

Designing for Behavior Change: A Human-Centered Approach to Research and Intervention

American Heart Association
Health Care by Food

Designing for Behavior Change: A Human-Centered Approach to Research



1

Foundations of Human-Centered Design and Behavior Change

Understand the principles of HCD and systems design, apply the COM-B model, and differentiate between systemic and individual interventions.

2

Mapping the Journey: A Human-Centered Approach to "Food is Medicine"

Apply journey mapping to reframe "Food is Medicine," focusing on user experiences and integrating insights into research.

3

Designing Targeted Interventions: Combining COM-B and Journey Mapping

Create nuanced behavior change strategies by merging COM-B and journey mapping, refining the "Food is Medicine" journey to enable critical behaviors

4

Personas in Action: Driving Insights for Behavior Change

Develop and apply personas within the COM-B and journey mapping frameworks to generate actionable insights that inform your research strategy.

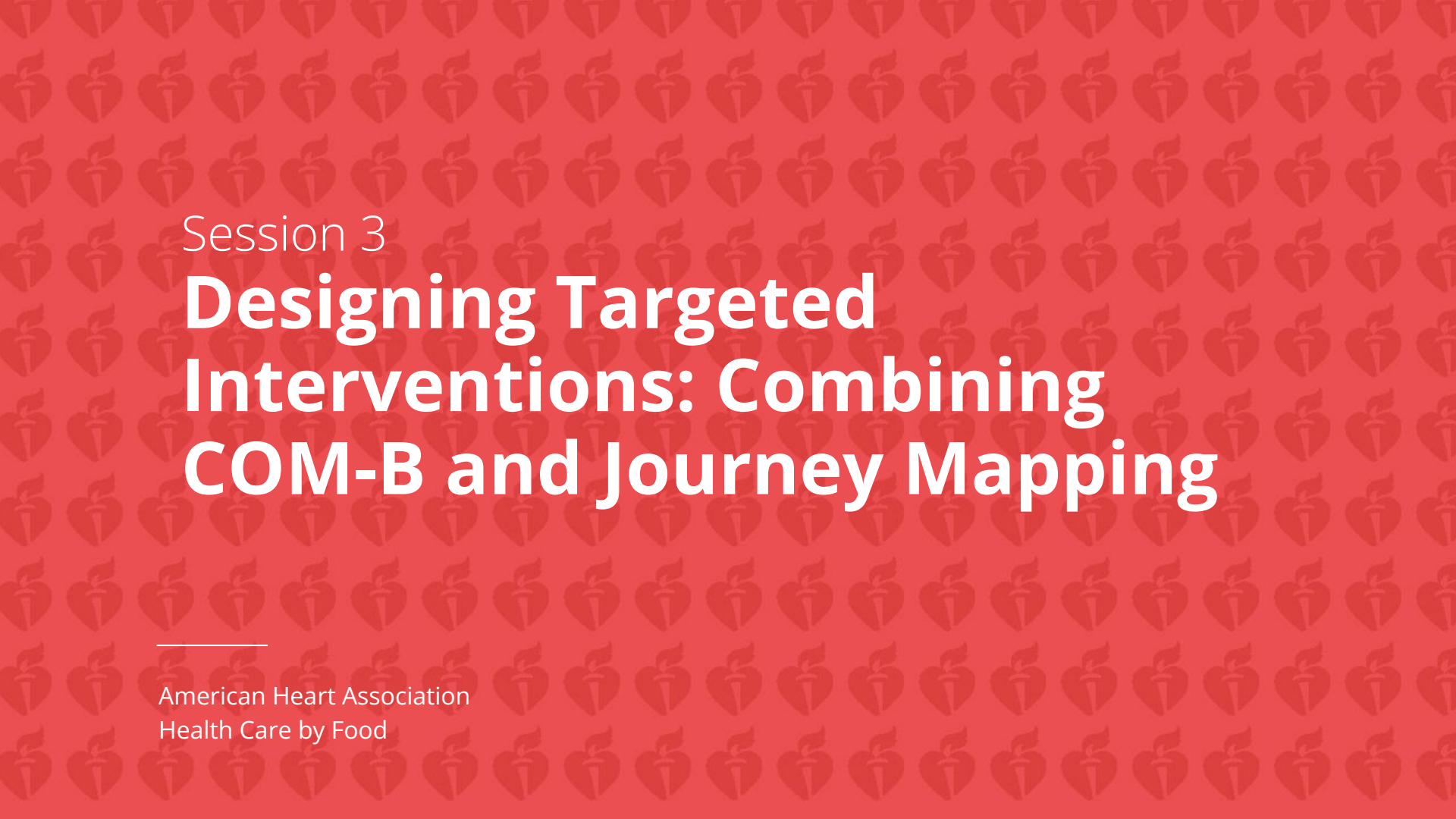


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Disclaimer

Statements, opinions, and study results presented in this presentation may not reflect the policy or science position of the American Heart Association, unless otherwise noted.

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Session 3

Designing Targeted Interventions: Combining COM-B and Journey Mapping

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Session 3 goal:

Create nuanced behavior change strategies by merging COM-B and journey mapping, refining the "Food is Medicine" journey to enable critical behaviors

Designing for Behavior Change: A Human-Centered Approach to Research and Intervention

Learning Objectives:

1. Refine the "Food is Medicine" (FIM) journey by identifying and anchoring each stage in critical behaviors that must be enabled for successful outcomes.
2. Combine the COM-B model of behavior change with the journey mapping framework to create a nuanced approach for designing interventions to enable behaviors across the journey.
3. Integrate this framework into your research strategy and approach to enhance the design of your study.

Review: Food is Medicine journey



Clinician
Interaction



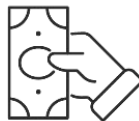
Prescription
by provider



Food & meal
planning



Food
selection



Purchase



Acquisition



Preparation



Consumption



Health
Outcomes

The Last Mile:
From fridge to mouth

Review: Food is Medicine journey



Clinician
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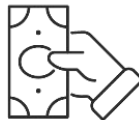
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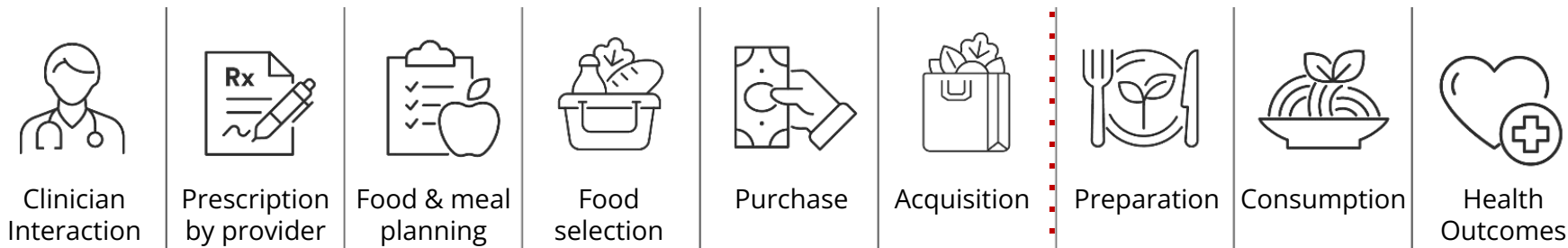


Health
Outcomes

The Last Mile:
From fridge to mouth

Every stage of the journey is **critical** and **contingent** on the one before it.

The journey as an anchor



The Last Mile:
From fridge to mouth

Every stage of the journey is anchored by a particular, and critical, **behavior**.

We must consider how **our research** advances our understanding of behavior change across the journey.

