

# Integrating Community Health Workers into **Team-Based**, Early Childhood Preventive Care

Tumaini Rucker Coker, MD MBA  
Professor and Division Head  
General Pediatrics



# Disclosure

- I have no relevant financial relationships or conflicts of interest to disclose.
- I do not intend to discuss an unapproved/investigative use of a commercial product or devices in my presentation.





# Team-Based Care

“Pay for interprofessional, integrated, team-based care.” -NASEM Report

- Integrates non-clinicians into Primary Care team

- Enhance care for SDOH

- Essential for Integrated Care

behavioral, social, oral, and population health integration within primary care

- Promotes Health Equity



# Community Health Workers in Primary Care

Early Childhood (birth-3), Behavioral Health, Chronic Disease management, social and medical complexity



Community members trusted by families



Link to Established Resources and Services



Communication and Coordination with Broader Team



Standardized Screening and Referral Services



**10** preventive care visits from ages **0-3**

**15-20** minute visit with a pediatrician

# Elements of a Bright Futures Well-Child Care Visit



History, Measurements,  
Physical Examination, and  
Procedures



Developmental and  
Behavioral Screening,  
Surveillance & Guidance

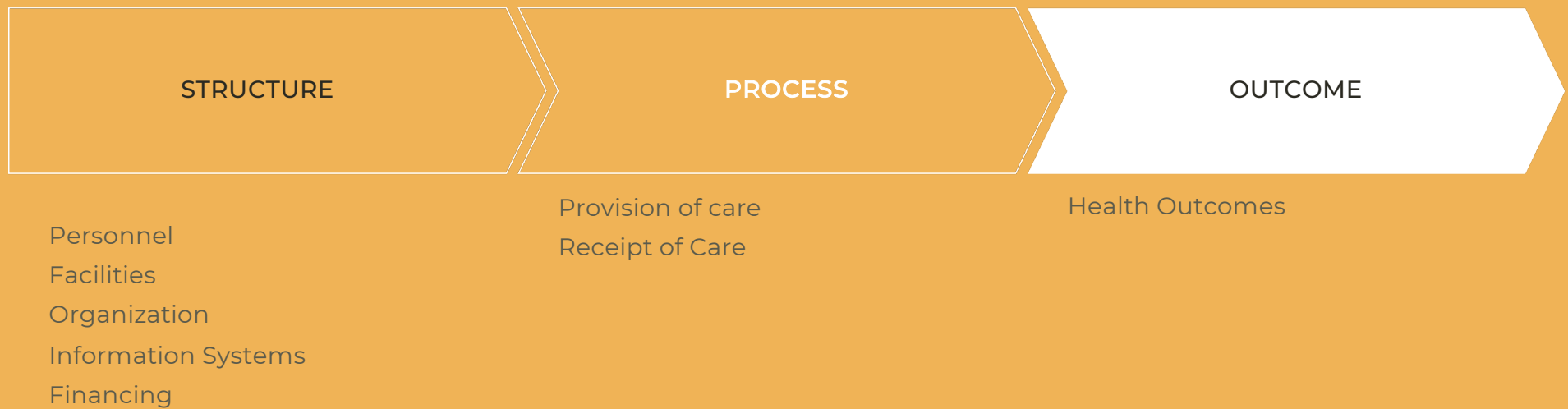


Anticipatory Guidance



Psychosocial and Social  
Needs Screening and  
Guidance

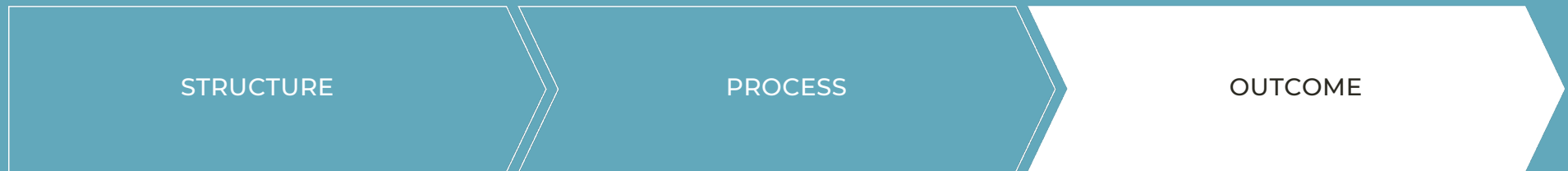
# Donabedian's Quality Framework



Dynamics of Health Outcome, Starfield B. 1973 NEJM



# Adapted Framework for Early Childhood Preventive Care



STRUCTURE

PROCESS

OUTCOME

**Personnel:** *Team- Based Care*

**Facilities:** Community-based Organizations, Early Learning Centers, Clinics

**Organization:** Health Neighborhood (connect and coordinate facilities)

**Information Systems**

*Cross-Sector* **Financing**

**Provision of care**

*Bright Futures Guidelines*

*Relational Health*

