Using Basic and Applied Social Science Methods to Develop a Self-Persuasion Intervention Promoting Adolescent HPV Vaccination

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Goals

- Illustrate how we are bringing basic and applied social sciences methods to bear on HPV vaccination issues
- Highlight our team science and multiple principal investigator approach

Dallas – 9th largest county in US

Race/Ethnicity:

NH White	32%
Hispanic	42%
Black	20%

Immigrants:

Foreign born	24%

Among 13-17 year olds:

40% **live below poverty threshold**

15% **uninsured**

67% **did NOT have a 11-12 yr old provider visit**

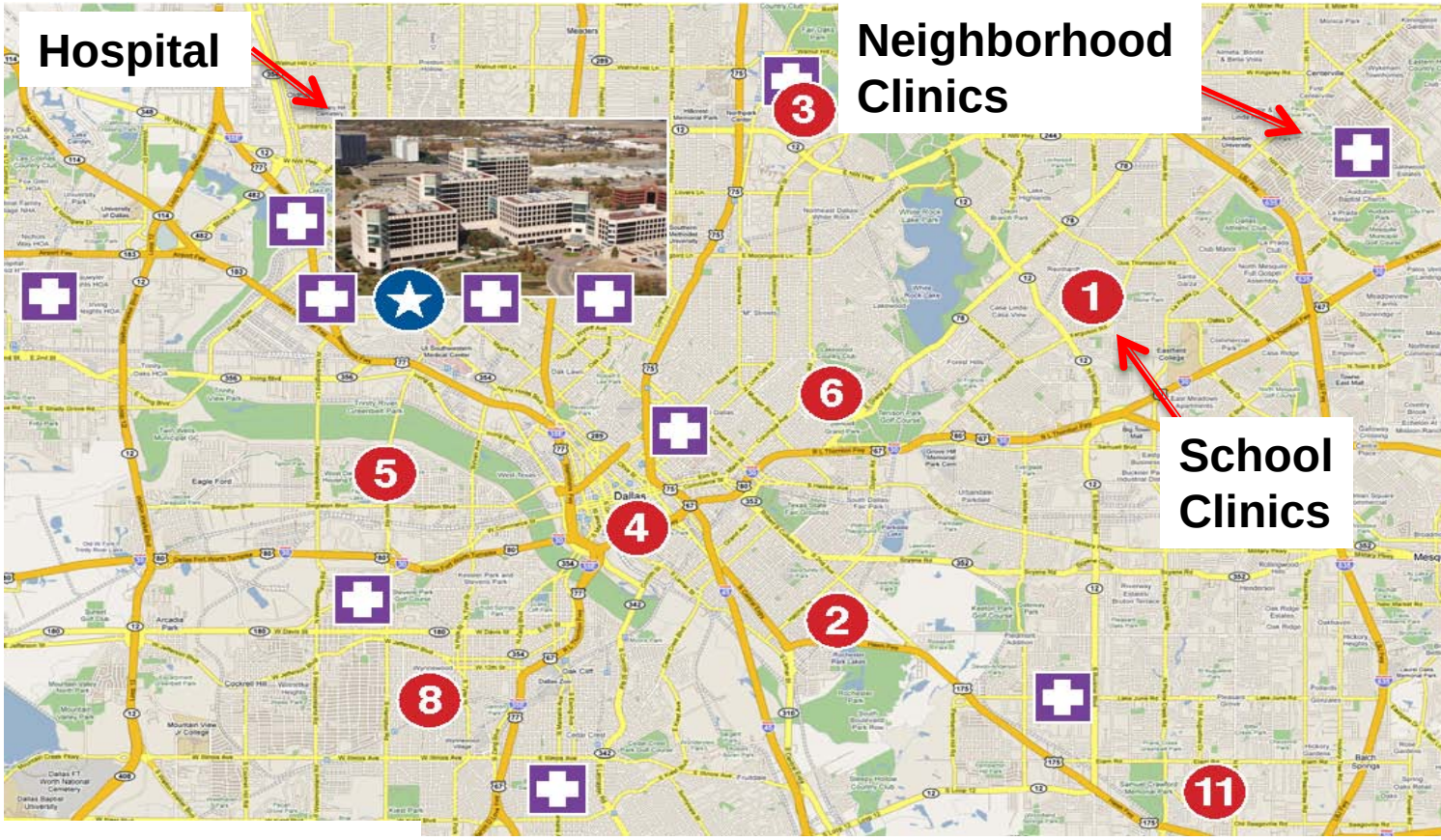
Parkland - Dallas County's integrated safety-net system