Designing an FIM program

Food is Medicine Journey

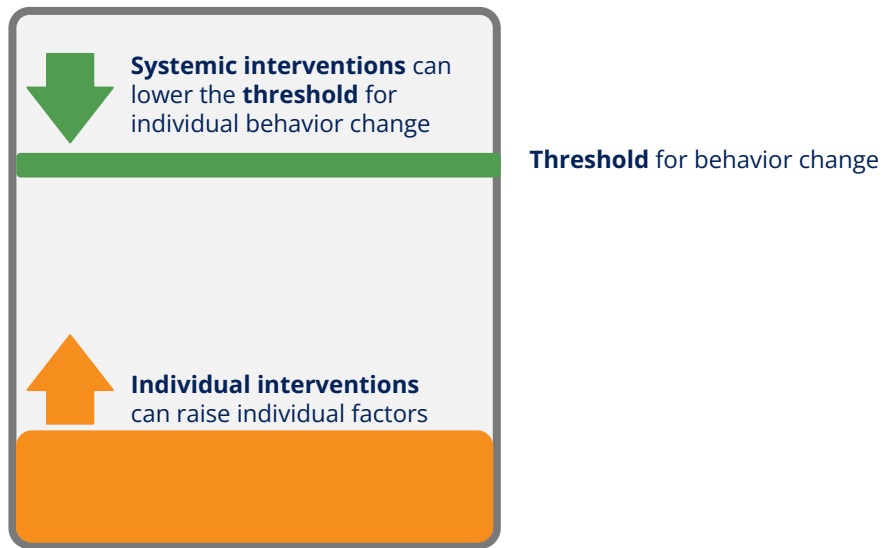


COM-B Behavior Change Model



Enabling **human behavior** at each stage of the **journey**.

Review: COM-B model for behavior change



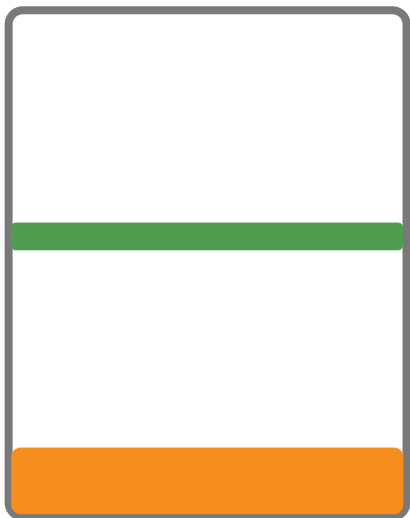
The original COM-B model describes individual factors (capability, motivation, or opportunity), and how interventions can shift those factors to enable behavior change.

Healthy Food Selection

Interventions and intervention elements can contribute to the behavior of **HEALTHY FOOD SELECTION** in various ways.

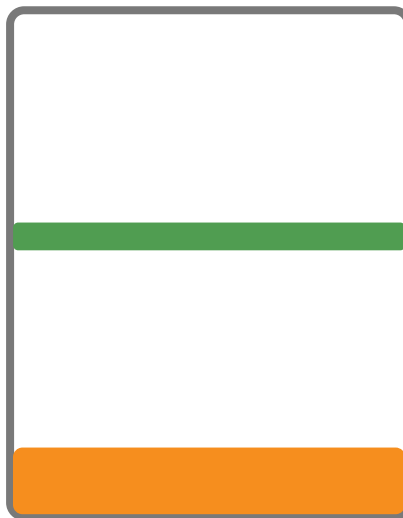


Food
selection



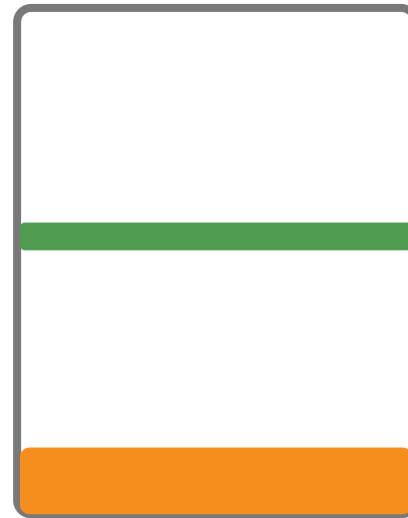
CAPABILITY

psychological or physical ability to
enact a behavior



OPPORTUNITY

physical or social environment that
enables behavior



MOTIVATION

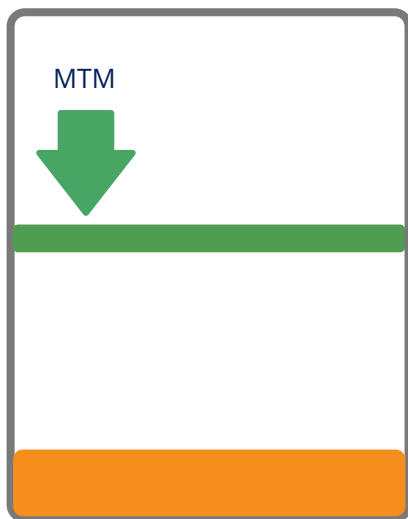
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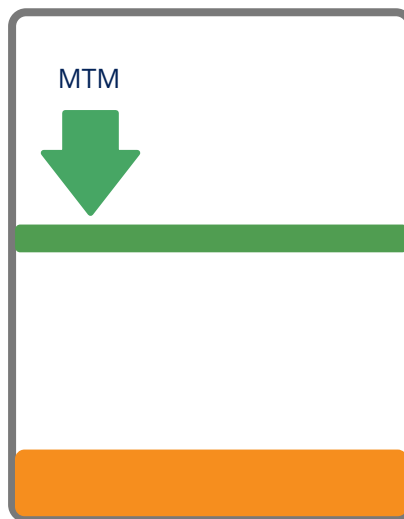


Food
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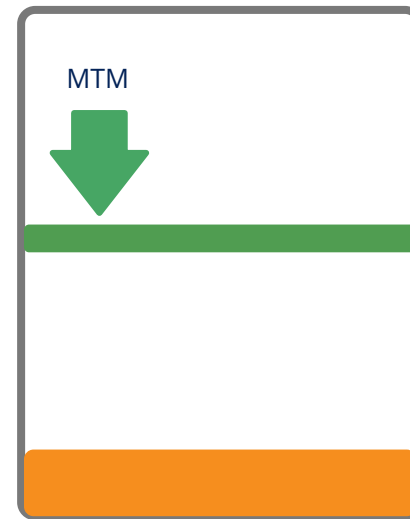
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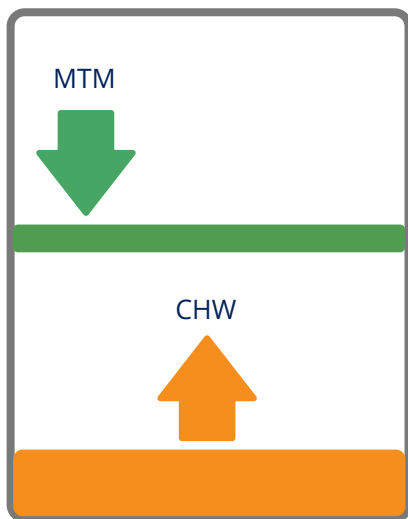
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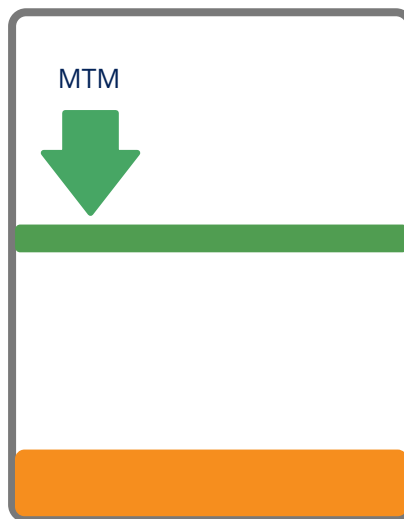