*Parent Social Support*

*Early Learning Promotion*

**Receipt of Care:** *accessible, continuous, comprehensive, coordinated, compassionate, culturally-effective*

Positive cognitive, emotional, social and physical development

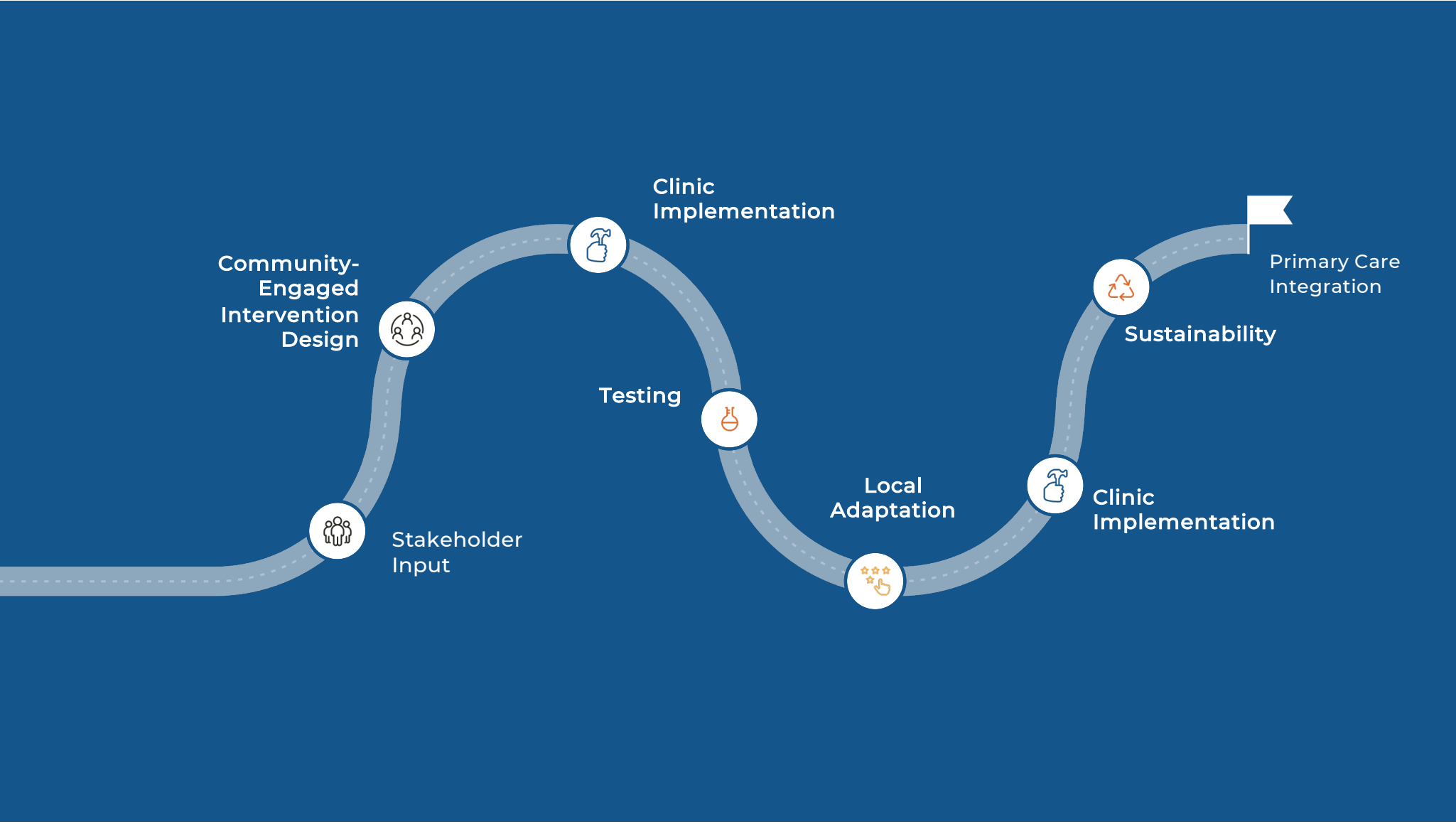
Reduced Family Social Need

Increased well-being of children and families

**A Process,**  
without a structure to support It.

# Community-Engaged Well-Child Care Design

Design and test a new, comprehensive model for well-child care in partnership with practices and clinics serving low-income communities



# Parent-Focused Redesign for Encounters, Newborns to Toddlers [PARENT]

Parent Coach

Pre-Visit Tool

Text Message Service

Brief, focused clinician encounter

Parent-focused  
Redesign for  
Encounters,  
Newborns  
to Toddlers  
**(PARENT)**



# Pre-Visit Tool



A project of the Child and Adolescent Health Measurement Initiative



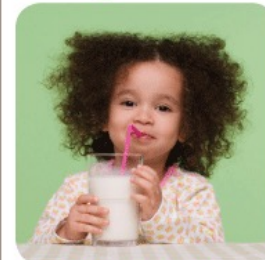
**Welcome Parents!** We hope you'll take a few minutes to complete the online questionnaire for YBPC before your child's next well-visit. Your answers will help your child's health care providers focus on the specific topics *you* wish to discuss, as well as issues that are important for your child and family.

## Step 1



**Answer a Questionnaire**  
about your child and family

## Step 2



**Pick Your Priorities**  
for what you want to talk or get  
information about at your child's  
well-visit

## Step 3



**Get Your Visit Guide**  
that you and your child's health  
care provider will use to tailor the  
visit to your child & family needs

New Users

Get Started ▶  
Click Here to Begin

# Pre-Visit Tool



## NEVHC Pre-Visit Questionnaire 12 Month Visit

Your answers to these questions will help guide your baby's visit today.

**Please check off the topics that are most important to you to discuss today.**

<b>Family Support</b>	<input type="checkbox"/> Ways to manage your child's behavior	<input type="checkbox"/> Finding time for yourself	<input type="checkbox"/> Parent/family community activities		
