

# Welcome!

We are so glad you are here!

We will get started shortly.  
In the meantime, we invite you to intentionally enter this space.



Silence your cell phone



Stretch



Close the door



Take a few deep breaths



Close browser windows



Emotionally release your to-do list



Check your audio and video



Take a bio break

***An Innovative Approach to Preconception Care for Young African American Men: the Gabe Health IT System***

Wednesday, September 15, 2021 || 2:00pm to 3:30pm ET





**An Innovative  
Approach to  
Preconception Care  
for Young African  
American Men and  
Women: the Gabby &  
Gabe Health IT  
Systems**

September 15, 2021



# Agenda



Housekeeping

Lisa Hong, NICHQ

Welcome & Speaker Introductions

Kenn Harris, NICHQ

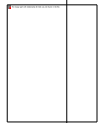
An Innovative Approach to Preconception Care  
for Young African American Men and Women:  
the Gabby & Gabe Health IT Systems

Dr. Brian Jack, BMC  
Leanne Yinusa-Nyahkoon  
Nireesha Sidduri  
Angelee Verdieu

Closing

Danisha Charles, NICHQ

# Meeting Logistics

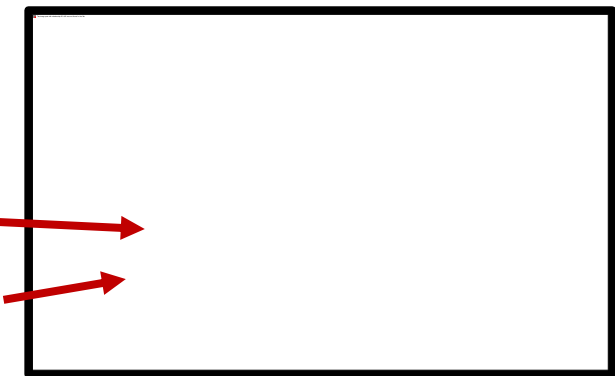


- This session is being recorded.
- All participants are muted upon entry. We ask that you remain muted to limit background noise.
- Members are encouraged to participate in the discussion by typing your comments or asking questions using the chat box.

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- Join the Zoom Meeting by **clicking the Zoom Meeting link** & launching the Zoom application
- An audio conference box will appear
  - If you do not see the box, click **'Join Audio'**
- From the audio conference box, select **'Phone Call'** or **'Computer Audio'**
  - If using the phone:
    - Dial one of the given numbers next to **"Dial"**
    - You will be prompted to enter the **Meeting ID**
    - Then you will be prompted to enter the **Participant ID**



# How to Chat



1

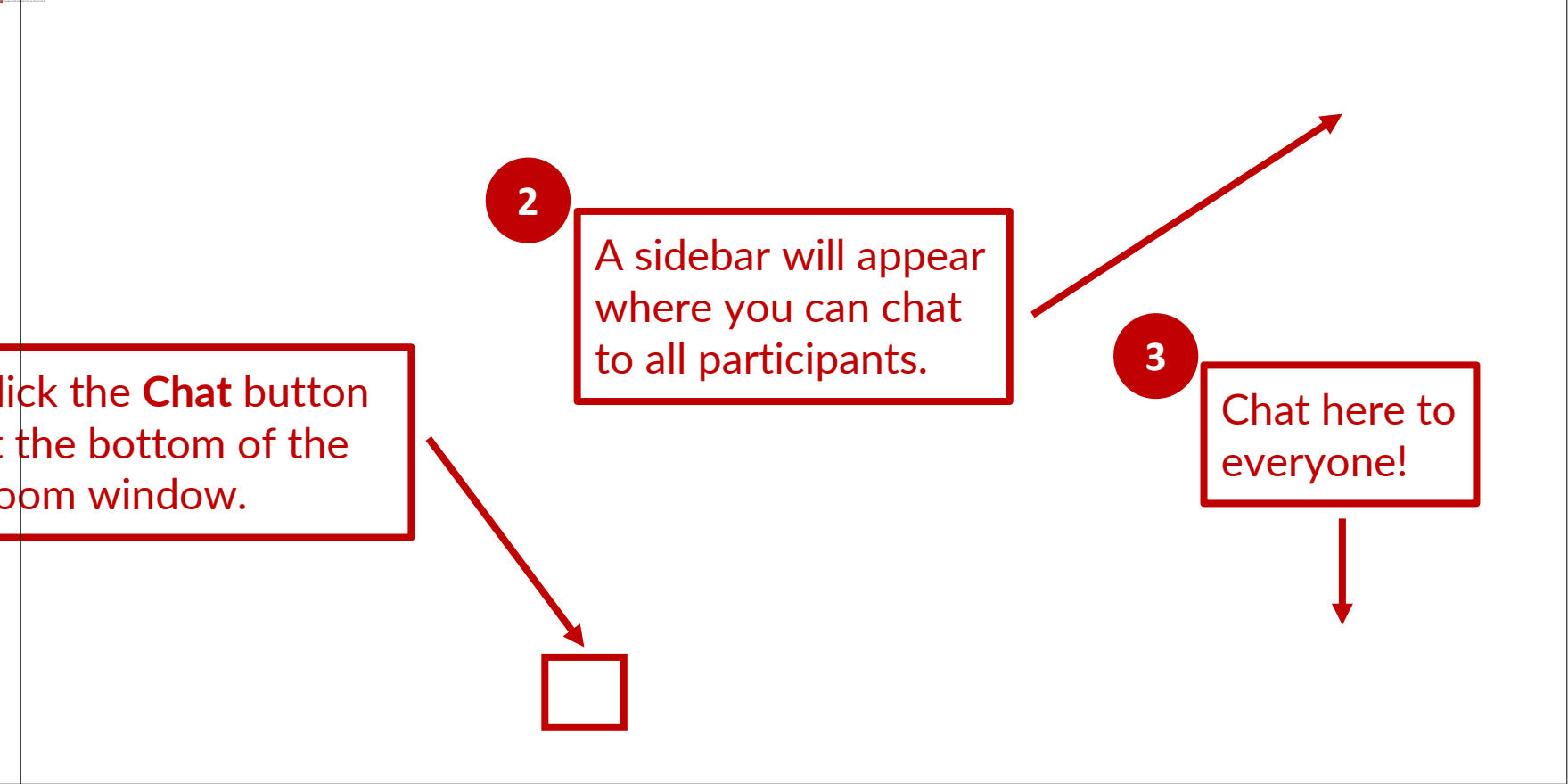
Click the **Chat** button at the bottom of the Zoom window.