10 neighborhood pediatric clinics

11 school-based clinics

Electronic medical record since 2008

Property taxes fund health care for uninsured residents



Parkland 2007-2009:

30% 1-dose coverage

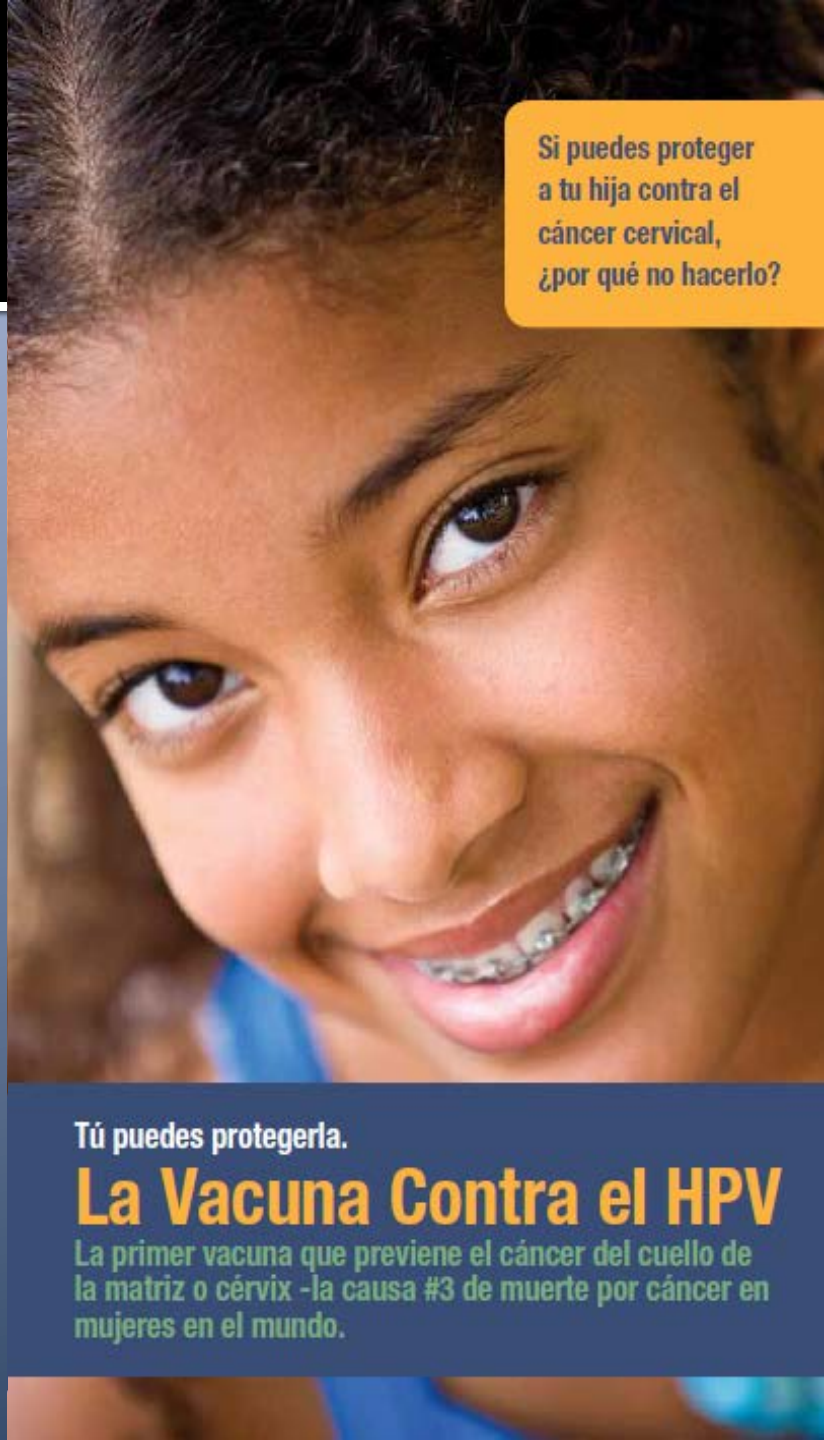
6% 3-dose coverage