<b>Establishing Routines</b>	<input type="checkbox"/> Nap time routines	<input type="checkbox"/> Brushing teeth	<input type="checkbox"/> Starting family traditions	<input type="checkbox"/> Bedtime routines	
<b>Finding a Dentist</b>	<input type="checkbox"/> Brushing teeth twice daily	<input type="checkbox"/> Your child's first dental check-up	<input type="checkbox"/> Finger sucking, pacifiers, and bottles		
<b>Feeding Your Child</b>	<input type="checkbox"/> Using spoon and cup	<input type="checkbox"/> How many meals or snacks a day	<input type="checkbox"/> Change in appetite and growth		
	<input type="checkbox"/> Healthy food choices	<input type="checkbox"/> How much your child should eat	<input type="checkbox"/> Your child's weight		
<b>Safety</b>	<input type="checkbox"/> Home safety indoors and outdoors	<input type="checkbox"/> Pets	<input type="checkbox"/> Water safety	<input type="checkbox"/> Car seats	<input type="checkbox"/> Sun protection
	<input type="checkbox"/> Gun safety/storage	<input type="checkbox"/> Foods that might cause choking	<input type="checkbox"/> Older siblings watching your child		

**Do you have any other concerns, questions, or problems that you would like to discuss today?**

---

### Questions About Your Baby

Do you have concerns about how your child hears?  Yes  No  Unsure

Do you have concerns about how your child speaks?  Yes  No  Unsure

Do you have concerns about how your child sees?  Yes  No  Unsure

Is there a TV or other digital media device on in the background while your baby is in the room?  Yes  No  Unsure

How much time each day does your baby spend watching TV or playing on a tablet, smart phone or other digital device?  
 None  1 hour or less  More than 1 hour

Does your child live with anyone who uses tobacco/marijuana or spend time in any place (like a car) where people smoke?  Yes  No  Unsure