2

A sidebar will appear where you can chat to all participants.

3

Chat here to everyone!





# Welcome & Speaker Introductions

Kenn Harris

Executive Project Director  
Healthy Start TA & Support Center  
National Institute for Children's  
Health Quality (NICHQ)



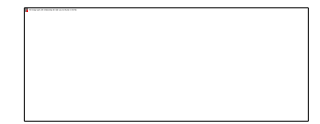
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Welcome!

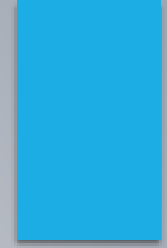
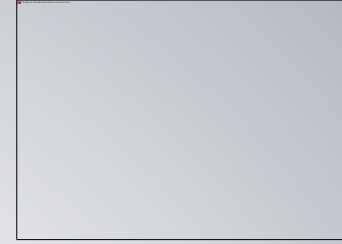




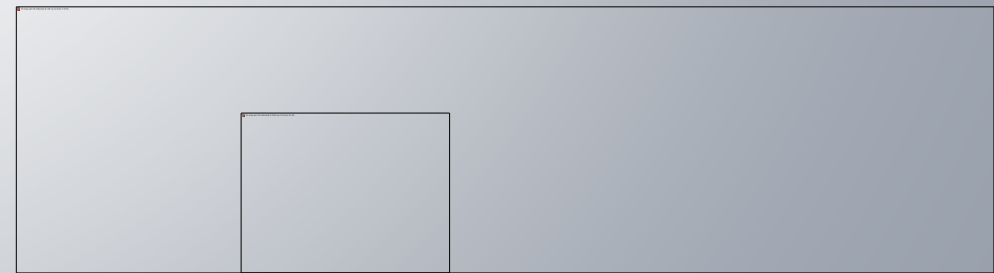
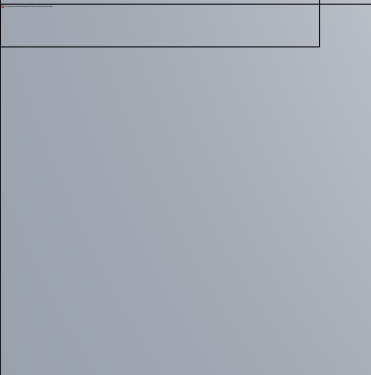
**An Innovative  
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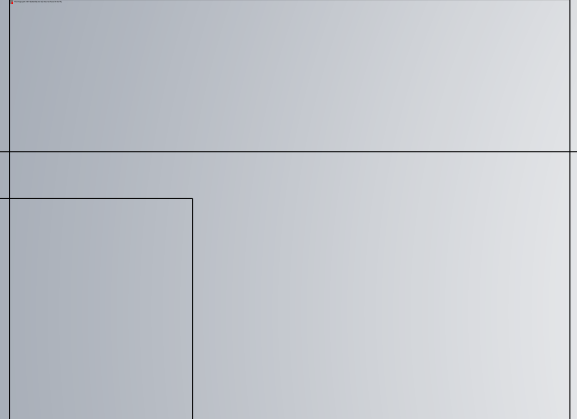
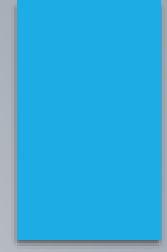


# An Innovative Approach to Preconception Care for Young African American Men and Women: The Gabby and Gabe Health IT Systems

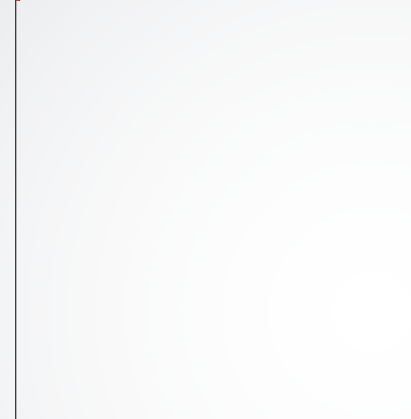


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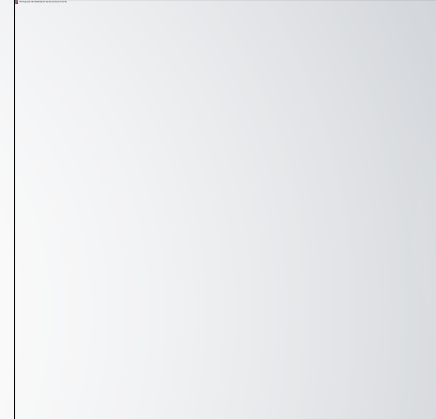
# Presenters this Afternoon



Brian Jack, MD  
Professor of Family Medicine  
Boston University School of  
Medicine/Boston Medical Center  
Institute for Health Systems  
Innovation and Policy



Leanne Yinusa-Nyahkoon, OTR/L  
Research Scientist,  
Pediatric Occupational Therapist



Nireesha Sidduri, MPH  
Research Assistant



Angelee Verdieu, BS  
Research Assistant



# Objectives

1. Examine the need for Preconception Care to address health disparities in maternal and birth outcomes
2. Describe health IT systems using conversational agents, like Gabby and Gabe, to assist health providers in providing individualized PCC
3. Overview of the development, features and testing of the Gabby and Gabe Systems for use in HS Programs
4. Identify next steps for collaboration

