Design Thinking for SNAP-Ed:
Healthcare Sector Summary of Findings December 2021

COOKING MATTERS®

FFORC
Food · Fitness · Opportunity
Research Collaborative

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Who is Cooking Matters?

Cooking Matters inspires families to make healthy, affordable food choices. Our programs teach parents and caregivers of young children with limited food budgets to plan, shop for and prepare healthy meals. We offer organizations who want to implement Cooking Matters education evidence-based and practice-tested curricula, digital resources, messaging, and more. Cooking Matters is a campaign of Share OurStrength, an organization working to end hunger and poverty.

Who is FFORC?

The UNC Center for Health Promotion and Disease Prevention's Food, Fitness and Opportunity Research Collaborative (FFORC) aims to build economic security, improve health outcomes and contribute to community-based research literature to address those effected by inequity in North Carolina.

Project Overview

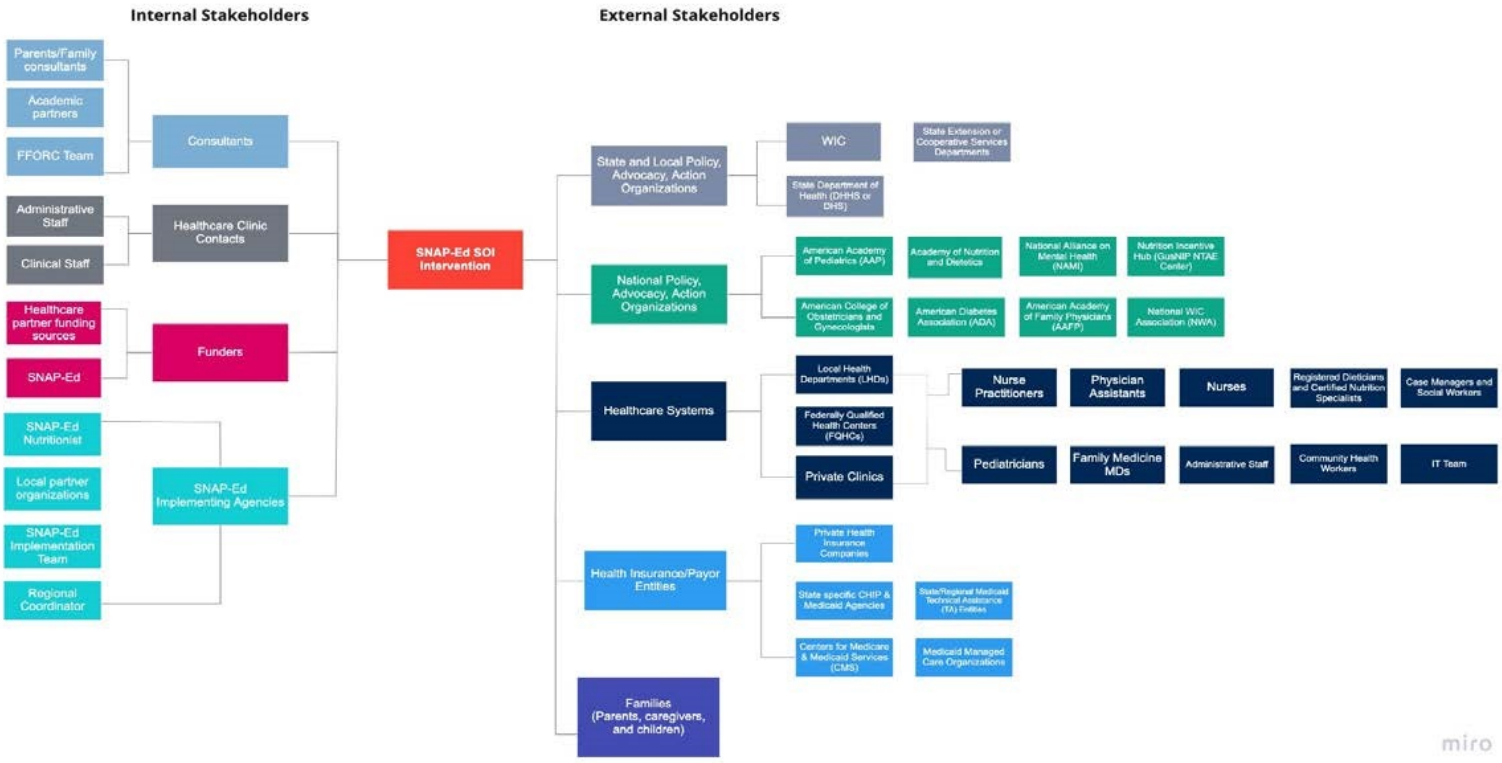
Pregnant women and caregivers of young children have regular touchpoints with the healthcare system, and healthcare providers are often a trusted source of information reported by this audience. To better understand how nutrition and food skills education resources can reach these caregivers through the healthcare setting, Cooking Matters contracted with the FFORC team, who used Human-Centered Design methods to surface and develop ideas from caregivers themselves as well as healthcare stakeholders. The results of that work are summarized in this document.

Stakeholder Mapping

Stakeholder mapping overview: Stakeholder mapping is a type of analysis that helps identify and group key organizations and people by their potential interest, involvement and power holding in a project. Completing a stakeholder mapping exercise helped our team think through key players in this sector and not unintentionally omit a person or group from our design thinking process who might have key insights to bring to our project.

For our work in the healthcare sector, we mapped out organizations, agencies, and individuals of interest who have potential to impact SNAP-Ed interventions in primary healthcare settings. We referenced the stakeholder map when determining the types and roles of healthcare stakeholders to invite to engage with us during the Ideation phase.

After drafting an initial stakeholder map, one of our stakeholder Key Informants provided feedback on the types of organizations and agencies included and offered suggestions to better align the map with the healthcare sector landscape. Their feedback included additional sources of potential funding including healthcare partner federal and grant funding sources as well as a more nuanced breakdown of potential healthcare and health insurance/payor entities that might be encountered in any healthcare sector intervention implementation project.



We leveraged community partner connections in SNAP-Ed, WIC, and other organizations to recruit a diverse group of caregiver participants for our initial phase of this project, the Inspiration phase.

Caregiver Characteristics*

SNAP-Ed eligible

Primary caregiver for child(ren) ages 0-5 years

Recruited from 5 priority states: CA, **CO**, **MA**, OK, **NC****

All participants identified as women

9 English language participants, 5 Spanish language participants

*For more detailed demographic information, please see Table 1 included in the Appendices.