### Questions About You and Your Family

Other than your baby's birth, have there been any major changes in your family lately?  
 Moving  Job change  Separation  Divorce  Death in the family  None  Other:

Please tell me how often the following statement is true:

1. Within the past 12 months, we (I) worried whether our food would run out before we got money to buy more  
 Often true  Sometimes true  Never true

2. Within the past 12 months, the food we (I) bought just didn't last and we didn't have enough money to get more.  
 Often true  Sometimes true  Never true

Are you worried about losing your housing?  Yes  No  Unsure

Do you feel physically and emotionally safe where you currently live?  Yes  No  Unsure

In the past year, have you ever drunk alcohol or used drugs/marijuana more than you meant to?  Yes  No  Unsure

Have you felt you wanted or needed to cut down on your drinking or drug/marijuana use in the last year?  Yes  No  Unsure

Has a family member's drinking or drug/marijuana use ever had a bad effect on your child?  Yes  No  Unsure

### Your Growing and Developing Baby

Check off each of the tasks that your baby is able to do:

<input type="checkbox"/> Bangs toy together	<input type="checkbox"/> Waves bye-bye	<input type="checkbox"/> Tries to do what you do	<input type="checkbox"/> Stands alone drinks from a cup	<input type="checkbox"/> Speaks 1 to 2 words
<input type="checkbox"/> Tries to make the same sounds you do	<input type="checkbox"/> Looks at things you are looking at	<input type="checkbox"/> Cries when you leave	<input type="checkbox"/> Babbles	
<input type="checkbox"/> Hands you a book to read	<input type="checkbox"/> Follows simple directions	<input type="checkbox"/> Plays peekaboo		

**Do you have any specific concerns about your child's learning, development or behavior?**  No  Yes, please describe:

---



# Text Messaging





Duarte Clinic



Compton Clinic

## RCT: Methods

- Randomized controlled trial of PARENT vs. usual care
- Parents with infant  $\leq$  12 months
- 12-month study period

Coker, et al 2016 Pediatrics; Mimila et al 2016 Pediatrics

# RCT: Findings

## Better performance on receipt of WCC

Anticipatory guidance and health education

Psychosocial screening

Structured developmental screening

## Better patient experiences of care

Helpfulness of Care

Family-centeredness of care

## Fewer ED Visits

50% reduction

## Well-Visits

Team-based approach to care  
Distinct services by team member  
Efficient use of wait time