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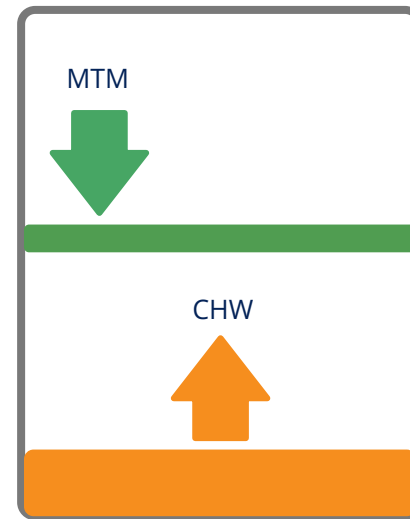
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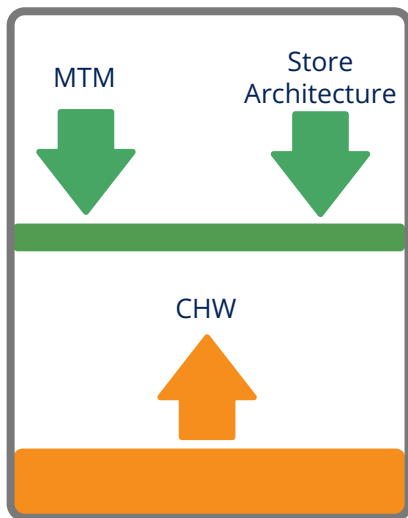
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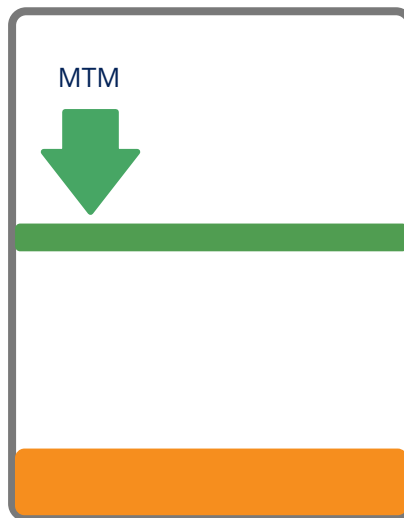


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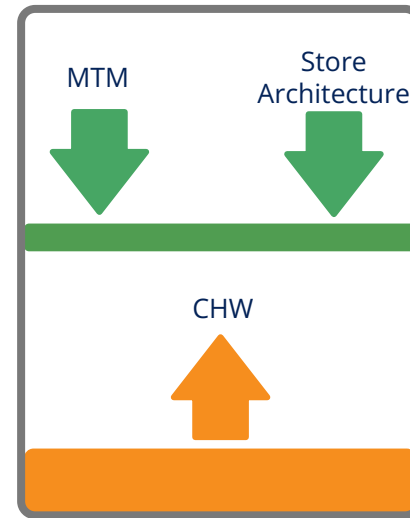
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OPPORTUNITY

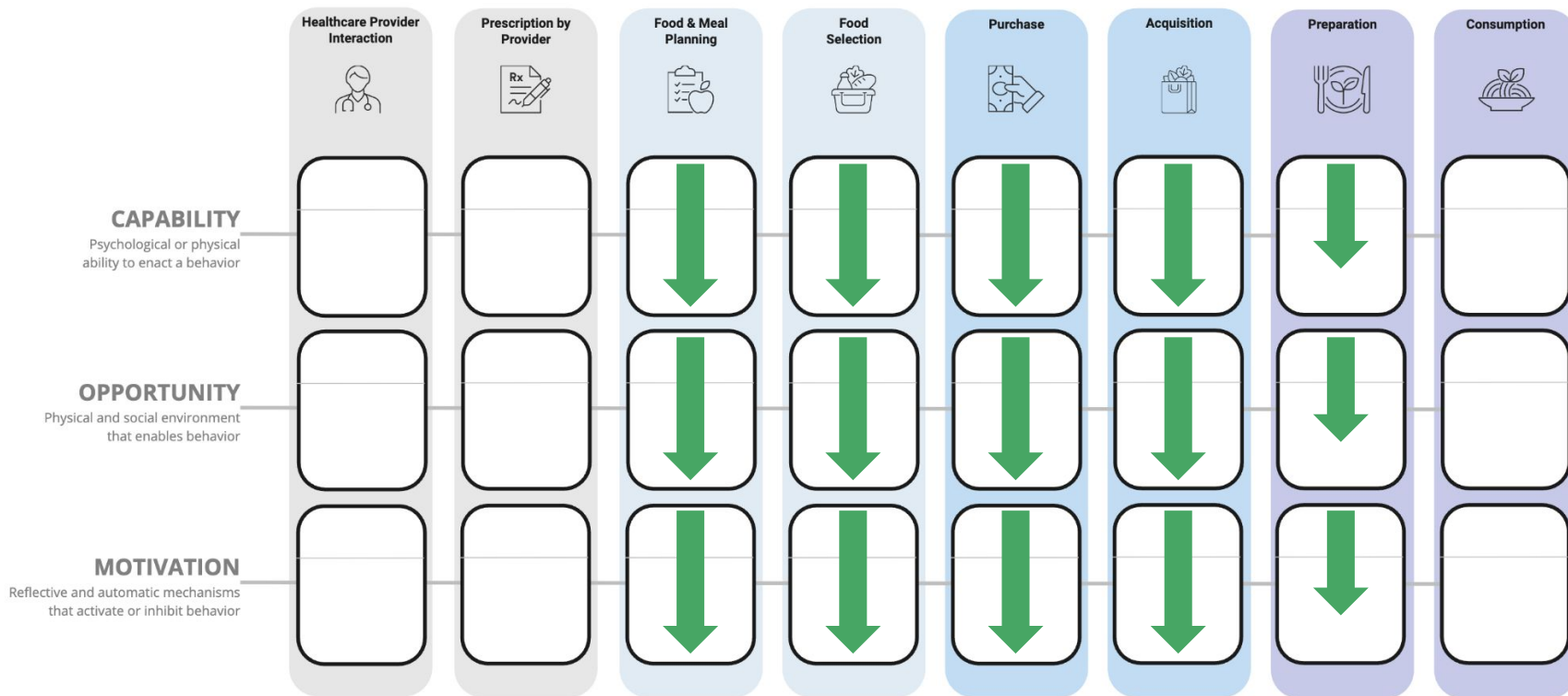
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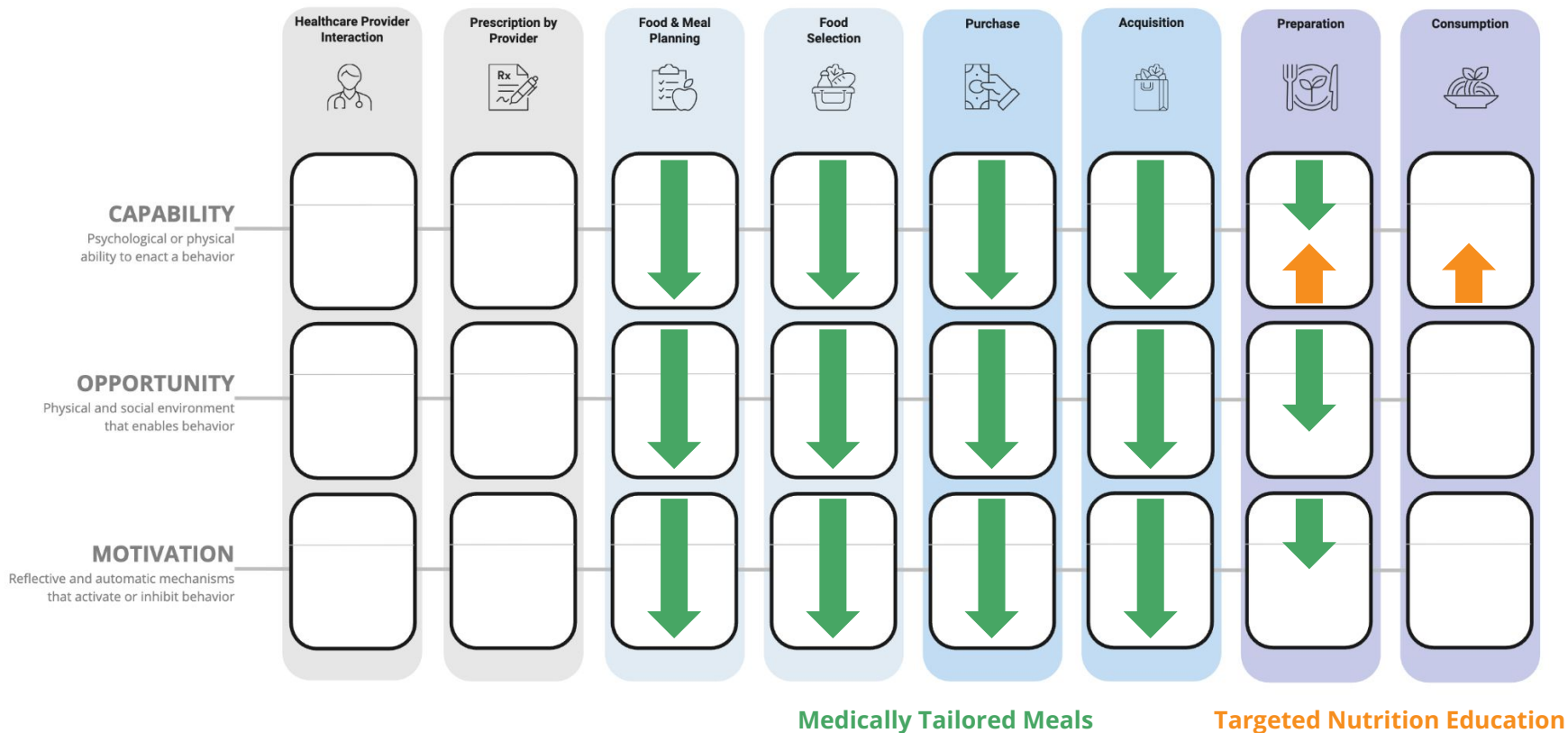
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Medically Tailored Meals