**Bolded states indicate states of residence for our caregiver participants in this specific project.

"I like that we, the participants of these programs, have a seat at the table, we do not always get that and appreciate it."
-participant from CO

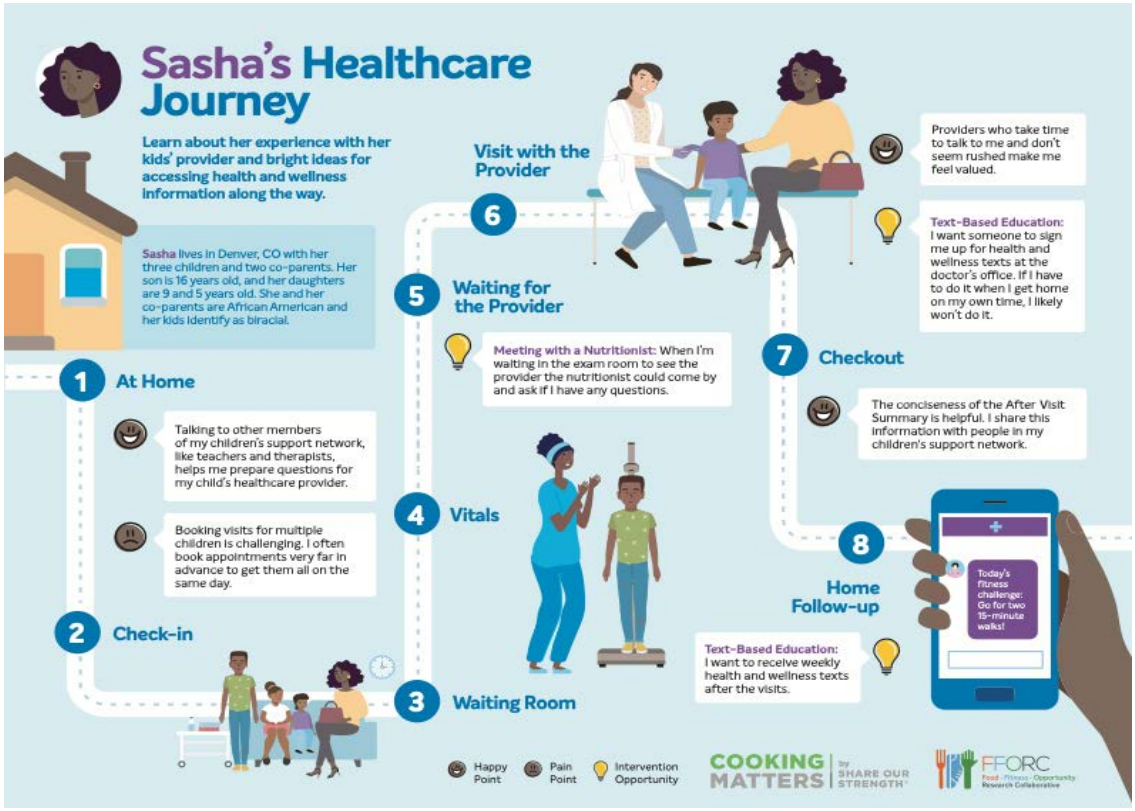
"Knowing we are not alone and folks in other states go through [the same things], that we are not alone, meant a lot to me"
-participant from NC

Caregiver Insights

Key insights for engagement in the healthcare sector

During two caregiver workshops, we employed several human-centered design methods, including journey mapping and empathy mapping exercises to better understand caregivers' wants, and needs for health and wellness education in spaces where their children receive primary health care services.

One of the journey maps from our caregiver sessions is below and more caregiver visual products can be found in the Appendices.



Following our two workgroup sessions with caregivers, participants completed a desirability survey to identify the top four preferred intervention concepts and most desirable elements of those ideas. Caregiver also completed a follow-up survey which allowed them to share even more detail around the types of health and wellness interventions they might want to see in healthcare spaces with their children and how they desire to be engaged by their children's healthcare providers and staff. From both our virtual workgroup sessions and survey responses, our team compiled key values, wants, and needs from caregivers which are summarized below.

Key Caregiver Values

- Authentic relationships with clinicians and health education providers
- Individualized, customizable learning opportunities
- Culturally appropriate education

Key Caregiver Wants

- Flexibility in content, delivery method, and duration of education intervention
- Self-led opportunities for learning outside of the clinic
- Assistance from healthcare clinic staff in accessing/enrolling in education intervention

Key caregiver insights across sectors

Caregiver values and wants for engagement in health and wellness education in healthcare settings echoed our findings from caregiver engagement in other Sectors of Influence including Food Retail and Early Childhood Education (ECE), with a focus on flexibility of

intervention delivery methods, content customizability, and ability to engage with educational information at a time and place of their choosing.

The insight statements from our ECE and Food Retail Sector engagement highlight commonalities among caregiver desires and needs for health and wellness education across these three Sectors of Influence.

ECE Sector Caregiver Insight Statement

- In order for me to be engaged, I **need programs and learning opportunities to be flexible**. Flexible to me means the program is offered at different times, is available in several formats (in person versus virtual), and provides enough variety in topics to keep it interesting.

Food Retail Caregiver Insight Statement

"I prepare for the grocery store before I leave the house so I can focus on the task at hand while I'm there. If I came across new information at the store, I would like it to be something I can quickly read or something I can take home to read later so that I can focus on shopping."

Healthcare Nutrition Education Intervention Desirability: Caregiver Feedback

From caregivers' responses to the desirability survey, we identified the preferred elements of each of the four top intervention options. Caregivers also shared some of their key nutrition-related questions they would like to ask their children's healthcare provider or nutrition health educator.

Nutritionist/Health Educator	Text-based	QR code-based	Television-based

• 15–30-minute session most desirable
• Either individual or group sessions acceptable with some preference for individual sessions
• Either in-person or hybrid virtual/in-person format preferred
• Individualized education was preferred vs. standardized content
	• Weekly text delivery most desirable frequency
	• Want to be offered and assisted with signing up for texts by healthcare clinic staff
		• Exam room preferred location to access QR code
		• Value the ability to access educational content on their own time
		• Value the accessibility of their smart device and ability to share content with others in their family system
			• Preferred educational content:
			  • Tips and tricks for buying and preparing healthy meals on a budget
			  • Fun educational content for children
			  • Tips and tricks for helping picky eaters try new foods

How did caregivers feel about the proposed intervention concepts?