## Parent Coach

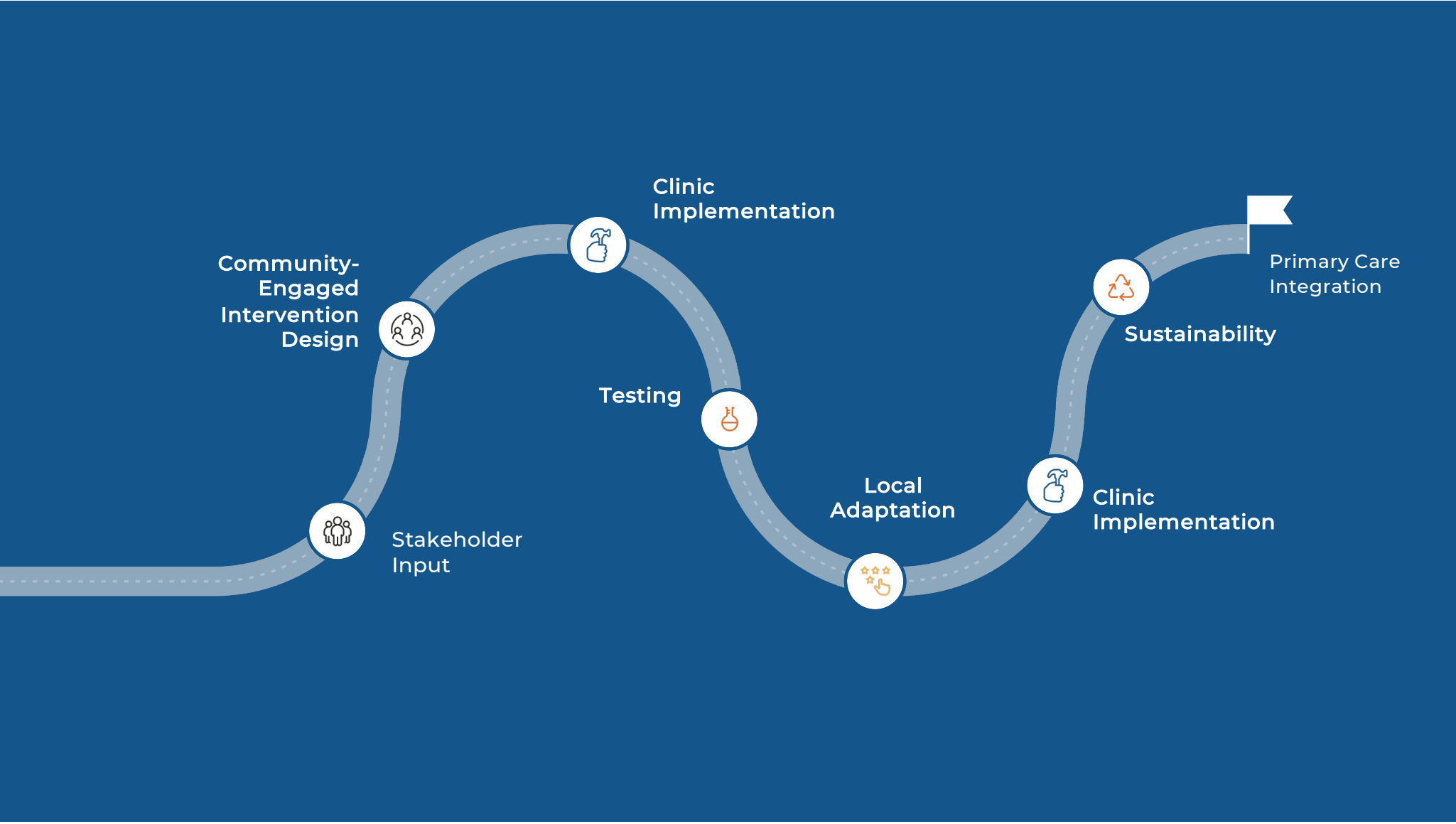
Trusting relationship with parent  
Guidance and education to parents  
Social-emotional support in parenting

## Pre-Visit Tool

Additional source of information  
Prepares parent for the visit  
Other options to access it (mobile phone)

## Text Messaging

Reinforced information from the visit  
Some would have preferred more, others reported  
the number of texts was just right





**Northeast Valley Health Corporation**  
a californiah<sup>+</sup>health center

# COMMUNITY HEALTH *Care*

MEDICAL • DENTAL • PHARMACY





10 clinical sites



Cluster randomization



3 Parent Coaches



# Clinic Adaptations

## 1 | Parent Coach

Training, education level/background

## 2 | Visit Documentation

Pre-visit questionnaires

EHR template in NextGen

Social needs systems

## 3 | Text Messaging Services

Increased social needs messages



## Bright Futures

Health Promotion Themes

Visits  
(0-36 Months)

Competency Assessments

## Visits

Observations

Mock Visits

EHR Practice

Precepted Visits

Visits with Feedback

## Community Resources & Screening

Site Visits

Resource 'Book'

Screening Process

## Video Modules

Trauma-Informed Care

Motivational Interviewing

Developmental Milestones

Behavior and Sleep



# Clinic Implementation

- **Coach to Provider Ratio**

- Clinic volume

- Clinician type

- Coach visit range

- **WCC Visit Scheduling**

- Two additional visits/half day

- 20 to 15 minute well-visit slot

LOGISTICS

# Clinic Implementation

- **Opportunities for Team Training**

Depression screening and referral

Developmental screening and referral

- **Clinician Role in Team**

Clinician-parent discussions

Clinician role in social needs

- **Tiered vs. Universal**

RELATIONSHIPS

# Cluster RCT: Methods

- Cluster randomized controlled trial of PARENT vs. usual care
- Parents with infant  $\leq 12$  months
- 12-month study period

# Outcomes

## Preventive Care Services

- **Anticipatory Guidance**
- Psychosocial and Social Needs
- Developmental Services