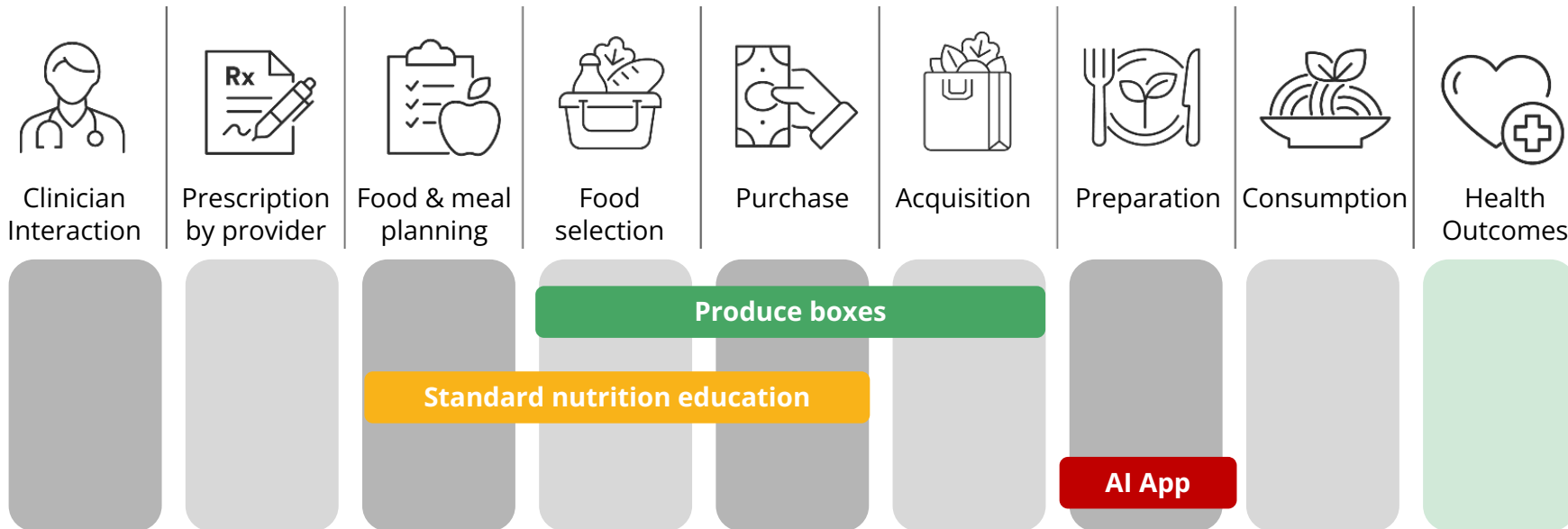


MTMs + Targeted Nutrition Education



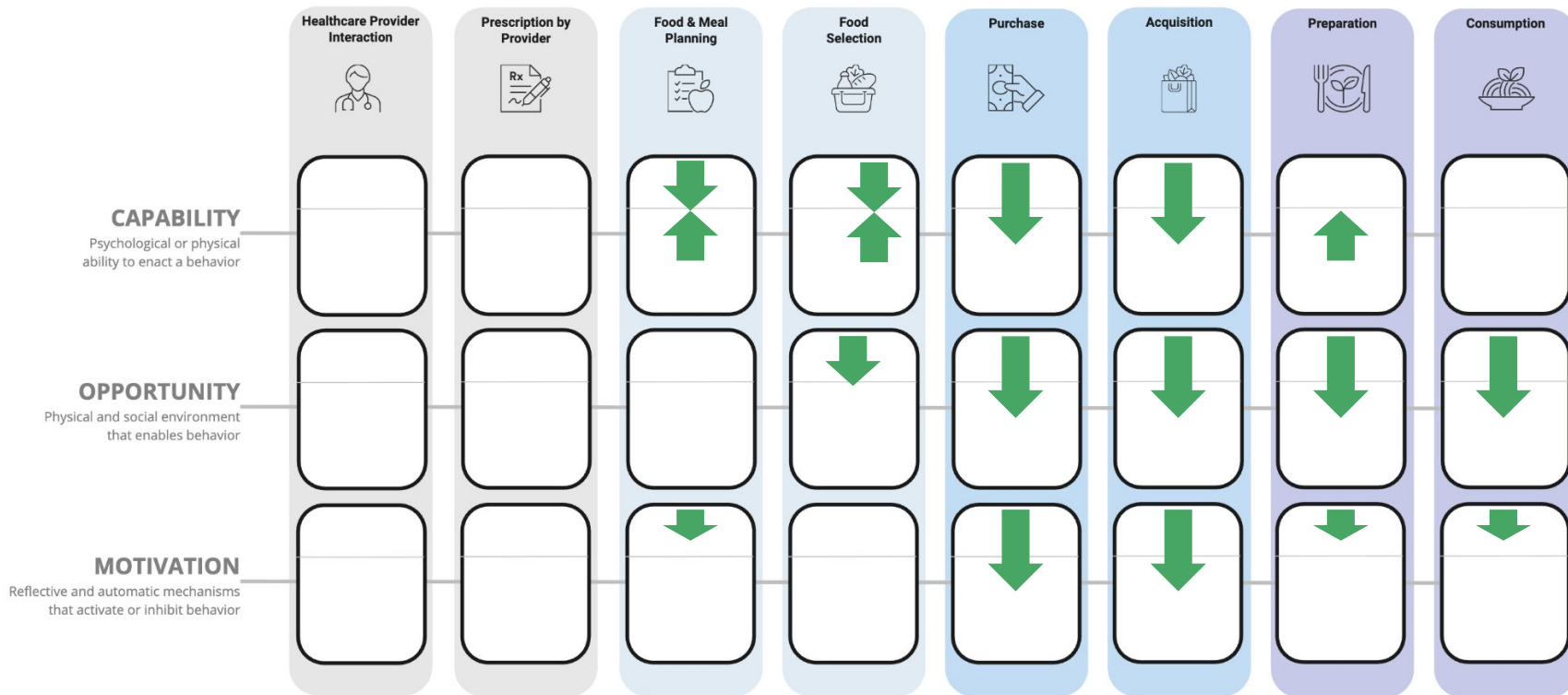
Example from the early studies

Pilot study 2



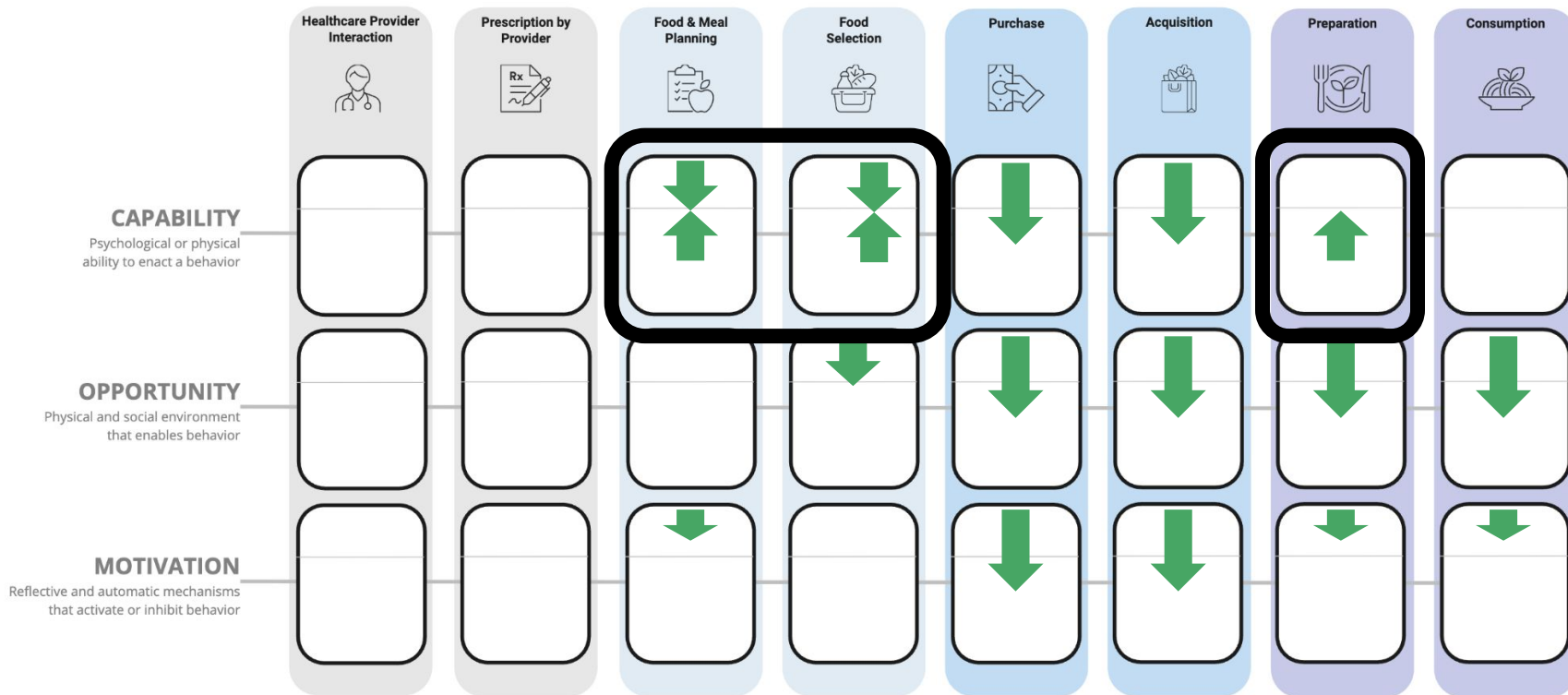