QR Codes

- *"I want tailored health and wellness information about my family's unique needs, like how to meet my children's nutritional needs on a plant-based diet."*
- *"QR codes are easy to scan. I'd want to see information for portioning, new foods to try, stuff like that."*

Television Intervention

- *"Trying to complete forms when there is nothing to keep my kids engaged is challenging. It's hard to entertain them and try to multitask when you're by yourself."*
- *"What I'd like is something geared toward kids about eating healthy, what helps keep your body healthy."*

Nutritionist/Health Educator

- *"Hearing about health and wellness education from someone else, like a doctor or someone they look up to, that would be great."*
- *"I like [it] because they know what they're talking about, I sometimes wonder what is healthy and what's not. Labels can be misleading."*

Text Intervention

- *"I interact with the outside world through my phone... primarily text messaging. It makes it easier to see the information and not have it lost in email."*
- *"I like receiving text messages with nutrition stuff, recipe ideas. I read it when I have time. I like that its not paper or it will get lost or the kids will draw on it."*

What types of questions did caregivers have regarding nutrition and healthy eating?

"What is healthy eating for our family and how can I get my kids to eat healthier?"

What can [my child] eat at a young age? (different milestones for each age)

What's a healthy weight to height [for my child]?

How many meals and snacks should my children eat?

"What exercises should they [my children] do?"

¿"Que alimentos nos pueden ayudar para tener un peso saludable"? (What foods can help us to have a healthy weight?)

Recipes and ideas to make for my child.

Stakeholder Insights

Our team leveraged partner networks and contacts in pediatric primary healthcare settings to recruit a diverse group of healthcare key informants including clinicians, program managers, and researchers for individual semi-structured interviews or multi-participant focus groups.

	Role	Location
1	Pediatrician	NC
2	FQHC Programs Manager	CA
3	Pediatrician and Researcher	CO
4	Research Assistant, MA	CO
5	Registered Dietician	CO
6	Nutrition Researcher, PhD	FL
7	Pediatrician	NC
8	SNAP-Ed Regional Coordinator	MN
9	SNAP-Ed Educator	MN
10	SNAP-Ed Director	GA
11	SNAP-Ed IA Associate Director	MN

Key insights into healthcare sector engagement: feasibility and desirability

As we moved into the Ideation phase of our project, we developed simple visual prototypes of each of the four selected intervention concepts using the virtual white board platform, Jamboard, to share with our sector key informants and stakeholders during a series of semi-structured interviews and focus groups. An example of one of these simple visual concept prototypes is below. After sharing these visual prototypes with stakeholders, we asked for their feedback on each of the four concepts regarding feasibility, desirability, and viability of each proposed intervention.

Television-based Health and Wellness Education

Fairly quickly into our key informant interviews, we noticed trends in the feedback on the desirability and feasibility for each intervention prototype concept. We integrated this feedback into our emerging prototype design, incorporating additional design elements suggested by stakeholders and adapting the emerging prototypes.

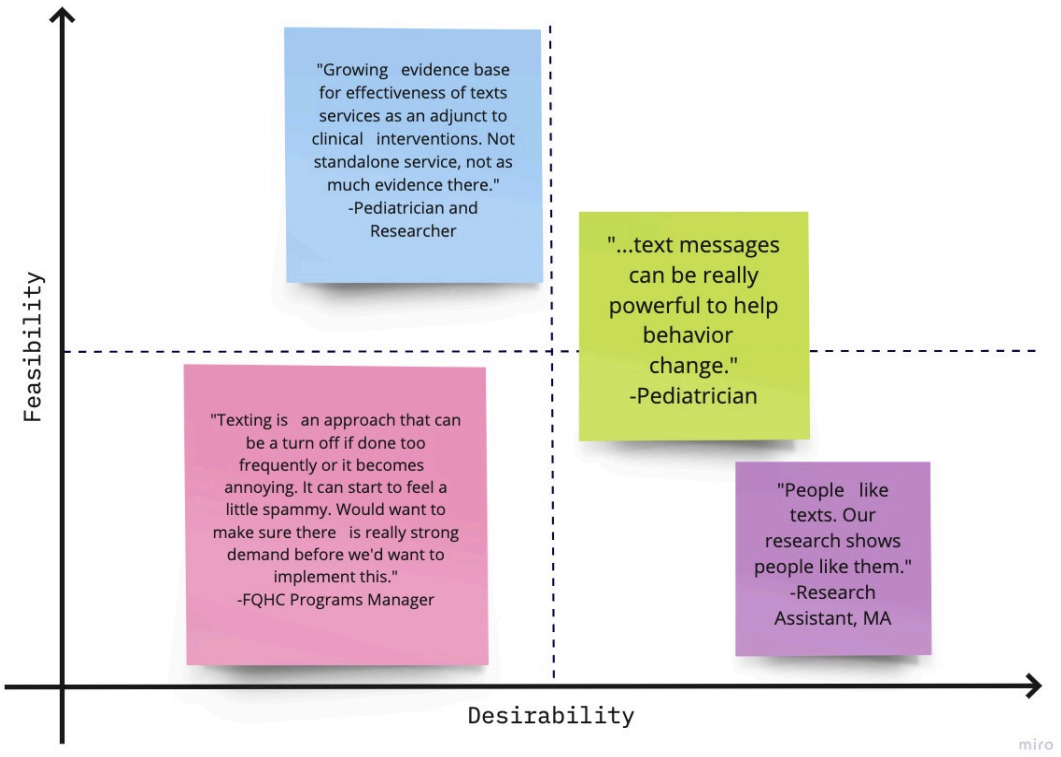
As our team iterated prototypes according to feedback from stakeholders, we continued to present these iterative concepts to stakeholders for ongoing review both in real-time individual interviews or a focus group as well as via a feasibility and desirability survey for stakeholders who were unable to be interviewed.

Text-based Intervention

During the Ideation phase, our team learned that text-based interventions have been employed in a variety of healthcare settings previously with research showing their effectiveness as part of a larger intervention concept with additional behavior change components.

Stakeholders largely felt positive about the use of text-based tools for nutrition education but did not view a text-based concept as a standalone intervention. It was rather viewed as an intervention element to be combined with more high-touch intervention elements, such as face-to-face education.

