavioral economics "combines elements of economics and psychology to understand how and why people behave the way they do in the real world" (Thaler 2016).

Design is the "process of developing informed, sensitive, inclusive, purposeful, and innovative solutions that embody functional and aesthetic demands based on the needs of the intended users and their ecosystem. Design is applied in the development of goods, services, processes, messages, and environments" (Design for Health 2019).

Human-centered design is "the process of integrating human perspectives in all steps of the problemsolving process. The process aims to understand an issue from the human perspective and focuses on how it looks and feels to users and stakeholders within their environment and context. This understanding informs the iterative development of concepts to solve a problem" (Design for Health 2019).

Insights are "ideas or anecdotes expressed as succinct statements that serve to interpret patterns in research findings. Insights offer a new perspective, even if they are not new discoveries" (Design for Health 2019).

Prototypes are "a simple model or representation built to test a concept with users to learn from them. A prototype helps designers understand, explore, and communicate what it feels like to engage with a solution in real working conditions. Prototypes can be rough and simple ('low fidelity') to test quickly and adjust. Or they can be more finished, designed representations, ('medium- to high-fidelity') at later stages of testing" (Design for Health 2019).

Social and behavior change is "a systematic, iterative, evidence-driven approach to improve and sustain changes in behaviors, social norms, and the enabling environment. SBC interventions aim to affect change by addressing their individual, social, and structural determinants or factors" (HIP 2022).

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