Pickens et al. *Am J Public Health* 2002;92:1728-32
Tiro et al. *Vaccine* 2012; 30: 2368-75

CPRIT-funded Trial

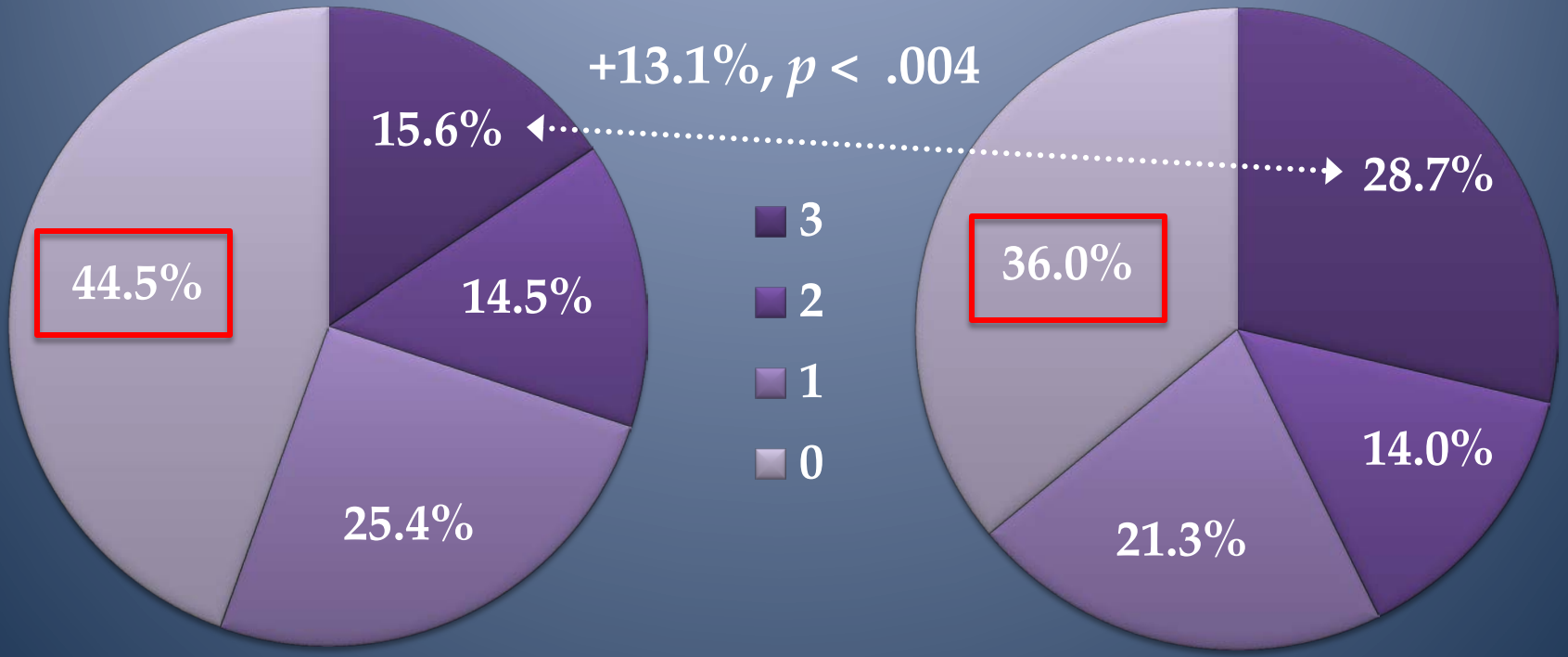
Parent-targeted intervention strategies:
- Mailed HPV vaccine brochure
- Telephone recalls