As we continued to refine our intervention prototypes, we incorporated the text-based content delivery method into an emerging intervention concept that drew elements from several intervention ideas. The prioritization matrix below provides an overview of key feasibility and desirability feedback for the text-based intervention:

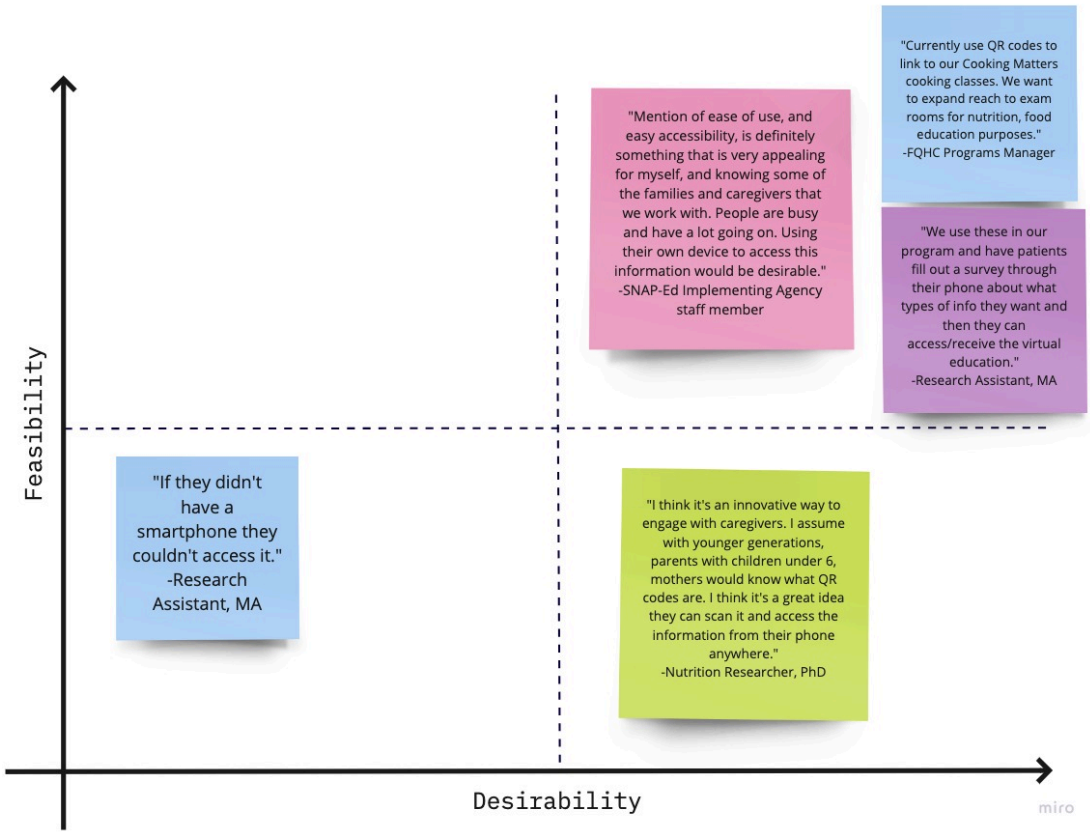


Stakeholder feedback on the QR code-based intervention was largely positive. Stakeholders felt that QR codes were not only desirable as a method of engaging parents/families but also highly

feasible, with several stakeholders sharing examples of how they currently use QR codes in their healthcare settings.

Feedback also indicated that most patients/families have access to a smartphone regardless of their demographic background and more families have smartphones than high-speed internet access in their homes.

As we presented the QR code-based intervention concept to stakeholders, it evolved to include a survey component accessed via the QR code that would allow families to indicate the type of nutrition education information they desire. The prioritization matrix below provides an overview of key feasibility and desirability feedback for the QR code-based intervention:

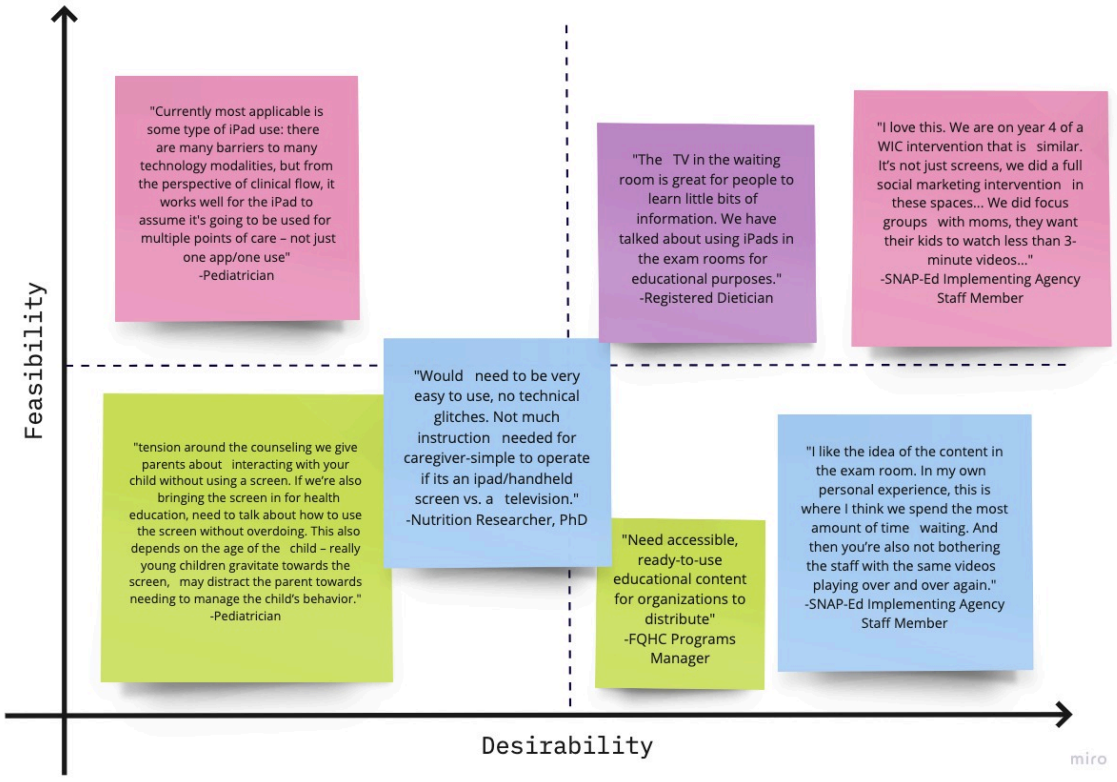


Screen-based Intervention

Feedback from stakeholders on a television or screen-based intervention prototype was mixed, with challenges raised around accessibility of technology and parent-child interactions around screen use.

What initially started as a waiting room-based television intervention during the Inspiration phase with caregivers evolved into a screen-based intervention likely using a tablet and likely delivered in exam rooms instead of waiting room spaces.