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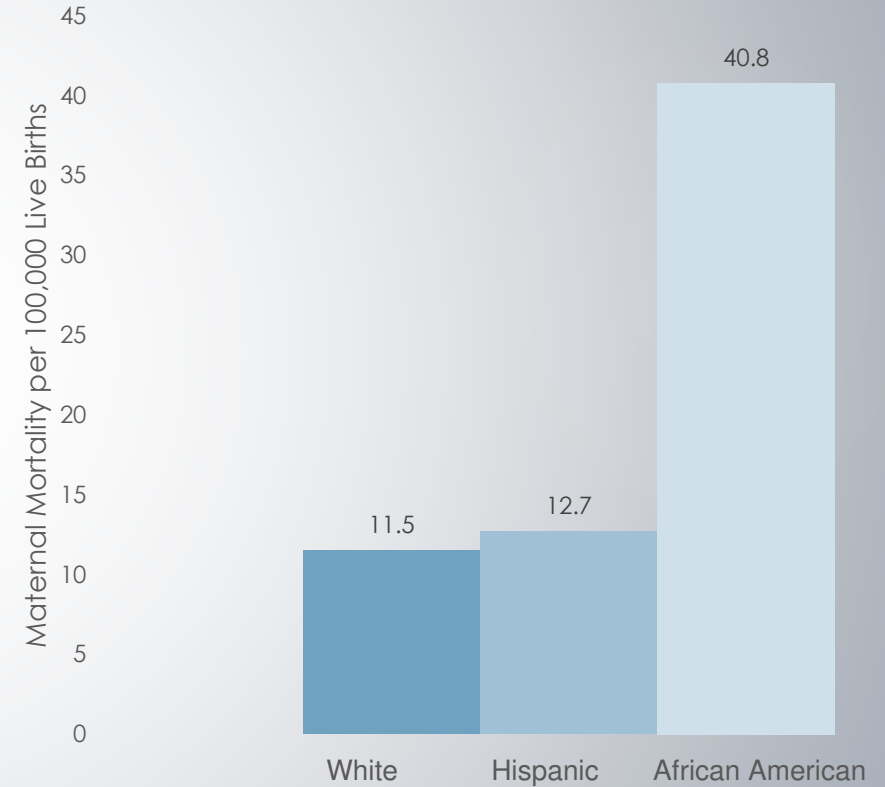
# There is an Unacceptable Disparity in MCH Outcomes between African American and White Women

LBW Rate<sup>2</sup>

PTB Rate<sup>2</sup>

Infant Mortality Rate<sup>3</sup>

Maternal Mortality Rate<sup>1</sup>



1- 2019. Morbidity and Mortality Weekly Report (MMWR). CDC.

2- 2012. National vital statistics reports: Volume 62, Number 9. Hyattsville, MD: NCHS

3- 2011 Deaths: Final Data for 2009. Washington, DC: Division of Vital Statistics

# A Trans-generational Approach and Systemic Racism

**Adverse Childhood Experiences (ACEs) and Toxic Stress** - Traumatic events occurring before the age of 18 including psychological, physical, or sexual abuse, violence against their mother, or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned have long-term associations with adult disease.

***Traumatic events as a child result in poor health as an adult***

**Developmental Origins of Health and Disease (DOHD)**- A wide array of environmental, social and health-related risks to the mother at the time of conception have profound and enduring effects not only on the health of the woman, but on the long-term health of the offspring into adulthood.

***A woman's health at the time of conception can result in poor pregnancy outcomes – and the health of the baby as an adult***

**Epigenetics**- Prolonged activation of the stress response systems from chronic stress, such as systemic racism over 400 years, can lead to toxic stress that has been shown to lead to biochemical changes at the level of the epigenome. Epigenetic changes, while not chromosomal, can be inherited resulting in impact future generations.

***A grandmother's lifetime stress can result in adult disease of her grandchild***

# What is Preconception Care?

## From the CDC:

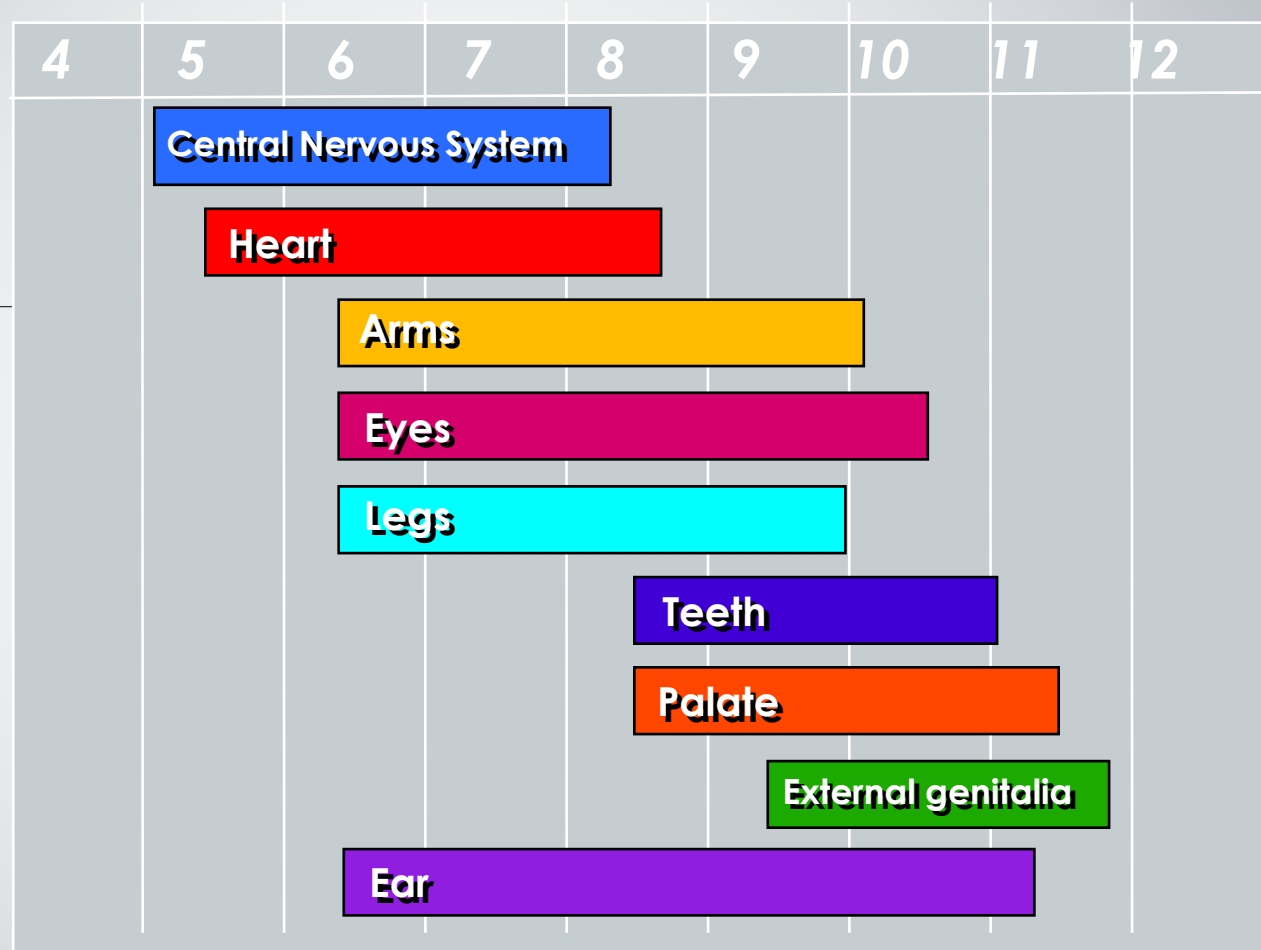
- Preconception health care is the medical care a woman or man receives that focuses on the parts of health that have been shown to increase the chance of having a healthy baby.