## Healthcare Utilization

- **Emergency Department Visits**
- Urgent Care Visits
- Well Child Care Visits

## Parent Experiences of Care

- Helpfulness of Care
- Family Centeredness
- Overall Satisfaction



# Participant Enrollment & Retention

10 clinics randomized  
937 parents enrolled  
785 completed 12-month follow-up



Participant Retention

# Baseline Characteristics



## Child Age

Mean age 4.4 months



## Child Race & Ethnicity

73% Latino  
5% Black  
12% White



## Household Language

50% English  
43% Spanish

n=914



# Baseline Characteristics



93% Medicaid Insured



95% Mothers



8% College Degree



63% with Household Annual Income <\$30,000

n=914

# Findings: Receipt of Preventive Care Services



**Anticipatory Guidance**  
Mean Score  
**73.9 vs. 63.3**



**Psychosocial Assessment**  
All 7 items assessed  
**67% vs 50%**



**Developmental Concerns  
Addressed**  
**89% vs 82%**



**Developmental Screening**  
**85% vs 84%**

## Findings: **Healthcare Utilization**



**Any ED Visit**

37% vs. 36%



**Well Child Care**

**Up-to-Date**

74% vs 63%



**Any Urgent Care Visits**

33% vs 36%

## Findings: **Parent Experiences of Care**



### **Helpfulness of Care**

Mean Score 77.8 vs. 69.8



### **Family-Centeredness of Care**

Mean Score 89.0 vs. 85.5



### **Overall Satisfaction with Care**

Mean Score 9.0 vs. 8.8

# Summary of Findings

- **Better Performance on receipt of WCC services**
  - Anticipatory guidance
  - Psychosocial screening
  - Developmental concerns addressed
- **Better parent experiences of care**
  - Family-centeredness of care
  - Overall rating of care
- **ED visits- no change**
  - For both study arms, unusually low during pandemic for both groups
- **More likely to be up-to-date on WCC visits**

# Summary and Conclusions



Integrating a CHW into the WCC team improves WCC for Medicaid-insured children

Evidence for PARENT, and other clinic-based interventions that utilize CHWs in a team-based approach to early childhood WCC

Clinics and practices will need Medicaid state plan amendments that provide adequate funding for CHWs in WCC and support for implementation

JAMA | Original Investigation

## Community Health Workers in Early Childhood Well-Child Care for Medicaid-Insured Children A Randomized Clinical Trial

Tumaini R. Coker, MD, MBA; Kendra Liljenquist, PhD, MPH; Sarah J. Lowry, PhD; Kevin Fiscella, MD, MPH; Marcia R. Weaver, PhD; Janette Ortiz, BS; Rachel LaFontaine, MD; Javier Silva, BS; Taylor Salaguinto, BA; Gina Johnson, MD; Lisa Friesema, MD; Lorena Porras-Javier, MPH; Laura J. Sotelo Guerra, BS; Peter G. Szilagyi, MD, MPH

**IMPORTANCE** An intervention model (the Parent-focused Redesign for Encounters, Newborns to Toddlers, the PARENT intervention) for well-child care that integrates a community health worker into preventive care services may enhance early childhood well-child care.

**OBJECTIVE** To examine the effectiveness of the PARENT intervention vs usual care for parents with children younger than 2 years of age.

**DESIGN, SETTING, AND PARTICIPANTS** A cluster randomized clinical trial was conducted between March 2019 and July 2022. Of the 1283 parents with a child younger than 2 years of age presenting for a well-child visit at 1 of the 10 clinic sites (2 federally qualified health centers in California and Washington) approached for trial participation, 937 were enrolled.

**INTERVENTION** Five clinics implemented the PARENT intervention, which is a team-based approach to care that uses a community health worker in the role of a coach (ie, health educator) as part of the well-child care team to provide comprehensive preventive services, and 5 clinics provided usual care.

**MAIN OUTCOMES AND MEASURES** There were 2 primary outcomes: score for parent-reported receipt of recommended anticipatory guidance during well-child visits (score range, 0-100) and emergency department (ED) use (proportion with  $\geq 2$  ED visits). The secondary outcomes included psychosocial screening, developmental screening, health care use, and parent-reported experiences of care.