Example from the early studies

Pilot study 2: Produce Boxes + Nutritional education + AI Prep App



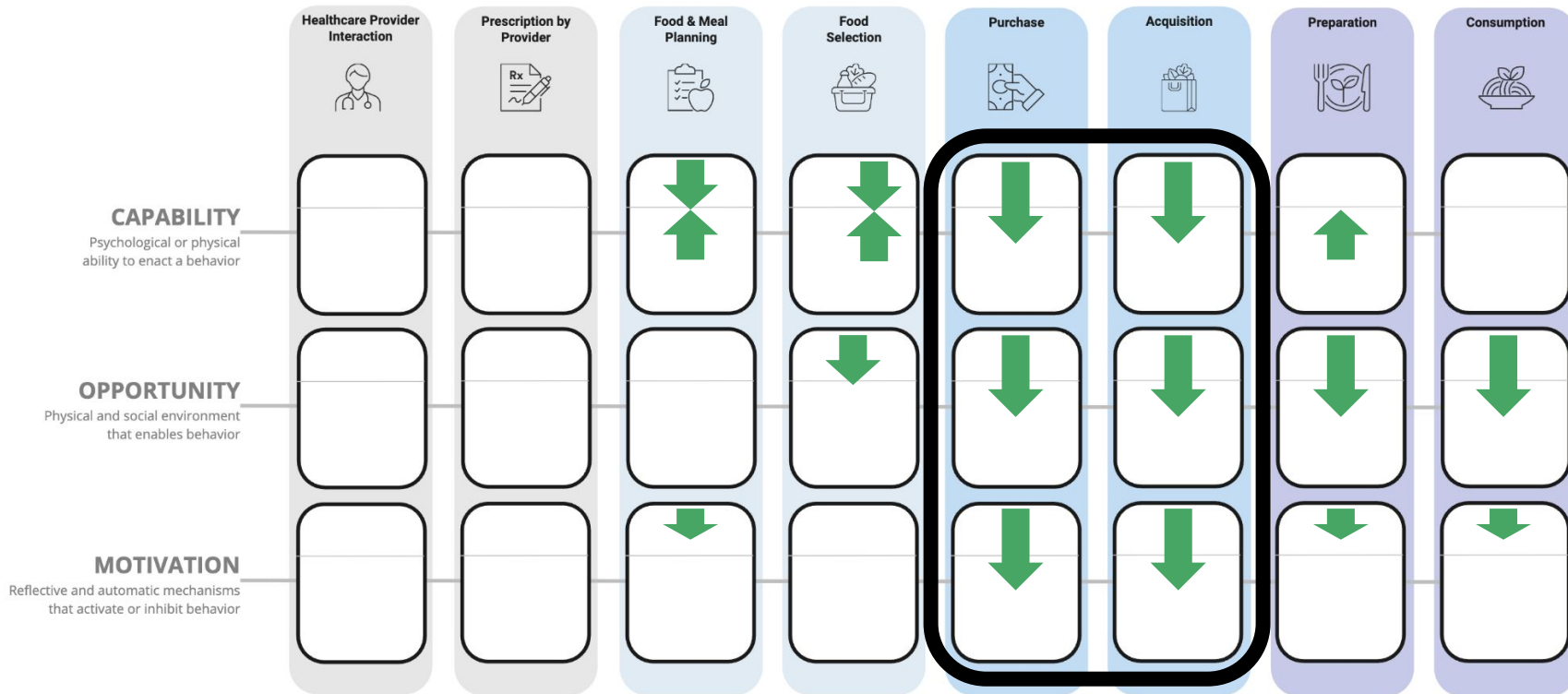
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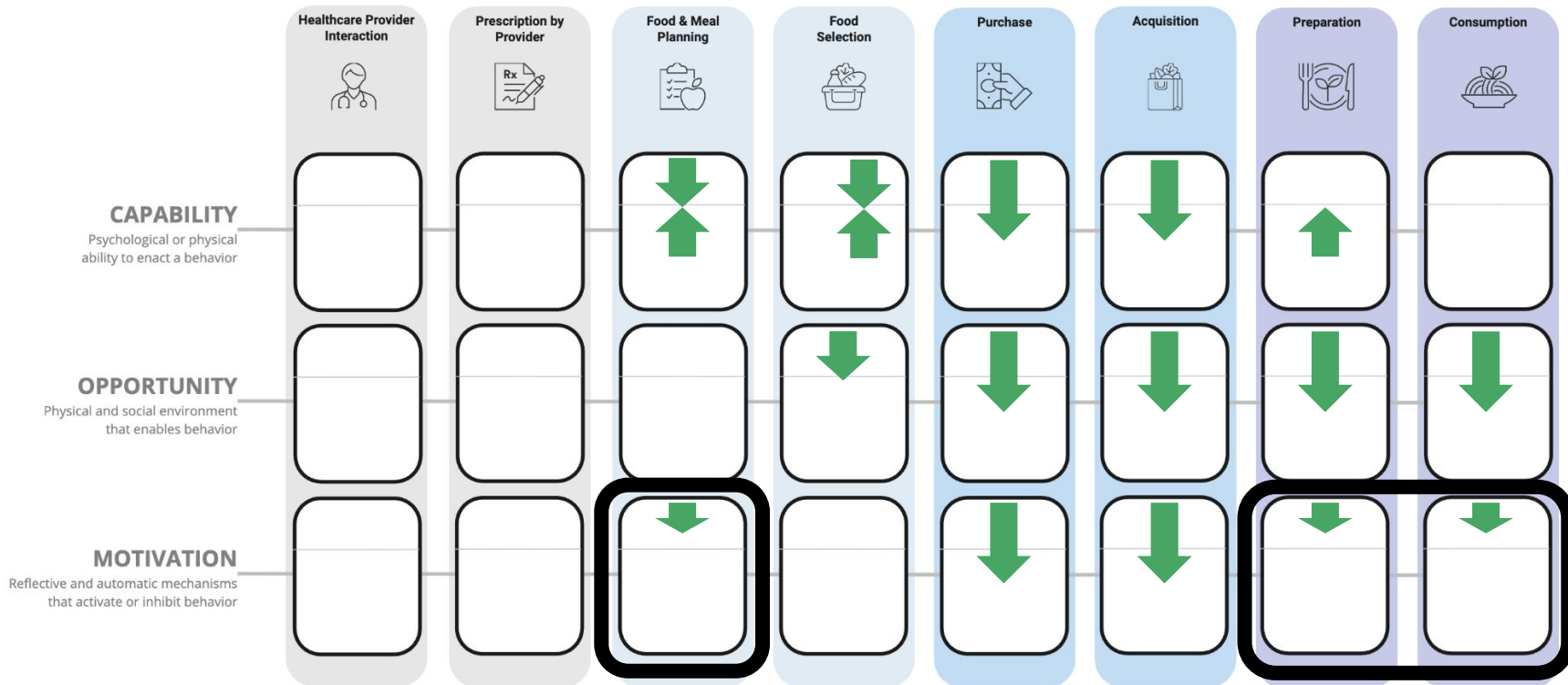