Goal:
Increase adolescent 1- & 3-dose HPV vaccine coverage



CPRIT Trial Results

NIS Teen 2011 Dallas County: 23.4%



Active Comparison (n = 173)

Intervention (n = 164)

Self-Persuasion Intervention Strategy

- Self-persuasion – directing individuals to generate their own arguments for a health behavior
- Effective intervention strategy
- Hypothesized to increase motivation because parents will: (1) choose arguments that resonate with them and (2) cognitively process the arguments deeply
- May prime parent to engage in discussion with provider

Baldwin et al. Health Psychology, 2013.

Self-Persuasion for Safety-Net Populations

- Many past interventions for other health behaviors encouraged well educated population to write their arguments
- Can you achieve the same intervention effect with safety-net populations who verbalize their arguments through a tablet application? What is the best way to elicit self-persuasion?

Study Design

Stage 1: Define intervention content (formative research)	Stage 2: Optimize intervention's effects (proof-of concept)	Stage 3: Assess feasibility in clinic (pilot study)
Aim 1: *Characterize parents' arguments and discussions with provider*	**Aim 2:** *Compare 4 intervention conditions on parents' intentions and experiences*	**Aim 3:** *Examine intervention's feasibility and acceptability in a clinic setting*
Approach: We will use cognitive interviewing methods to assess pro-vaccine arguments relevant to underserved populations (n=50) and analyze audiorecordings of parent-provider discussions (n=50 dyads) in Parkland.	**Approach:** In a controlled experiment, we will use quantitative and qualitative methods to test basic mechanisms and identify the optimal intervention condition for undecided parents of unvaccinated Parkland adolescents (n = 160).	**Approach:** We will conduct a small pilot study (n = 90) in 6 Parkland clinics to refine intervention & measurement procedures and analyze audiorecordings of parent-provider discussions to assess intervention's impact.