Stakeholders liked the concept of short, engaging videos for parents to watch with their children that also incorporated opportunities for further learning. Stakeholders also wanted content to be pre-packaged and easy to implement for clinic staff. The prioritization matrix below provides an overview of key feasibility and desirability feedback for the screen-based intervention:



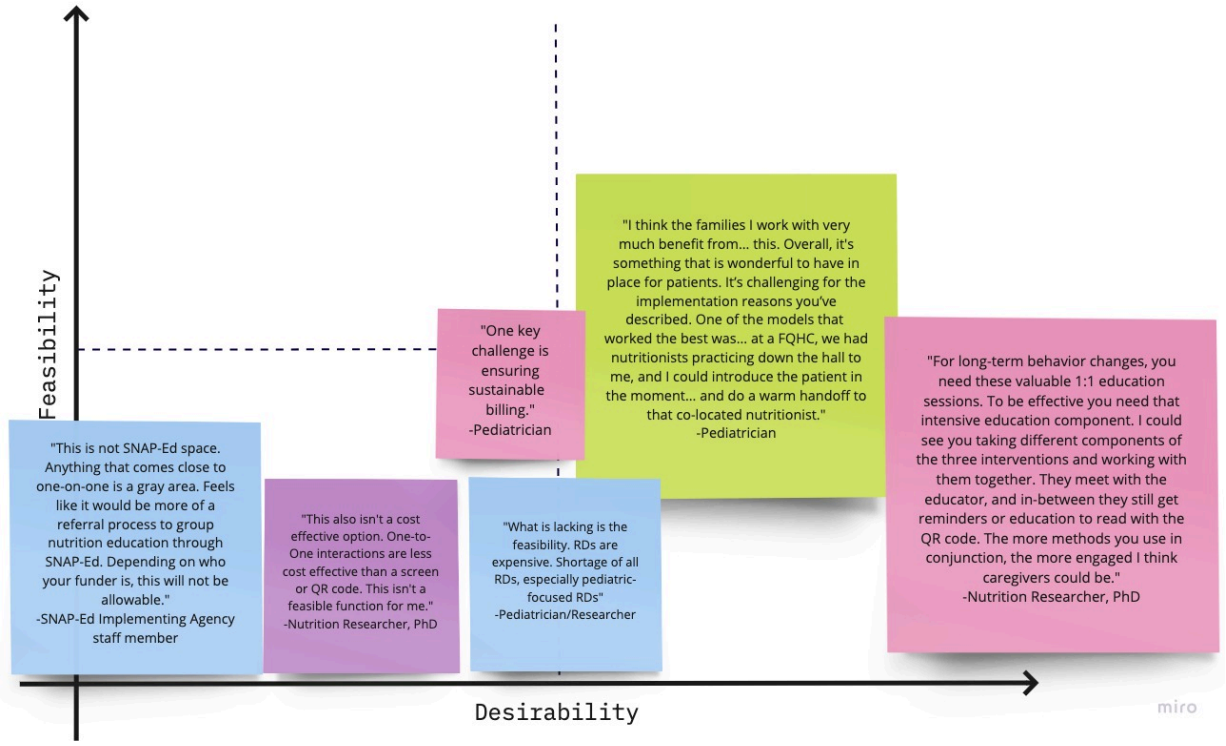
<u>Nutritionist/Health Educator Intervention</u>

The direct education, one-on-one intervention with a nutritionist or other health educator was seen as highly desirable by many key informants.

However, feasibility of this intervention was considered low, with nearly every stakeholder expressing concern. Concerns included cost, personnel shortages, SNAP-Ed allowable expenses, and implementation challenges.

Stakeholders did offer other potential adaptations to one-on-one nutrition education including referrals to SNAP-Ed cooking classes or a referral through the healthcare provider to a

Registered Dietician for medical nutrition therapy. The prioritization matrix below provides an overview of key feasibility and desirability feedback for the nutritionist/health educator intervention:



Prototype Iteration: Incorporating Stakeholder Feedback

At the conclusion of our key informant interviews and stakeholder engagement focus group, our team continued to refine the emerging intervention prototype(s), incorporating additional feedback and suggestions from stakeholders.

What emerged was a more expansive intervention concept that draws from many of the initial prototypes from our caregiver sessions, particularly the QR code and screen-based prototypes. With an integrated, multi-component concept, SNAP-Ed could reach families in several ways. For example, screens and QR codes that contain health and wellness information can be placed in the waiting room and the exam room. The content of the screens and posters could be used to match the theme of the clinic (e.g.., cartoon characters, superheroes, etc.).

This prototype provides a balance between families who desire technology-related interventions and those that may have language and accessibility considerations. This latest prototype also considers SNAP-Ed allowable expenses and restrictions around one-on-one nutrition education, incorporating nutrition education classes as an alternative.

Healthcare Stakeholder Insights: Role of SNAP-Ed

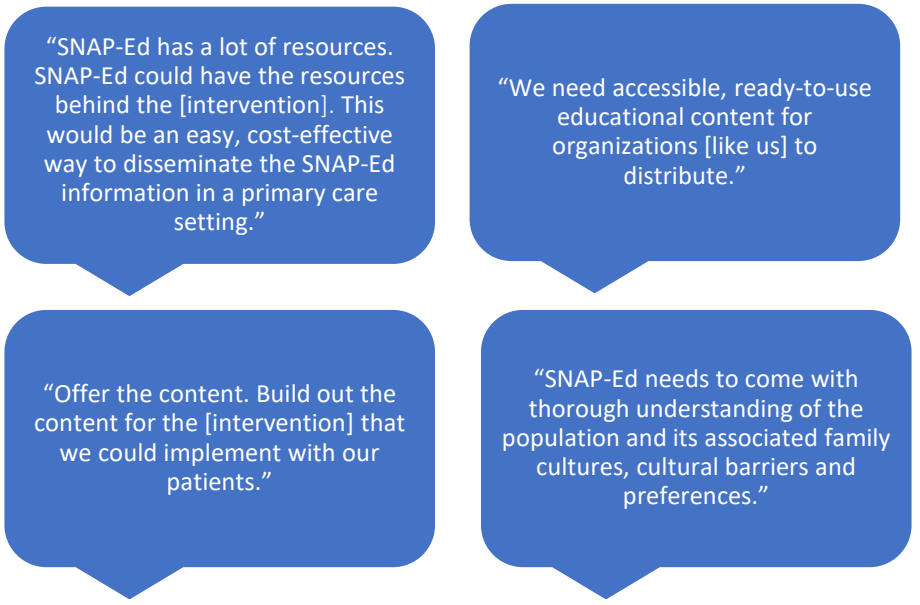
In addition to gathering healthcare sector key informant feedback on our emerging intervention prototypes, we also asked key informants what they, as clinicians, program managers, and other healthcare representatives, saw as the role of SNAP-Ed Implementing Agencies in bringing nutrition and other health and wellness interventions to clinical primary care spaces.