# We Currently Intervene Too Late

## Critical Periods of Development

Weeks gestation from LMP

Most susceptible time for major malformation



Missed Period

Mean Entry into Prenatal Care



# Components of Preconception Care

<b>Family Planning</b>	Knowledge of and Assess for Effective Birth Control
<b>Infectious Diseases</b>	HIV, Hepatitis C, Tuberculosis, Toxoplasmosis, CMV, Listeriosis, Parvovirus, Malaria, Gonorrhea, Chlamydia, Syphilis, History of Genital Herpes, Asymptomatic bacteriuria, Periodontal disease, Bacterial Vaginosis, Group B Strep
<b>Medical Conditions</b>	Diabetes, Thyroid Disease, PKU, Seizures, Hypertension, Rheumatoid Arthritis, Lupus, Renal Disease, Cardiovascular, Thrombophilia, Asthma
<b>Psychiatric</b>	Depression/Anxiety, Bipolar disease, Schizophrenia
<b>Parental Exposures</b>	Alcohol, Tobacco, Illicit Substances
<b>Family History</b>	All Individuals, Ethnicity-based, Family history, Personal history
<b>Nutrition</b>	Dietary Supplements, Vitamin A, Folic Acid, Multivitamins, Vitamin D, Calcium, Iron, Essential Fatty Acids, Iodine, Underweight, Overweight, Eating Disorders
<b>Environment</b>	Mercury, Lead, Soil and Water Hazards, Workplace Exposure, Household Exposure
<b>Psychosocial</b>	Inadequate Financial Resources, Access to Care, Physical / Sexual Abuse
<b>Medications</b>	Prescription, Over-the-counter, Medication, Dietary Supplements
<b>Reproductive</b>	Prior Preterm Birth Infant, Prior C-Section, Prior Miscarriage(s), Prior Stillbirth, Uterine Anomalies
<b>Special Populations</b>	Women with Disabilities, Immigrant and Refugee Populations, Cancer

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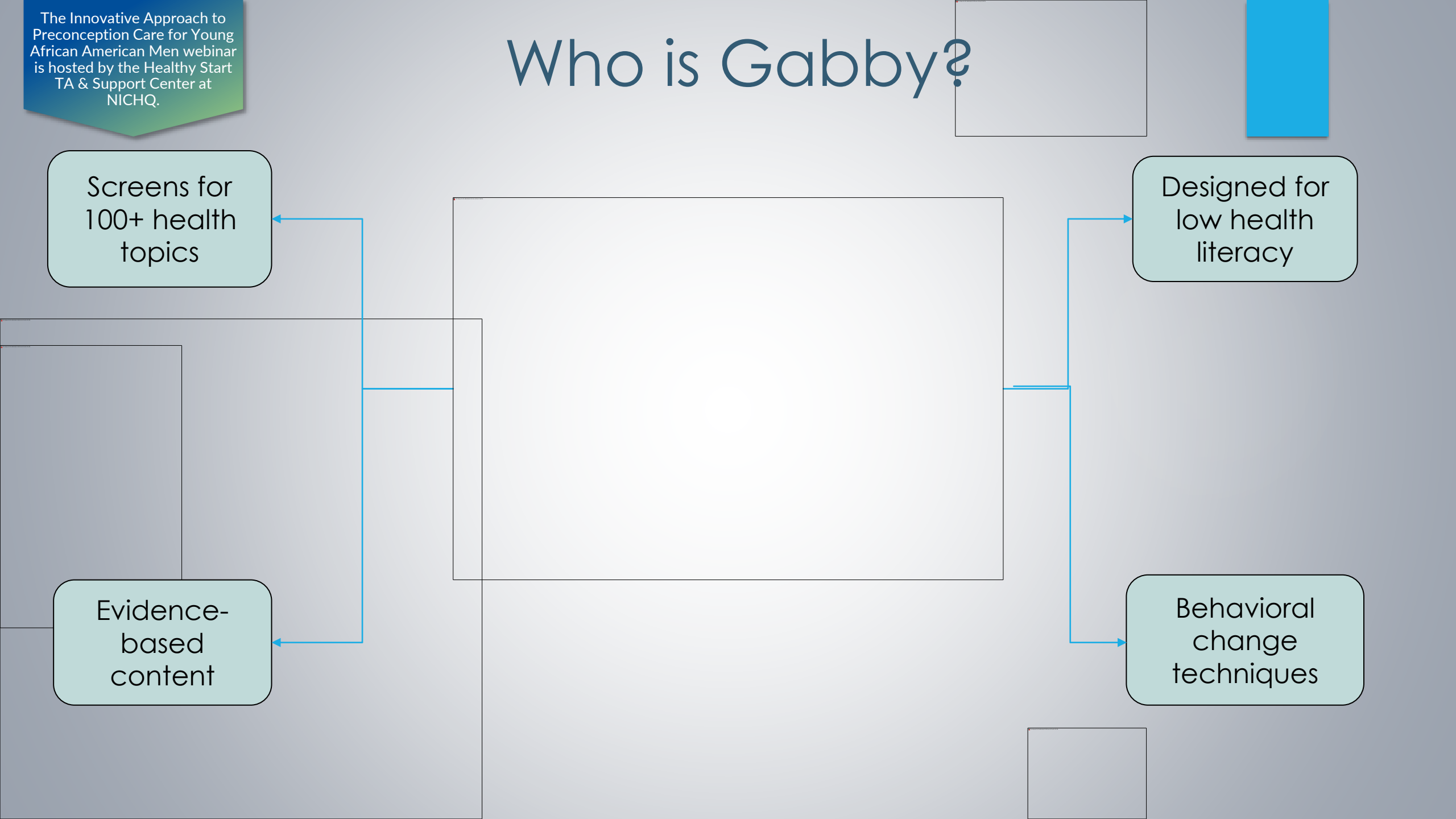
# Who is Gabby?

