

Improving Hispanic children's early language environments

HÁBLAME
BEBÉ



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HÁBLAME BEBÉ



Introduction

- Early language exposure is critical for the development of foundational brain circuitry required for higher learning
- A child's early language exposure sets the foundation for cognitive ability, literacy, school readiness, and ultimately, educational achievement
- The best language interaction happens when caregivers speak their home language to their infants and children
- The Language Nutrition solution

Study rationale

- Our precision home-visiting approach
- The problem:
 - Disparities facing low-income Hispanics
 - Low-income Hispanic children's developmental and language-related delays identified significantly later
 - The language ideology problem in the US (Baralt, Darcy Mahoney, & Brito, in press)
 - A striking absence of accessible, culturally acceptable, and evidence-based interventions that teach about the role of bilingual language development for low-income Hispanic families
- Our hypothesis
- Nurse-Family Partnership

Role of an Háblame Bebé Coach

- Nurses at Nurse-Family Partnership in Miami-Dade County will be trained to **educate and coach** expectant and new mothers about why and how to **talk with their babies**



Believe every parent has the power to help their child learn



Share knowledge and enthusiasm for Language Nutrition



Explicitly address language ideology, why/how to be proud to be Hispanic



Increase verbal transactions between mothers and babies

PARENT GUIDE

T

TALK

with your baby, paying attention to his or her social and verbal communication

- ▶ Talk about everything.
- ▶ Ask your baby questions.
- ▶ Answer for your baby.
- ▶ Respond to your baby's expressions, vocalizations, and movements.

I

INTERACTIONS

will grow your baby's brain

- ▶ Feed your baby words.
- ▶ Be a "sportscaster." Narrate what you do all day long.

P

PRACTICE

- ▶ Talk with your baby all the time!
- ▶ Talk with your baby everywhere you go!

S

SING

read, and tell stories

- ▶ Sing songs.
- ▶ Read books to your baby.
- ▶ Tell your baby stories.

HÁBLAME BEBÉ (Talk to me Baby)

1. U.S. *Learn the Signs, Act Early* Developmental milestones in Spanish



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2. **Bilingual vocabulary tracker in Spanish and in English**



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3. **Videos and educational modules**
4. **Motivational push notifications**