We heard repeatedly from key informants that healthcare providers are open and interested in offering more nutrition education and intervention in primary care settings but lack the resources and the tools to do so. What providers want from SNAP-Ed is content that is pre-developed, pre-packaged, and ready to use in their individual clinic settings.

Healthcare sector stakeholders saw the role of SNAP-Ed centering around the creation, maintenance, and distribution of accessible, ready-to-implement educational content for clinics to distribute to their patients via the emerging methods discussed above. Educational content beyond traditional paper materials was seen as desirable, such as electronic materials including videos and interactive content.

Stakeholders also stressed the importance of relationships, cultural competency, and understanding of the different desires, needs, and preferences of families from a diverse range of backgrounds and lived experiences.

SNAP-Ed Implementing Agency (SIA) staff also echoed the importance of strong working relationships between healthcare sector representatives and SIAs, which is highlighted in the following quote from one SIA staff member: *"That relationship piece is so critical. We've been on some teams where it's easy for us to get information out of the system or for the referrals to happen. We might not be built into the EMR system for the healthcare system to refer participants to us, but if we have that strong relationship built prior, then it's easy."*



Conclusion

Our findings from caregiver and stakeholder engagement in the healthcare sector center around caregivers' expressed desires for flexible, individualized education opportunities that will help them meet their families' health and wellness goals. Caregivers are receptive to nutrition education engagement at the healthcare clinic but want opportunities that let them engage in ways that work for their lifestyles and unique health goals. Likewise, healthcare sector stakeholders confirmed that clinicians are receptive to offering nutrition and health-focused interventions for their patients and families but lack the knowledge and resources, especially the educational materials themselves, to effectively implement such an intervention. These findings highlight a potential opportunity for SNAP-Ed Implementing Agencies to partner with healthcare providers to deliver effective nutrition and health-related interventions for families of young children in healthcare spaces.