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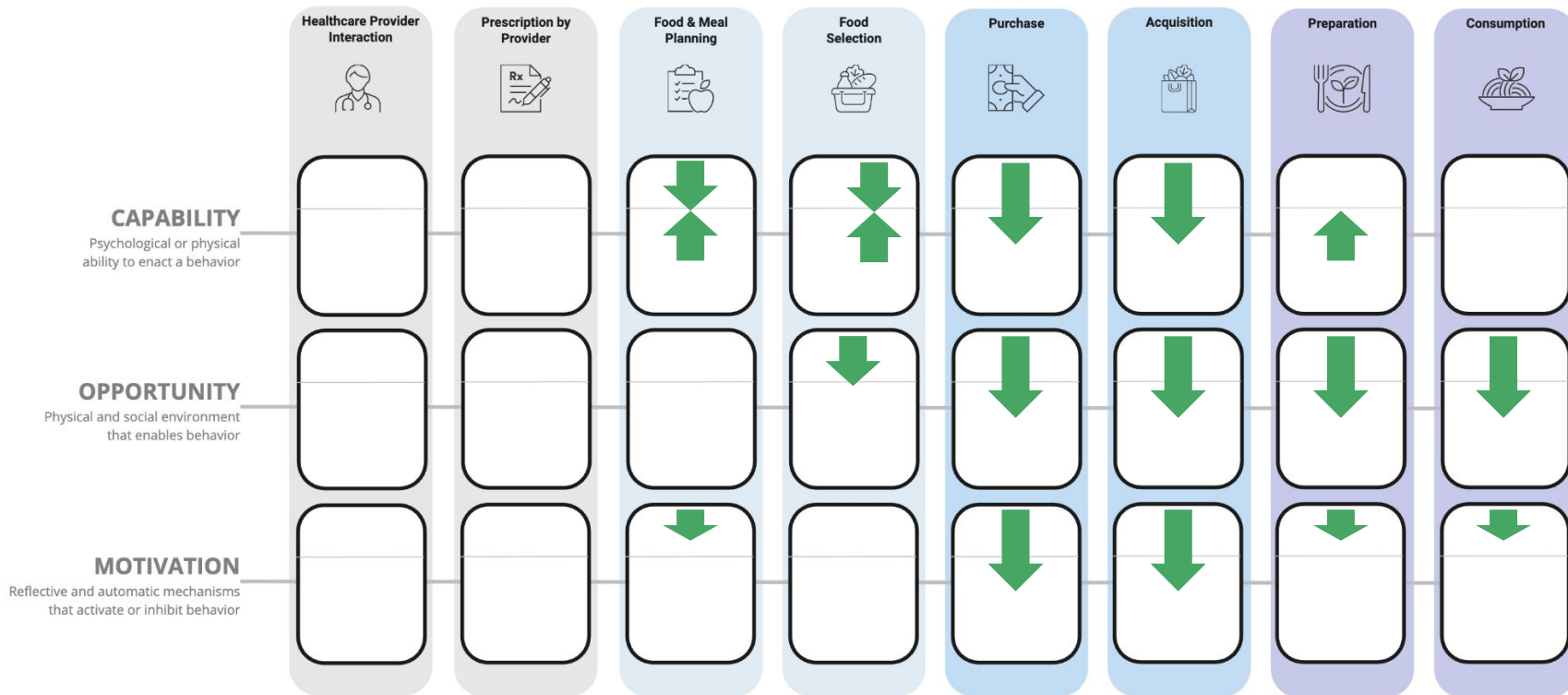
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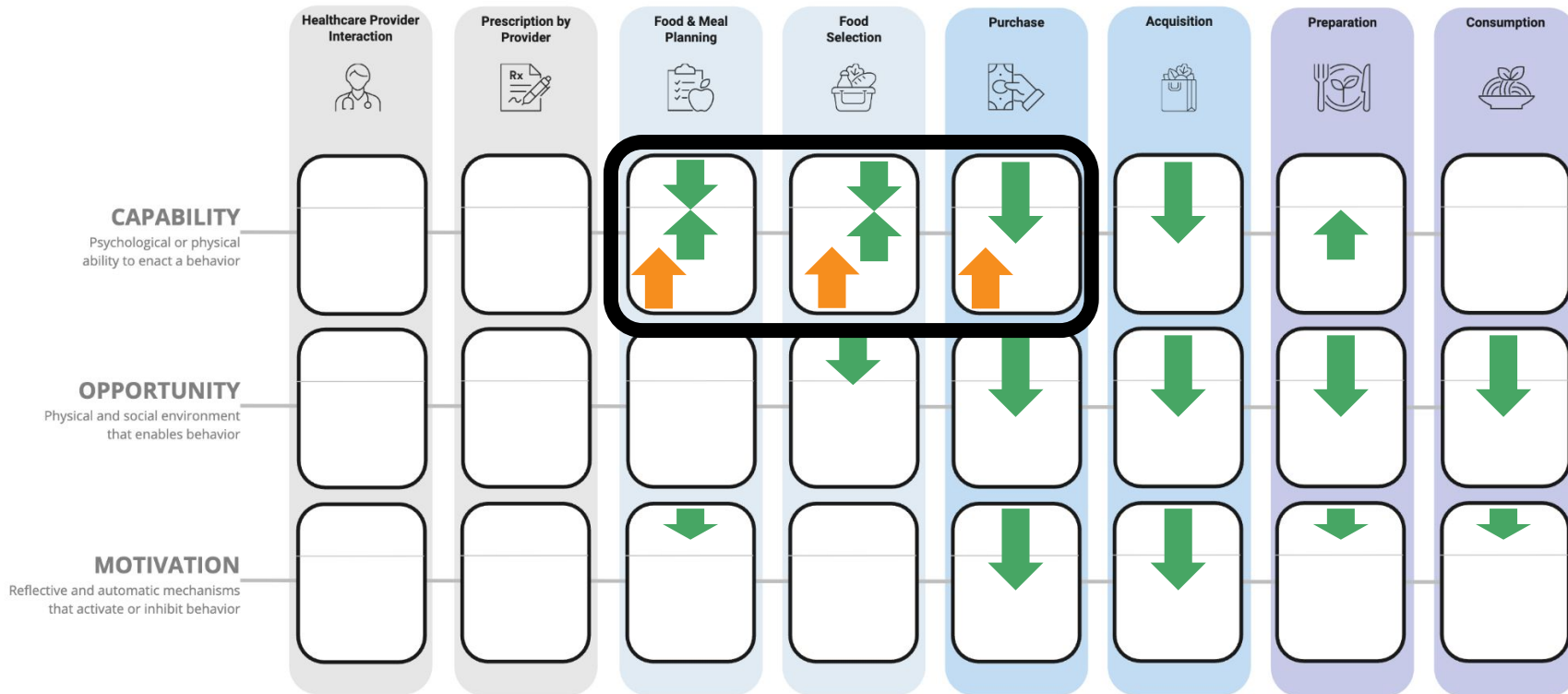
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