**RESULTS** Of the 937 parents who were enrolled, 914 remained eligible to participate (n = 438 in the intervention group and n = 476 in the usual care group; 95% were mothers, 73% reported Latino ethnicity, and 63% reported an annual income  $< \$30\,000$ ). The majority (855/914; 94%) of the children (mean age, 4.4 months at parental enrollment) were insured by Medicaid. Of the 914 parents who remained eligible and enrolled, 785 (86%) completed the 12-month follow-up interview. Parents of children treated at the intervention clinics (n = 375) reported receiving more anticipatory guidance than the parents of children treated at the usual care clinics (n = 407) (mean score, 73.9 [SD, 23.4] vs 63.3 [SD, 27.8], respectively; adjusted absolute difference, 11.01 [95% CI, 6.44 to 15.59]). There was no difference in ED use (proportion with  $\geq 2$  ED visits) between the intervention group (n = 376) and the usual care group (n = 407) (37.2% vs 36.1%, respectively; adjusted absolute difference, 1.2% [95% CI, -5.5% to 8.0%]). The effects of the intervention on the secondary outcomes included a higher amount of psychosocial assessments performed, a greater number of parents who had developmental or behavioral concerns elicited and addressed, increased attendance at well-child visits, and greater parental experiences with the care received (helpfulness of care).

**CONCLUSIONS AND RELEVANCE** The intervention resulted in improvements in the receipt of preventive care services vs usual care for children insured by Medicaid by incorporating community health workers in a team-based approach to early childhood well-child care.

**TRIAL REGISTRATION** ClinicalTrials.gov Identifier: NCT03797898

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 Visual Abstract

 Supplemental content

**Author Affiliations:** Seattle Children's Research Institute, Seattle Children's Hospital, Seattle, Washington (Coker, Liljenquist, Lowry, Salaguinto, Guerra); Department of Pediatrics, School of Medicine, University of Washington, Seattle (Coker, Liljenquist, LaFontaine); Department of Family Medicine, University of Rochester, Rochester, New York (Fiscella); Department of Global Health, University of Washington, Seattle (Weaver); Department of Pediatrics, University of California, Los Angeles (Ortiz, Porras-Javier, Szilagyi); School of Public Health, University of Washington, Seattle (Silva); Northeast Valley Health Corporation, San Fernando, California (Johnson); Community Health Care, Tacoma, Washington (Friesema).  
**Corresponding Author:** Tumaini R. Coker, MD, MBA, Seattle Children's Research Institute, 1920 Terry Ave, Seattle, WA 98101 (tumaini.coker@seattlechildrens.org).