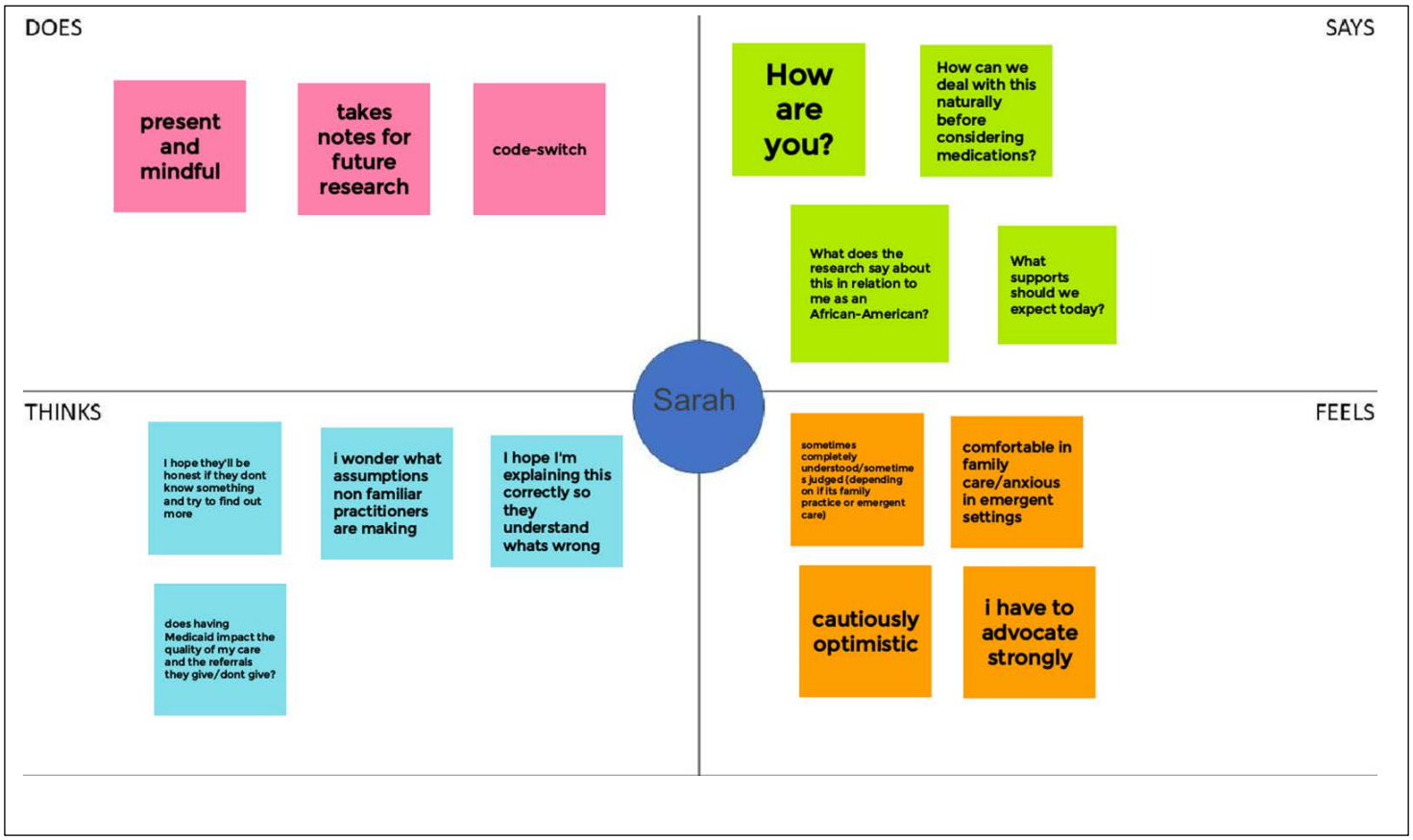
Appendices

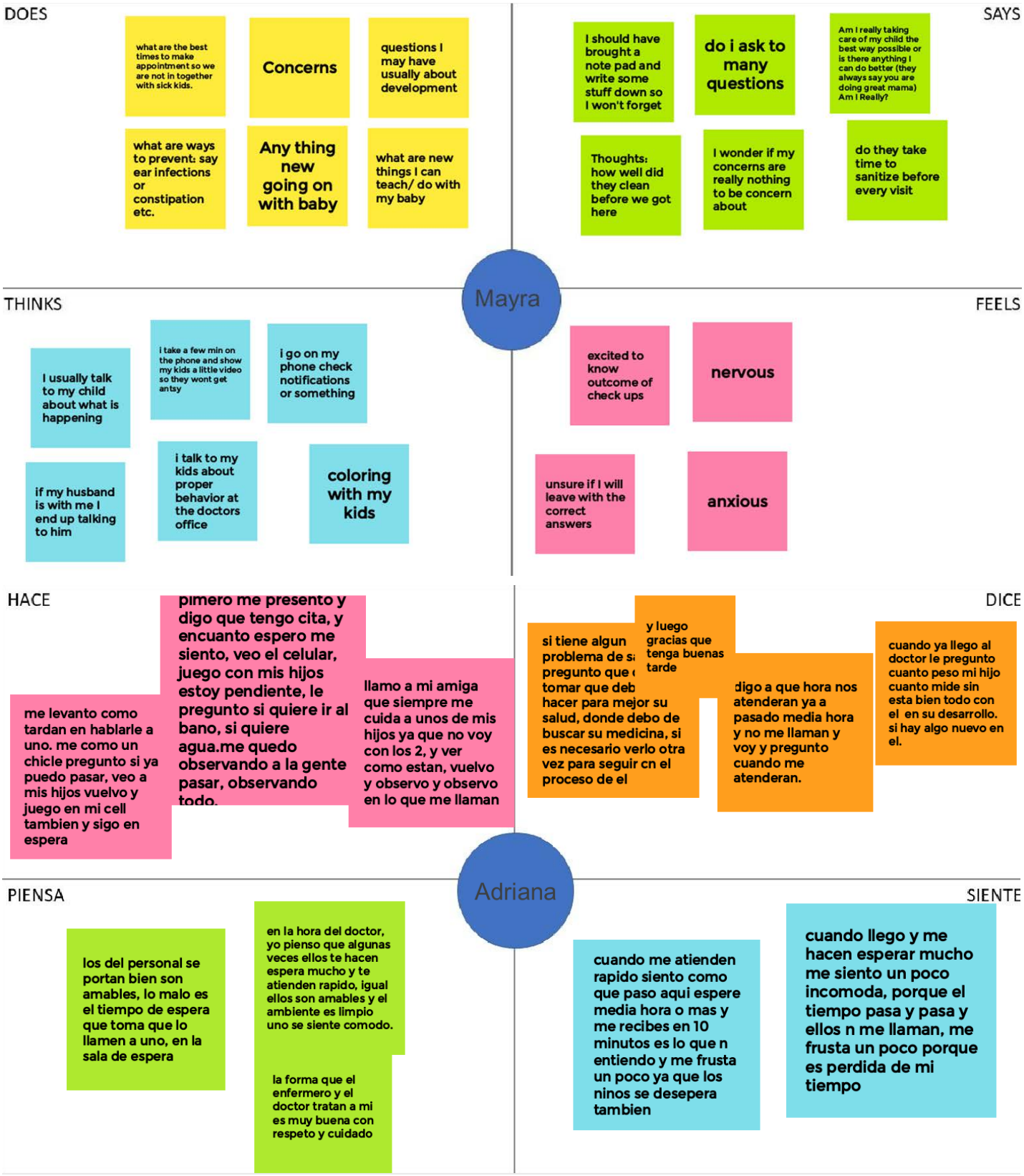
Table 1

Table 1: Caregivers Participating in SNAP-Ed Design Thinking Sessions Characteristics (n = 14)	
Characteristic	n (%)
Age	
18 – 29 years old	3 (21.0)
30 – 39 years old	10 (71.0)
40 – 49 years old	1
Gender Identity	
Woman	14 (100.0)
Ethnicity	
Hispanic or Latino/a/x	10 (71.0)
Not Hispanic or Latino/a/x	4 (29.0)
Race	
American Indian or Alaskan Native	1
Black or African American	3 (21.0)
White	8 (57.0)
Other	1
No selection	1
Highest Level of Education Completed	
Less than high school	1
Some high school	1
High school diploma/GED	2 (14.0)
Vocational/technical/trade school	1
Some college	4 (29.0)
Associates degree	4 (29.0)
Bachelor's degree	1
Employment	
Employed (part-time)	2 (14.0)
Employed (full time)	2 (14.0)
Self-employed (full time)	1
Stay-at-home caregiver	4 (29.0)
Student	1
Out of work for greater than a year	3 (21.0)
Unable to work	1
Marital Status	
Married or domestic partnership	11 (79.0)
Single, never married	3 (21.0)
Participation in Supplemental Nutrition and Safety Net Programs*	
Food pantry	4 (29.0)
Free or reduce-price school meals	8 (57.0)
Free summer meals	8 (57.0)
Head Start	3 (21.0)
Medicaid	14 (100.0)
SNAP/EBT (Formerly known as Food Stamps)	9 (64.0)
P-EBT (Pandemic-EBT)	10 (71.0)
WIC	11 (79.0)