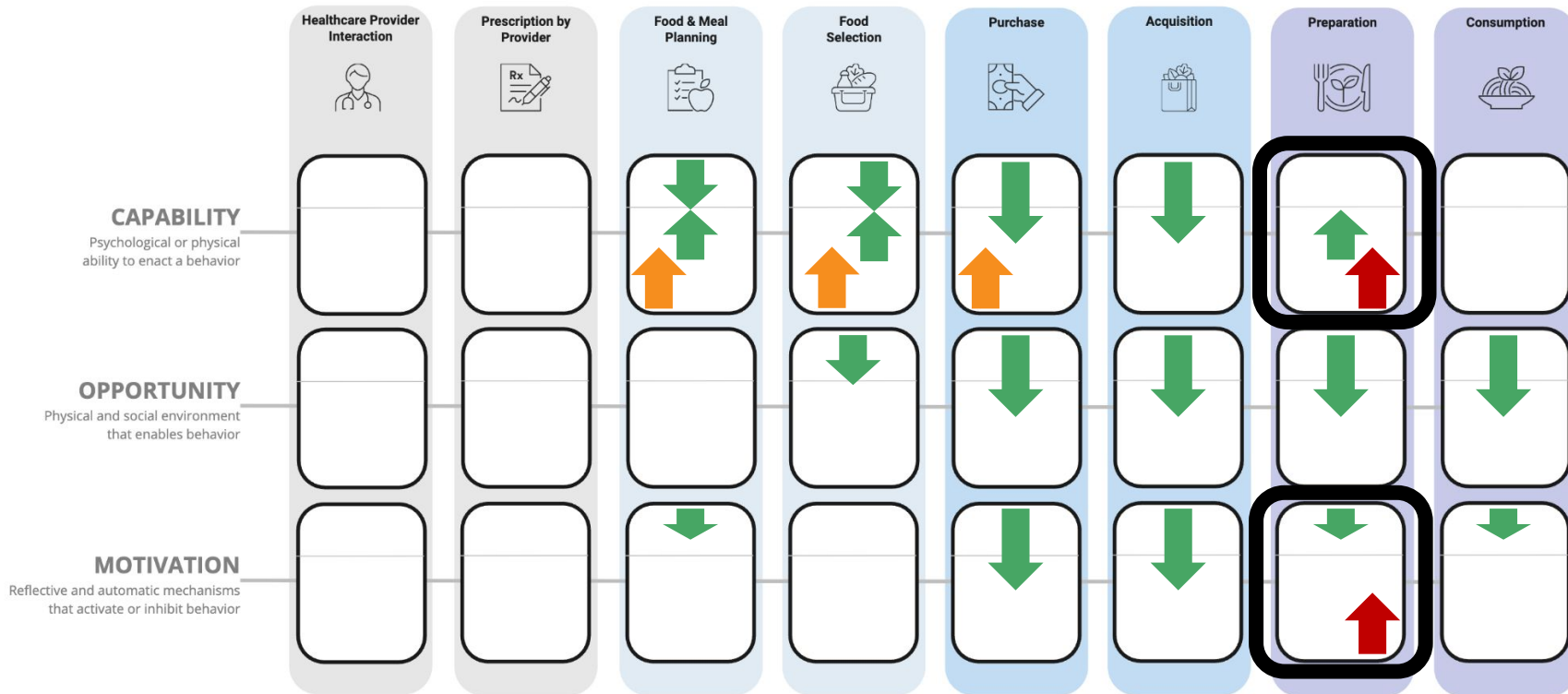
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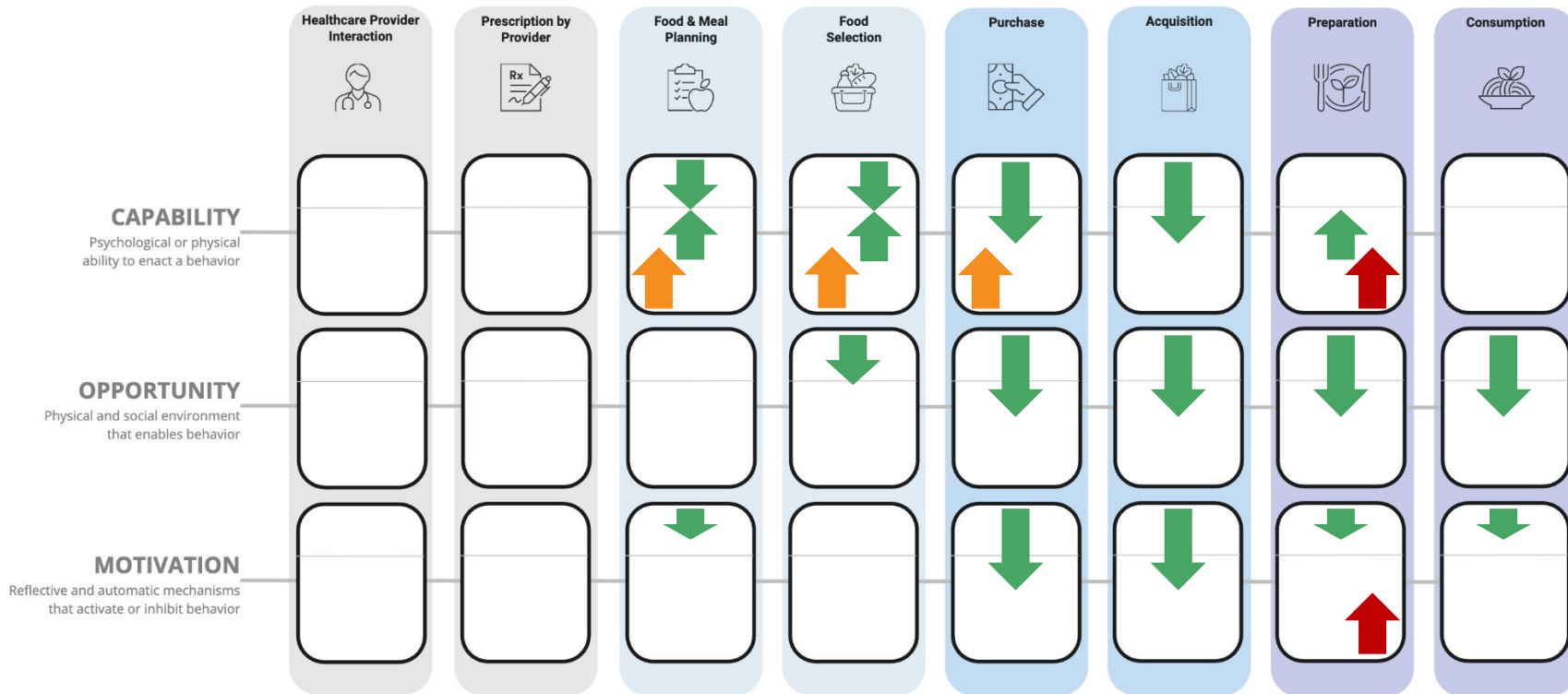
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Session 3 Exercise