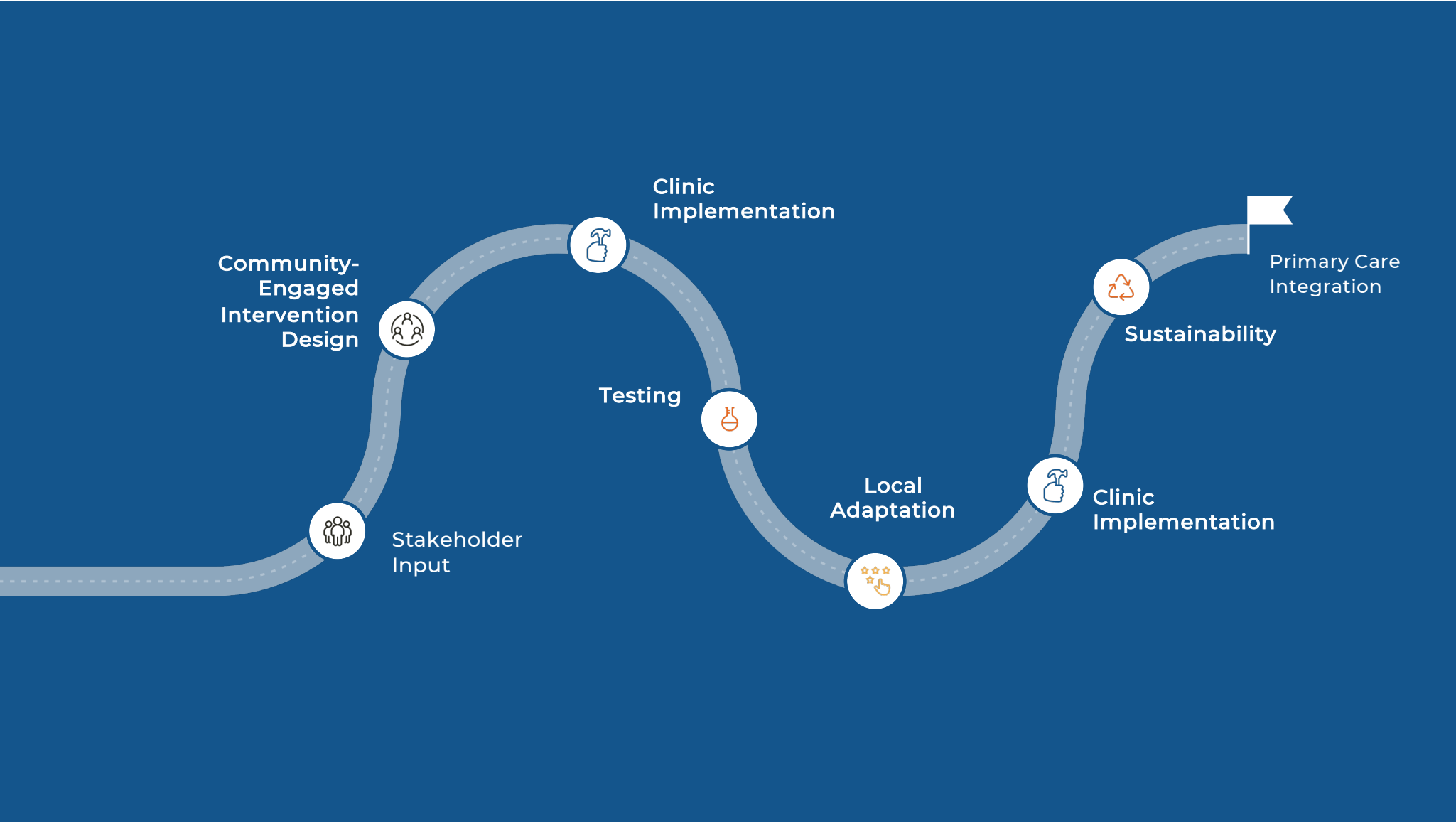
# JAMA<sup>®</sup>

Coker TR, Liljenquist K, Lowry SJ, et al.

## Community Health Workers in Early Childhood Well-Child Care for Medicaid-Insured Children: A Randomized Clinical Trial

Published April 30, 2023

Available at [jama.com](https://www.jama.com)



Community-Engaged Intervention Design



Stakeholder Input



Clinic Implementation

Testing



Local Adaptation



Clinic Implementation



Sustainability



Primary Care Integration



# PARENT Adaptation for Black Families: NCH-PCN Partnership

- Pilot post hoc analysis-- intervention effects on experiences of care and ED use stronger for Latino compared with Black families
- RCT of FQHCs: includes 5% Black families
- Need larger trial for adaptation and implementation in clinics with greater proportion of Black families



# Comparing Two Models of Well-Child Care for Black Families

Nationwide Children's

12 Nationwide  
Primary Care Clinics

Stepped Wedge  
Randomized Trial

Adaptation &  
Implementation

Parent, Staff, and  
Provider  
Engagement

PCORI Funded, 5-year Comparative Effectiveness Trial

# Our Team

Seattle Children's and Nationwide Children's



Akua  
Amponsah,  
MD



Katie  
Dicostanzo



Teah Hoopes,  
MPH



Alex Kemper,  
MD



Kendra  
Liljenquist,  
PhD



Sarah Lowry,  
PhD



Kirsten  
Senturia, PhD



Dane Snyder,  
MD

# The Team (initial RCT)

Peter Szilagyi, MD

Marcia Weaver, PhD

Kevin Fiscella, MD, MPH

Community Health Care

North East Valley Health Care

Lorena Porrás-Javier, MPH

Laura Sotelo Guerra, BS

Kendra Liljenquist, PhD

Elizabeth Wingfield, M.A

Rachel Hurst

*Eunice Kennedy Shriver National Institute of Child Health  
and Human Development (NICHD)*

# The Team

1 | Tumaini R. Coker, MD,  
MBA

2 | Kendra Liljenquist, PhD,  
MPH<sup>1,3</sup>

3 | Sarah J. Lowry, PhD<sup>1</sup>

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MPH

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BS

14 | Peter G. Szilagyi, MD,  
MPH

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[tumaini.coker@seattlechildrens.org](mailto:tumaini.coker@seattlechildrens.org)

Thank You