Screens for 100+ health topics

Designed for low health literacy

Evidence-based content

Behavioral change techniques

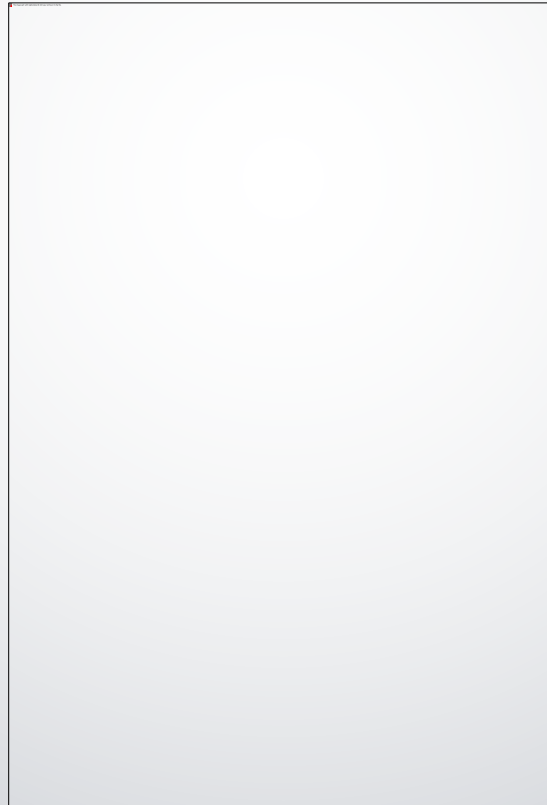


# Qualitative Research to Guide Development

Focus groups, key informant interviews, patient advisory group, and usability testing conducted with over 100 African American females, ages 15-34

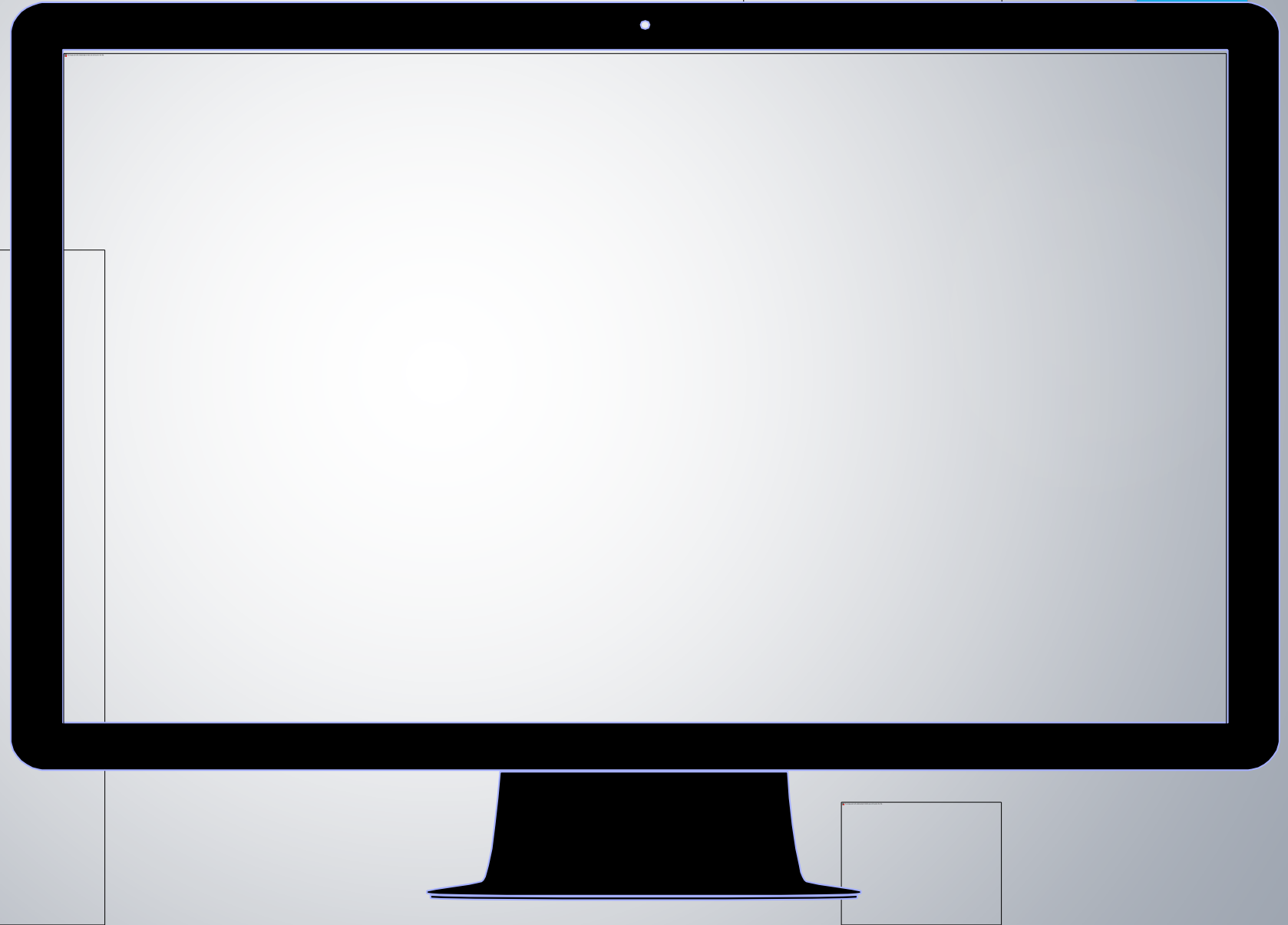
## Suggestions for design of system

- Name
- Appearance:
  - Clothing
  - Shading
  - Accessories
  - Hairstyle
- Script content
- Stories
- Social networking
- Visual Layout