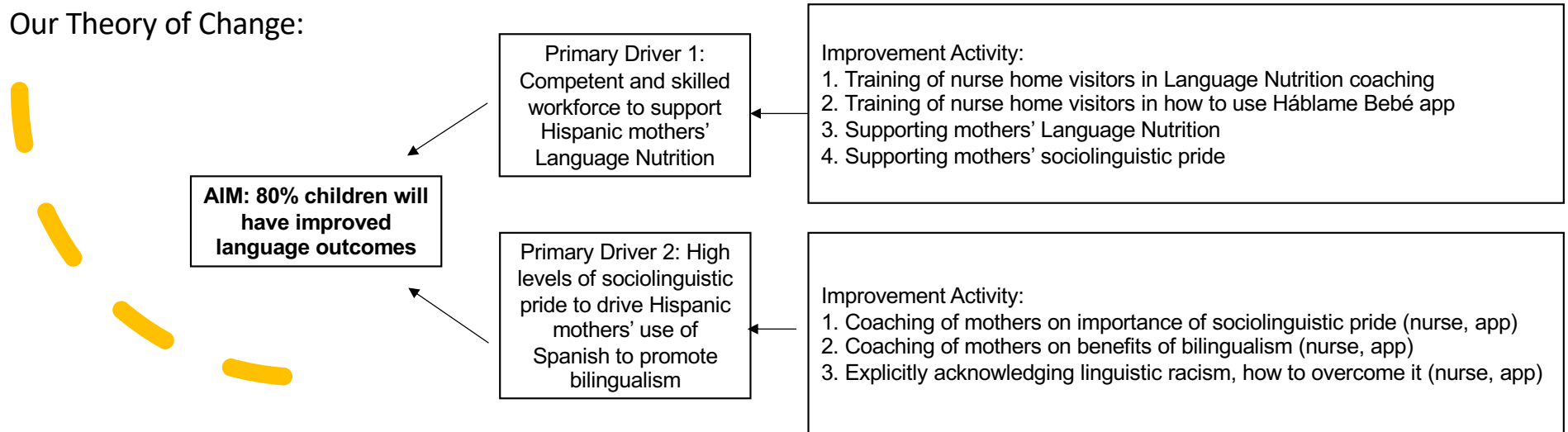




Objectives

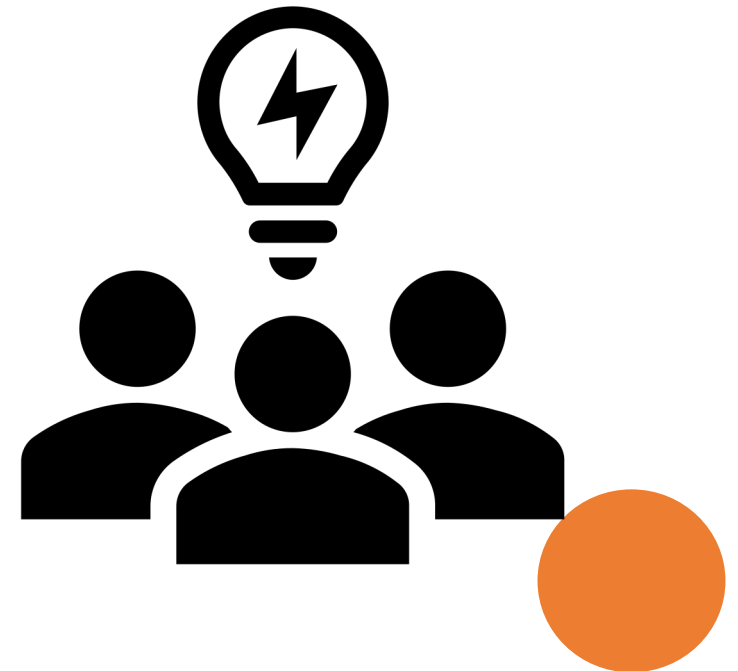
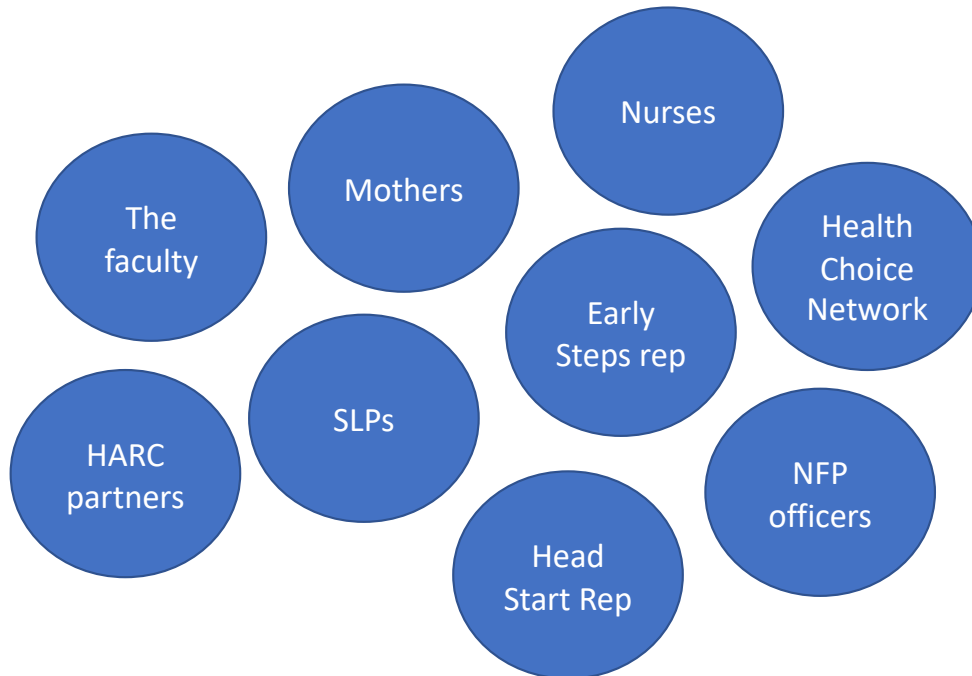
OUR AIM:	To improve the Language Nutrition of low-income Hispanic children enrolled in Nurse-Family Partnership.
OUR MEASURES:	We will measure outcomes for nurses, mothers, and children. These may change as we progress across our PSDA cycles and as determined by the nurses and team.
OUR IDEAS:	Ideas, or the changes made to meet our aim, will be determined as they will be generated from the rapid cycle testing, where each cycle is guided by the Plan-Study-Do-Act (PSDA) method.