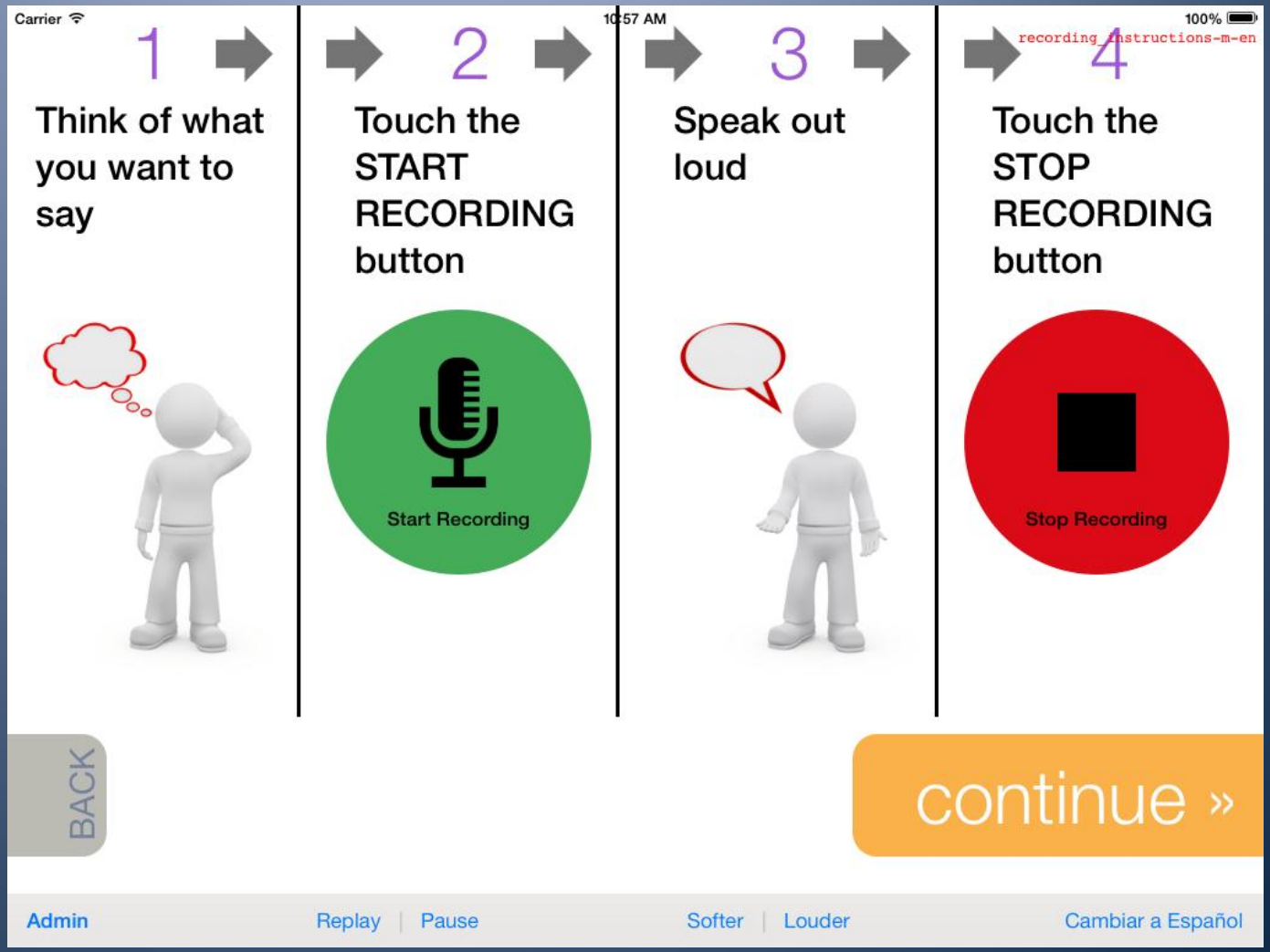
Guided by PA 11-063: Translating Basic Behavioral and Social Science Discoveries into Interventions to Improve Health-Related Behaviors (R01)