# Features of the Gabby “My Health To-Do List”

- Living Well
- Staying Well
- Print/Email Option
- Gabby’s Blog
- Glossary
- Health Websites
- Reproductive Life Plan
- Browse Health Topics
- Personalization
- Color Scheme
- “My quotes”
- “My Goal”



# Gabby Randomized Controlled Trial

- RCT from 2014 to 2018 with 528 AA/Black women across the US recruited from 35 states and 242 cities
- Characteristics of our sample: higher education, higher computer literacy, higher health literacy
- Use of Gabby resulted in a 16% increase in the reported rate of PCC risks being addressed

# Development and Testing: Key Takeaways

1. Gabby was built from end-user feedback
2. Gabby creates a MHTDL on a customizable homepage to assist women in managing their health behaviors
3. Gabby is evidence-based and has been successfully tested in two RCTs
4. Women who participated in research studies enjoy using the system and found the information helpful

# Implementing Gabby at Community-Based Sites

- Translating Gabby from the research setting into the real world!
- Bringing the Gabby System to 12 community-based sites (i.e. Healthy Start programs, Community Health Centers) across the US
- Multi-step pre-implementation process to prepare for 6-month roll out
  - Includes introductory call, process mapping, stakeholder interviews and launch webinar to understand site facilitators and barriers to implementation

# Emerging Themes – Implementation Facilitators and Barriers

## **Motivation for Site Adoption of Gabby system:**

- Role of site champion
- Perceived strong evidence base and social media presence
- Gabby is easily accessible and would incur minimal costs
- Strong learning climate and organizational culture

## **Barriers & Challenges:**

- Unanticipated administrative challenges
- Competing staff/client priorities
- Internet/computer availability



# Development of Nthabi in Lesotho

Disseminate a culturally adapted, user-friendly, evidence-based, scalable mHealth intervention in all 10 districts of Lesotho to Promote Preconception Health

- Adapt evidence-based Intervention for LMIC
- Adapted Gabby to Deliver PCC
- Assist overworked health workforce
- Mobile health interventions can leap-frog face-to-face health education
- Focus groups to inform cultural adaptation

- Engaged local writer and storyteller
- Stories to promote usage of Nthabi
- 60 short installments – each with a “cliffhanger”
- Women have option to listen each day for 2 months

Lineo Segoete--Storyteller

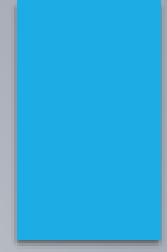
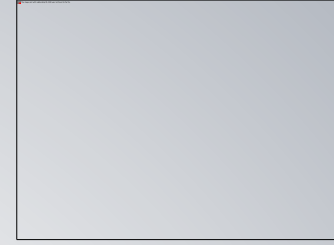
Typical Day in OPD

# Nthabi is Now on Smart Phones

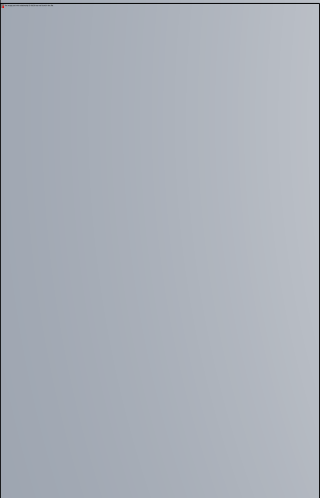
- Health education on:
  - Family Planning
  - Healthy Nutrition
  - Sexually Transmitted Infections
  - TB
  - HIV education and testing (Global Fund)
- Like Gabby, dialogue tailored to Stage of Change
  - Precontemplative – Motivational Interviewing
  - Contemplative – Shared Decision Making
  - Planning/Action – Tip, Homework, etc.
- Primary outcome: % AGYW precontemplative for HIV testing who decide to get tested after talking to Nthabi
- We aim to enroll 200 women from all 10 districts of Lesotho

- Wrapping up current implementation with sites in the next few months
- Gabby Toolkit
  - Practices for streamlined implementation process
  - Gabby “How-To” manual
  - Lessons learned and feedback
- Seeking funding for widespread implementation
- Gabby & Clinical Outcomes

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Before we talk about  
Gabe, any questions?



# What About Men?

## For Men:

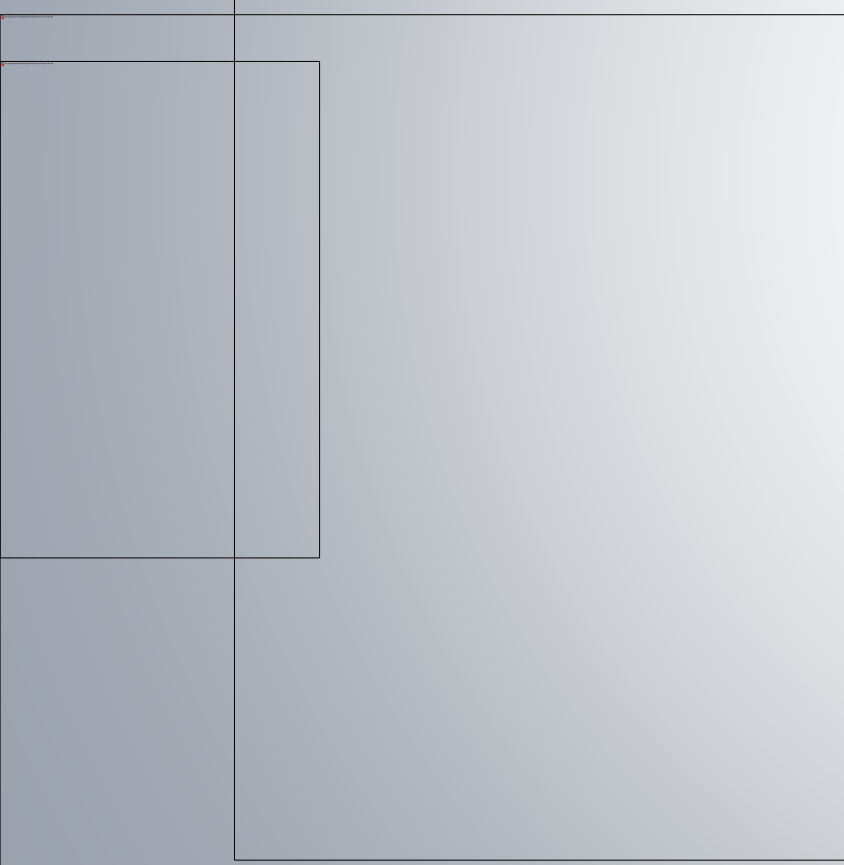
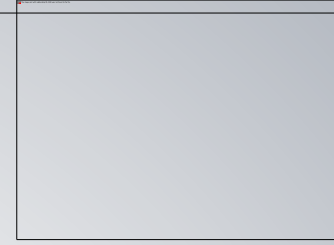
- Preconception health is important for men, too. As an individual, it means choosing to get and stay as healthy as possible—and helping others to do the same. As a partner, it means encouraging and supporting your partner's health. As a father, it means protecting your children. **Preconception health is about providing yourself and your loved ones with a bright and healthy future.**