Our Theory of Change:



Methods

- **Step 1: Team formation**



Methods

- **Step 2: PSDA cycles** (CQI Model for Improvement)

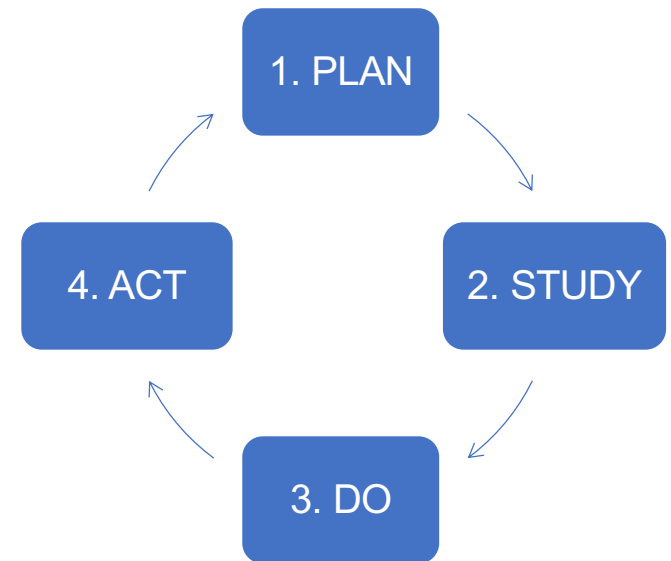


What are we trying to accomplish?

How will we know that a change is an improvement?

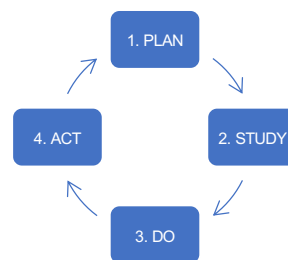
What change(s) can we make that will result in improvement?

Following the Breakthrough Series Collaborative Model (Arbour et al., 2019), we will use a rapid-cycle evaluation framework that allows for continuous adjustments and new ideas to be added to our intervention based on team-based ideas that are generated from iterations of data feedback. We will do this across three Plan-Study-Do-Act cycles.