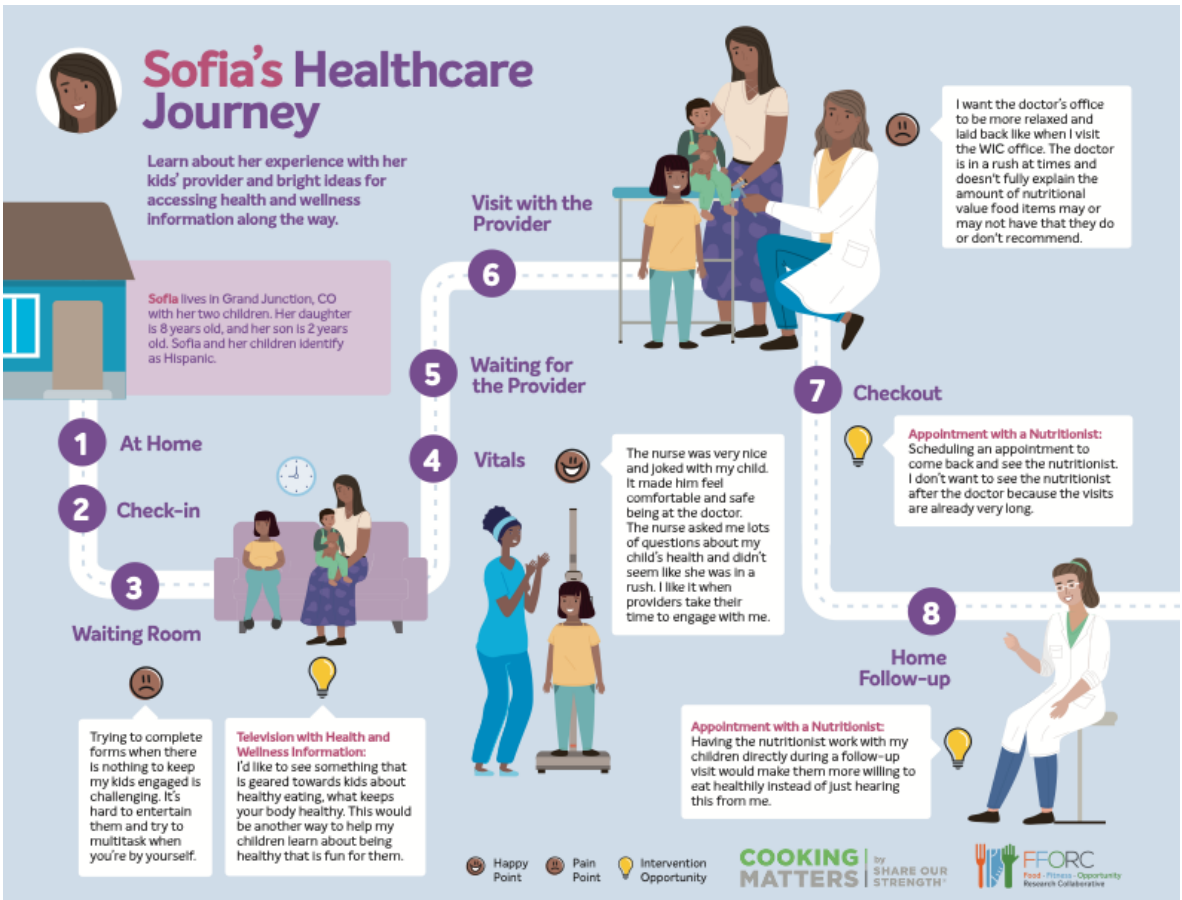
Number of children < 6 years old at home	
1 child	6 (43.0)
2 children	5 (36.0)
5 or more children	3 (21.0)
Type of Childcare	
At-home childcare only	6 (43.0)
At-home childcare and center-based childcare	1
At-home childcare, partner provides childcare, and center-based childcare	1
Friend or family (not partner/spouse) provides childcare	1
Center-based childcare only	3 (21.0)
At-home childcare and partner/spouse provides childcare	2 (14.0)
State	
Colorado	10 (71.0)
Massachusetts	2 (14.0)
North Carolina	2 (14.0)
Type of Neighborhood	
Rural	2 (14.0)
Suburban	5 (36.0)
Urban	7 (50.0)
Language Preferred for Design Thinking Sessions	
English	9 (64.0)
Spanish	5 (36.0)
**Caregivers could select multiple options for Supplemental Nutrition and Safety Net Programs. Numbers and percentages reflect participation in individual types of programs.*	

Caregiver Empathy Maps




DOES
what are the best times to make appointment so we are not in together with sick kids.
Concerns
questions I may have usually about development
what are ways to prevent: say ear infections or constipation etc.
Any thing new going on with baby
what are new things I can teach/ do with my baby
SAYS
I should have brought a note pad and write some stuff down so I won't forget
do i ask to many questions
Am I really taking care of my child the best way possible or is there anything I can do better (they always say you are doing great mama) Am I Really?
Thoughts: how well did they clean before we got here
I wonder if my concerns are really nothing to be concern about
do they take time to sanitize before every visit
Mayra
THINKS
I usually talk to my child about what is happening
i take a few min on the phone and show my kids a little video so they wont get antsy
i go on my phone check notifications or something
if my husband is with me I end up talking to him
i talk to my kids about proper behavior at the doctors office
coloring with my kids
FEELS
excited to know outcome of check ups
nervous
unsure if I will leave with the correct answers
anxious
HACE
me levanto como tardan en hablarle a uno. me como un chicle pregunto si ya puedo pasar, veo a mis hijos vuelvo y juego en mi cell tambien y sigo en espera
pimero me presento y digo que tengo cita, y encuanto espero me siento, veo el celular, juego con mis hijos estoy pendiente, le pregunto si quiere ir al bano, si quiere agua.me quedo observando a la gente pasar, observando todo.
llamo a mi amiga que siempre me cuida a unos de mis hijos ya que no voy con los 2, y ver como estan, vuelvo y observo y observo en lo que me llaman
DICE
si tiene algun problema de s pregunto que tomar que deb hacer para mejor su salud, donde debo de buscar su medicina, si es necesario verlo otra vez para seguir cn el proceso de el
y luego gracias que tenga buenas tarde
digo a que hora nos atenderan ya a pasado media hora y no me llaman y voy y pregunto cuando me atenderan.
cuando ya llego al doctor le pregunto cuanto peso mi hijo cuanto mide sin esta bien todo con el en su desarrollo. si hay algo nuevo en el.
Adriana
PIENSA
los del personal se portan bien son amables, lo malo es el tiempo de espera que toma que lo llamen a uno, en la sala de espera
en la hora del doctor, yo pienso que algunas veces ellos te hacen espera mucho y te atienden rapido, igual ellos son amables y el ambiente es limpio uno se siente comodo.
la forma que el enfermero y el doctor tratan a mi es muy buena con respeto y cuidado
SIENTE
cuando me atienden rapido siento como que paso aqui espere media hora o mas y me recibes en 10 minutos es lo que n entiendo y me frusta un poco ya que los ninos se desepera tambien
cuando llego y me hacen esperar mucho me siento un poco incomoda, porque el tiempo pasa y pasa y ellos n me llaman, me frusta un poco porque es perdida de mi tiempo

Caregiver Journey Maps



Key Informant Interview Guide

Questions for All Key Informants

1. What are your initial reactions to these [four intervention] ideas?
2. Which intervention idea seems the most feasible to implement in your workplace/clinic/office?
3. Which intervention idea seems like it would be most helpful for the families you serve?
    - What stands out about this intervention?
    - How might this work in your clinic?
    - What roles and/or resources would SNAP-Ed need to provide to make this successful in your clinic?
    - What types of nutrition and wellness questions do you receive from your patients that you wish you had more time and capacity to address?
    - What potential barriers do you envision to the intervention's implementation and success?
4. Has your practice ever implemented a similar type of health and wellness intervention?
5. What else would you like to share about how we could support families you serve or make it easier for primary care offices to offer nutrition and wellness support?
6. Who else should we talk to as we are exploring this intervention idea?
7. What questions do you have for us?

Additional Questions for SNAP-Ed Implementing Agency Staff Members:

1. Have/how have SNAP-Ed staff worked in healthcare offices or other HIPAA governed spaces in the past?
2. Have SNAP-Ed staff ever accessed patient records or used programs like MyChart?
3. Where is the line between nutrition education and counseling?
4. Is there anything that we are not considering regarding SNAP-Ed and healthcare?
5. How would you like this packaged as a SNAP-Ed IA? Are there any tools or resources that would greatly help?
6. What does an IA need to execute an intervention like this?
7. What are the pain points, specific to an intervention idea or in general, that you envision?