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# Life Course Perspective Hypothesis

*Lu MC, Halfon N. Matern Child Health J. 2003;7:13-30.*

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Kramer et al. *Qual Hlth Research*. 2021.

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### Life Expectancy –

Black Men:	70.7 yrs
White Men:	76.3 yrs
Hispanic Men:	78.7 yrs

### No Health Insurance –

Black Men:	28.8%
White Men:	15.7%

### Mortality From Disease –

30% ↑ heart disease

60% ↑ stroke

200% ↑ diabetes

200% ↑ prostate cancer

“The Invisible Man”, Elder and Gilbert, Feb 2014; Robert Wood Johnson



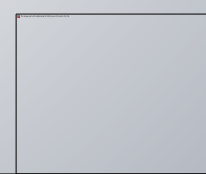
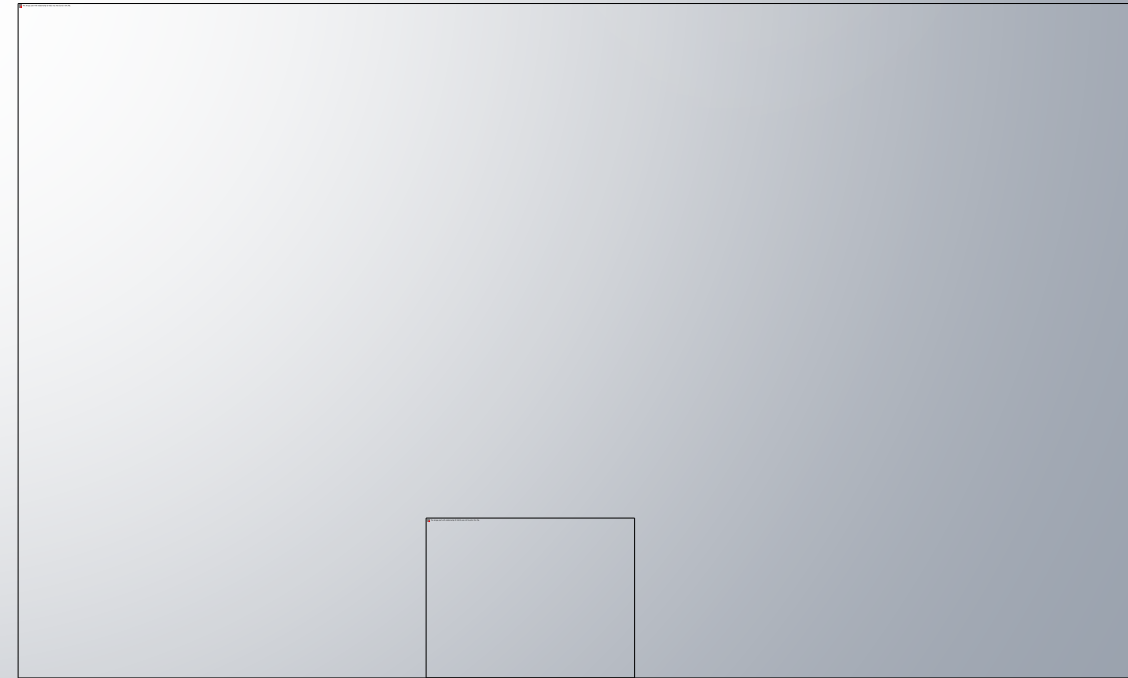
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Poverty

Employment

Educational Achievement

College Education and Criminal Justice



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## **Designing health services to better meet the needs of young African American and Black men**

1. Proactive engagement and partnerships
2. Meet men on their own terms
3. Create an open door and trusted space
4. Build where medical care works, rebuild where it does not
5. Thoughtful use of newer technologies

# Gabe Vision

- Role of men's health remains unaddressed in MCH
- Lack of evidence-based interventions and tools for public health practice.
- Improving knowledge, attitudes and behaviors regarding clinical and social determinants of health is necessary for better health outcomes
- Empowering black men to enhance their health before they become fathers offers hope of improving outcomes for their children's early development
- The Gabe System is designed to engage young Black men to take ownership of their health, and provide resources to help them be role models to their children

# Meet Gabe

Gabe is an embodied conversational agent designed for AA and Black men

An inclusive medical and social approach to health:

- Emotional Health
- Nutrition, Sleep, and Exercise
- Housing, Employment, and Education
- Criminal Justice
- Healthy Relationships
- Discrimination and Resilience
- Family Planning
- Adverse Childhood Events / IPV
- Violence
- Medical Conditions and Risks

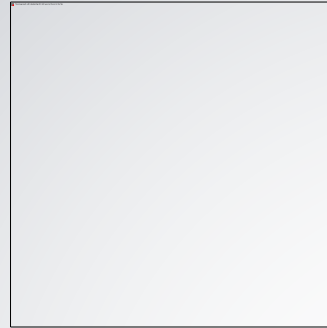
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# Gabe National Advisory Board- 2015