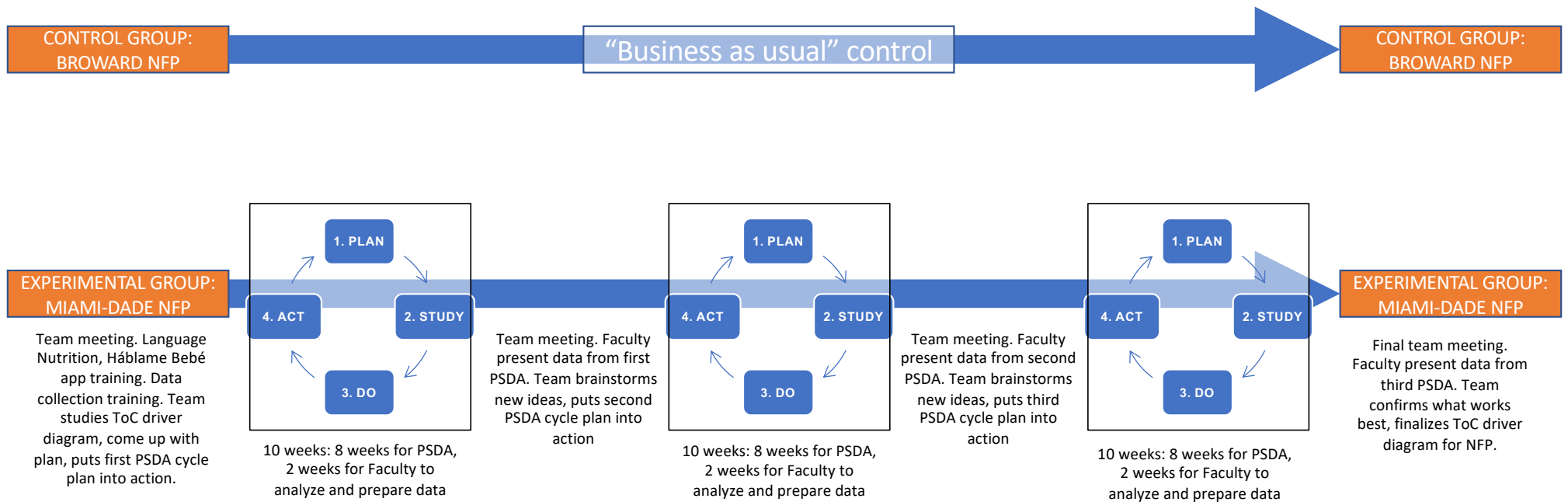
Methods

- **Step 3: Team-based ideation** (with the nurses as the frontline leaders!) to generate strategies affiliated with our drivers
 - Nurse home visitors collect the weekly/biweekly measures
 - Nurse home visitors also complete their own assessments anonymously (self-efficacy, etc.)
 - Faculty analyzes all measures, prepare report to the team
 - **Team meets again face-to-face** to assess our data, devise next Plan-Study-Do Act cycle 1.0



- Nurse home visitors implement new plan across the next eight weeks

Experimental design



Measures

PRE-INTERVENTION MEASURES

FOR EXPERIMENTAL AND CONTROL:

Nurses:

- Language Nutrition Knowledge Test

Mothers:

- Demographic survey
- Early Communication Indicator (ECI) video
- Language Nutrition Knowledge test
- Sociolinguistic pride survey
- Karitane Parenting Confidence Scale
- Oral interview about Child-language interactions

Children:

- Early Communication Indicator (ECI) video

MEASURES FOR EXPERIMENTAL GROUP ONLY, TO BE COLLECTED DURING EACH PSDA CYCLE

These will inform data to be presented at team meetings via a visual run chart to inform next PSDA.

Nurses:

- **Weekly:** Nurse Háblame Bebé questionnaire on provider experience, social validity, comfort using/recommending app
- **Once during PSDA cycle:** Oral interview
- **Once during PSDA cycle:** Qualitative data from Team meeting (ideas, etc. – from the video-recordings and researcher's notes during team meetings)

Mothers:

- **Weekly:** Survey on Language Nutrition provision to child, sociolinguistic pride, and efficacy
- **Weekly:** Data on home visitation attendance (collected by nurse home visitor)
- **Daily:** App use analytics (collected by the researcher via Firebase)

POST-INTERVENTION MEASURES

FOR EXPERIMENTAL AND CONTROL:

Nurses:

- Language Nutrition Knowledge Test

Mothers:

- Early Communication Indicator (ECI) video
- Language Nutrition Knowledge test
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Children:

- Early Communication Indicator (ECI) video

This is the data that will inform each PSDA cycle! We will analyze this together as a team

Discussion

- Our team-based, CQI plan's use of precision home visiting aims to shed light on the key ingredients in the nurse-client relationship
 - And use of a free ancillary tool to deliver health information to Hispanic families
- By working closely with nurses, families, and key stake-holders, and by using iterative feedback, this project will shed light on how PHV can:
 - → Help low-income Hispanic mothers in NFP talk more to their baby in their home language
 - → Improve low-income Hispanic children's early language environments to ensure kindergarten readiness