Designing for Behavior Change: A Human-Centered Approach to Research and Intervention

Session 3 Exercise: Mapping Interventions to Journey Stages



Health Care  Food™
Accelerating the Integration of Food is Medicine in Health Care

Instructions.

For each intervention or intervention element in your study, complete one worksheet. Use the checkboxes to mark which journey stages the intervention element addresses, building on the exercise from Session 2. For each stage marked, indicate how the intervention influences one or more components of the COM-B model:



Use an up arrow to indicate a **individual intervention** that raises individual capability, opportunity, and/or motivation.



Use a down arrow to indicate a **systemic intervention** that lowers the threshold for individual behavior change.

	Healthcare Provider Interaction	Prescription by Provider	Food & Meal Planning	Food Selection	Purchase	Acquisition	Preparation	Consumption
Element from Session 2 Exercise	☐	☐	☐	☐	☐	☐	☐	☐
CAPABILITY Psychological or physical ability to enact a behavior								
OPPORTUNITY Physical and social environment that enables behavior								
MOTIVATION Reflective and automatic mechanisms that activate or inhibit behavior								

The pictured worksheet is available for download.

Use separate worksheets for each intervention or intervention element

We encourage teams to complete this collaboratively.

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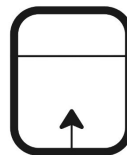
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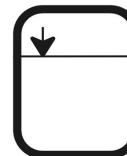
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BEHAVIOR CHANGE

- Many studies primarily center food provision, with additional elements framed to support that element, as opposed to framing all elements as part of a cohesive strategy for behavior change.
- Support elements can be further specified by identifying the journey stages targeted and the mechanisms for behavior change (COM-B)
- Systemic interventions can reduce or obviate the need for behavior change, but it's important to consider the eventual transition off

JOURNEY GAPS

- Limited focus on health care provider interactions
- Measuring consumption relies on proxy measures

HUMAN CONTEXT

- In-home context, lived experience and family dynamics around food are underexplored
- Orientation around solving for human needs

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Human-Centered Design Task Force



Stacey Chang is a designer of new creative solutions to age-old dilemmas in health. He focuses on building complex adaptive systems that can respond to the dynamic challenge of producing health in human society, and currently advises a broad array of efforts seeking to build more sustainable, equitable, and effective models. Prior to founding New Origin

Studio, Stacey served as the Founding and Executive Director of the Design Institute for Health at the University of Texas at Austin. The Design Institute was a first-of-its-kind institution, dedicated to creating systemic human-centered solutions in clinical and community contexts.

Embedded as an integrated part of an operating health system and a medical education and training program, the Institute considered topics as broad as the design of products and services, the built environment, integration of social and medical interventions, the structure and strategy of national health systems, and new models for societal health at a global scale.

Before his academic tenure, Stacey served as the Managing Director of the Healthcare practice at IDEO, the global design and innovation firm. Clients included governments, research institutions, hospitals, pharma, insurance, medtech, and all the upstarts trying to rewrite the script, in both established and emerging markets.

Stacey presents frequently and is widely published, including in the New England Journal of Medicine, NEJM Catalyst, Harvard Business Review, and Politico. He has served as a TEDMED Editorial Advisory Board member, a Thought Leader for NEJM Catalyst, an Eisenhower Fellow, and an advisor to the Global Delivery arm of the Bill and Melinda Gates Foundation. He holds degrees in engineering from MIT and Stanford.



Natalie Privett PhD leans into messy challenges and complex systems. She leverages deep expertise in systems theory, design, and health systems to reframe tenacious problems and design transformational action to advance health. Across her professional roles, Natalie has advanced systemic opportunities at every

level of health and care while also training future health systems change agents, from physicians to policy makers to designers.

Before joining New Origin Studio, Natalie was Director of Systems Design at the Design Institute for Health at the Dell Medical School at the University of Texas at Austin, a first-of-its kind academic institution dedicated to developing and applying creative design approaches to solving complex large-scale health system challenges. Concurrently, she also launched and taught in the Masters of Arts in Design in Health. Prior to University of Texas, Natalie served as Lead System Design Engineer and Assistant Professor of Health Systems Design & Global Health at the Mount Sinai Health System and Icahn School of Medicine at Mount Sinai in New York City. She was also previously Assistant Professor at New York University's Wagner Graduate School of Public Service.

Natalie has a MS and PhD in Management Science & Engineering from Stanford University and a BS in Industrial Engineering from Texas A&M University. She was a Global Health Research Fellow at the MIT-Zaragoza Logistics Center.