Tablet Application Development

Application Intro Screen

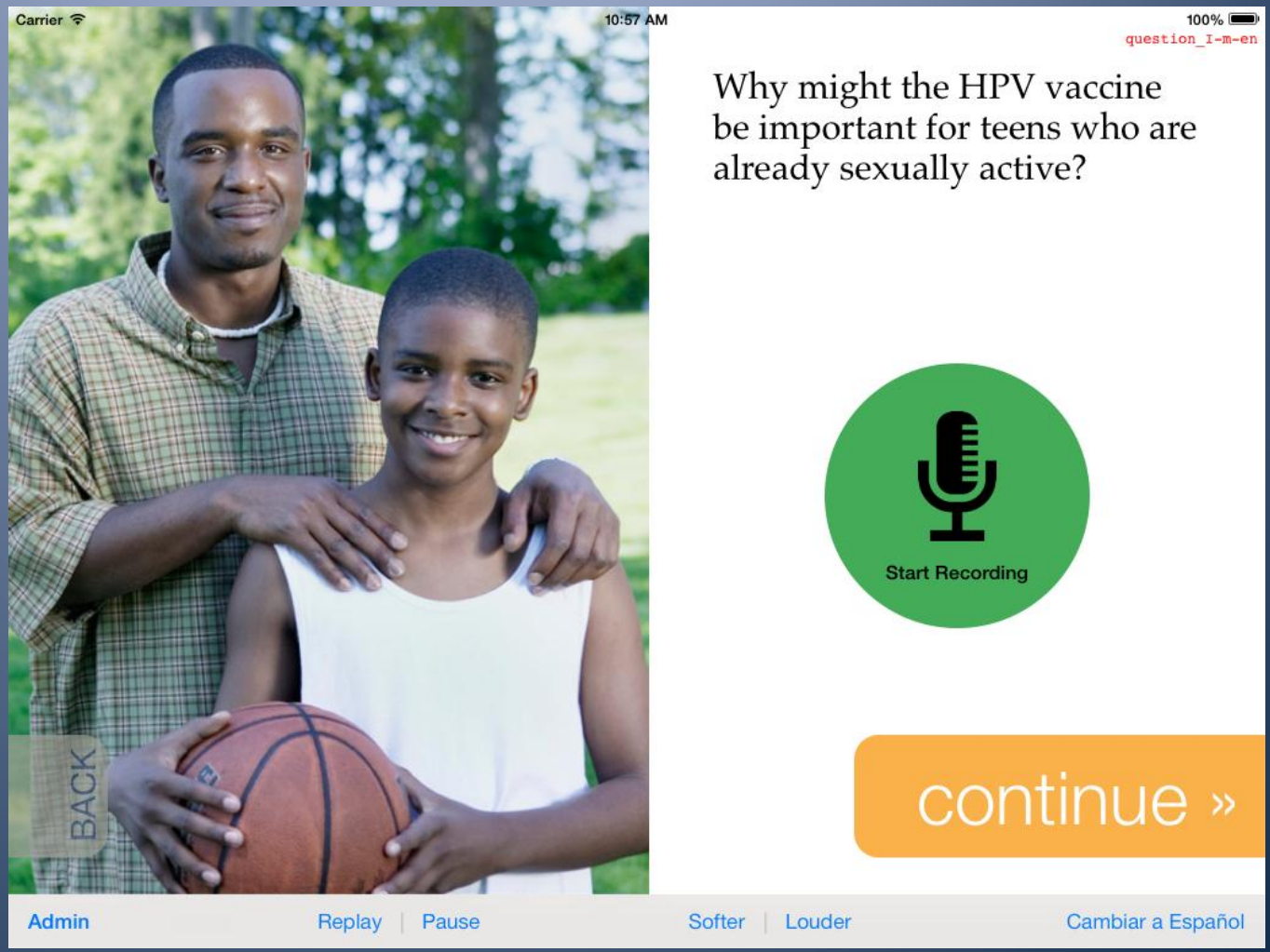
Tablet Application Development

Recording instructions



Tablet Application Development

Question prompts

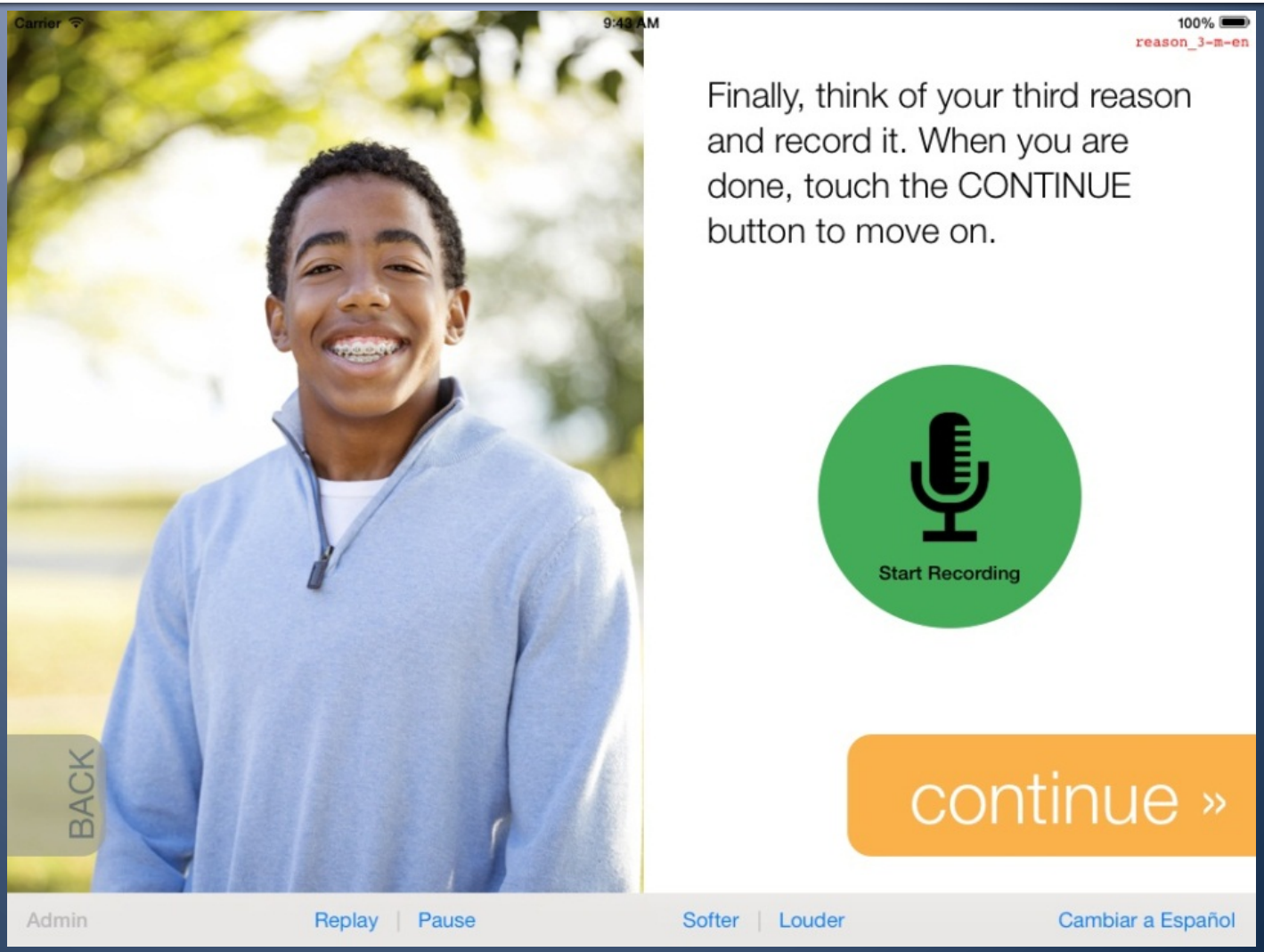


Tablet Application Development

Messages targeted based on child's sex & parent's preferred language

Tablet Application Development

Parents are asked to summarize their top 3 reasons



Analyses Integrate Quantitative and Qualitative Data

Quantitative outcomes:

- Did each intervention condition affect vaccine intentions?
- Motivation for vaccination? Influence recall of pro-vaccine arguments?

Qualitative outcomes:

- Experience with intervention tasks (likeable, useful, difficult, relevant)?
- Did it raise new concerns?

Synthesize data to create summary profiles for each intervention condition & select optimal one
+ effect on intentions AND no/minimal negative reactions

Multiple PI Plan – Systematic collaboration between basic & applied behavioral scientists

- Capitalizing on complementary training, skills, experience, and institutional resources
- Building on a successful history of collaboration (articles, grant preparation)
- Clearly designating who will lead each specific aim
- Establishing a communication plan (method & frequency)
- Documenting the strategy for resolving conflicts

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Questions?

Self-Persuasion Intervention Protocol Steps

Step	Approx. Time	Intervention Condition			
		High Choice, Deep Processing	Low Choice, Deep Processing	High Choice, Shallow Processing	Low Choice, Shallow Processing
A: Listen to information about HPV and the vaccine	~5 min	X	X	X	X
B: Choose which argument topics they prefer	~2 min	X		X	
C: Generate answers to a set of question prompts	~10 min	X	X		
D: Verbalize arguments that are recorded on the tablet	~5 min	X	X		
E: Listen to pro-vaccine arguments	~2 min			X	X
	Total Time	22 min	20 min	9 min	7 min