## Boston, MA

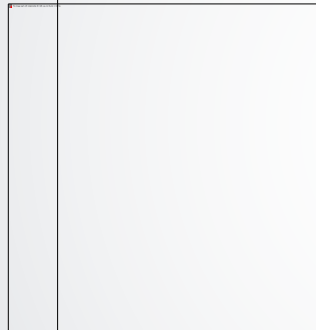
### **Elmer Freeman**

- **Executive Director:** Center for Community Health Education Research and Service (CCHERS)
- Northeastern University



### **Rich Derosa**

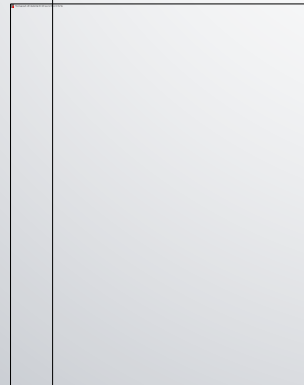
- **Director:** Behavioral Health at Boston Public Health Commission (BPHC)
- **Director:** Father Friendly Initiative at BPHC



## Providence, RI

### **Robert Nyahkoon**

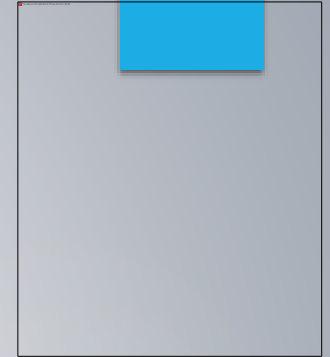
- **Director:** YouthBuild Preparatory Academy, Providence (RI)



## Hartford, CT

### **Doug Edwards**

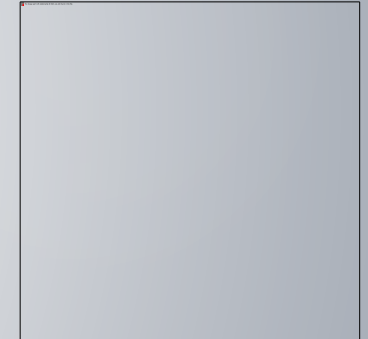
- **Founder:** Real Dads Forever (Hartford / Manchester, CT)



## Columbus, Ohio

### **Arthur James, MD**

- **Associate Professor:** Department of Obstetrics and Gynecology at The Ohio State University Wexner Medical Center.



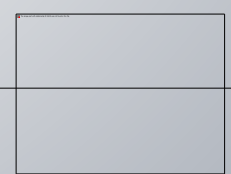
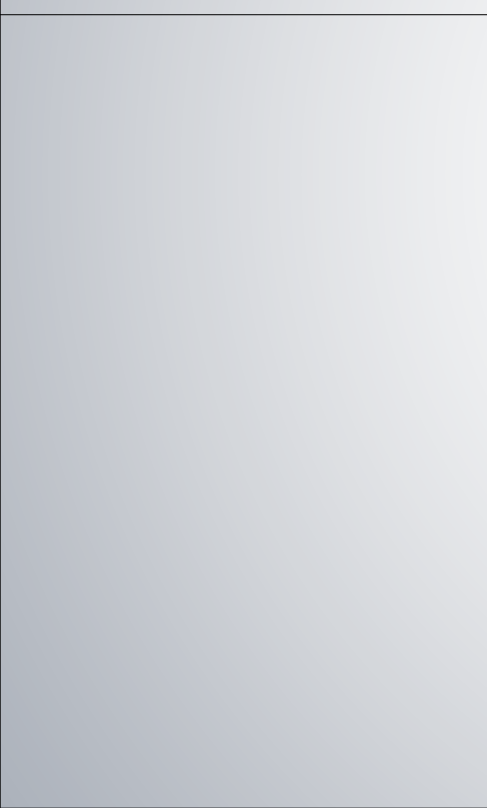
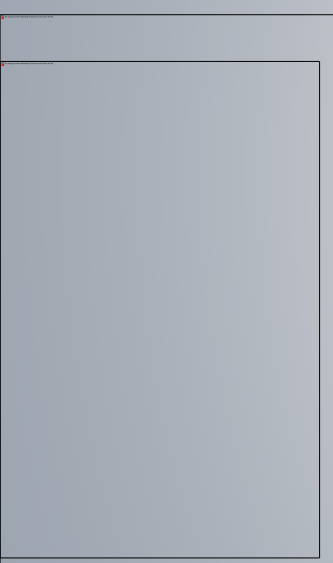
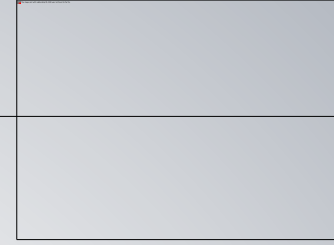
## New Haven, CT / Boston, MA

### **Kenn Harris**

- **President:** National Healthy Start Association
- **Director:** New Haven Healthy Start
- **Director of Men's Health, NICHQ**



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# Methods

- Sample
  - Black and African American men ages 15-27 were recruited from community sites in Boston MA, New Haven CT, Providence RI, and Philadelphia PA.
- Data Collection
  - **Focus Groups (N=67)** – 11 groups
  - **Peer Advisory Group (N=9)** – a group of 9 men
  - **Key Informant Interviews (N=12)** – interviews with community leaders and program directors
  - **Usability Testing (N=5)** – individual sessions with participants at YouthBuild Providence
- Discussions were audio recorded and transcribed verbatim

# Themes from Focus Groups

1. Perceptions of Health
2. Hindrance to Health
3. Health Concerns
4. Illness Management
5. Assistance with Health and Wellness
6. History of Negative Interactions
7. Components of a Positive Interaction



# Who Should Gabe Be?

“He’s [Gabe ECA] a computer, so it’s kind of a little more open for me to talk to him. [ . . .] It’s not like somebody’s there. They’re lookin’ at me directly. I’m like a little nervous to open a little bit more. With the computer, it’s kind of like talking to myself a little bit, so I can be a little more open and give a little more detail to Gabe.”

“I think what’s important is if you’re worried about people not believing what’s on the site, what people do is have proof on the site and have sources. How do you know that? Stats would help. You’re dealing with people, intellectuals. You’ve got to tell us why we shouldn’t drink so much alcohol. I’m not gonna believe you just because you say that.”

# 1. Perceptions of Health

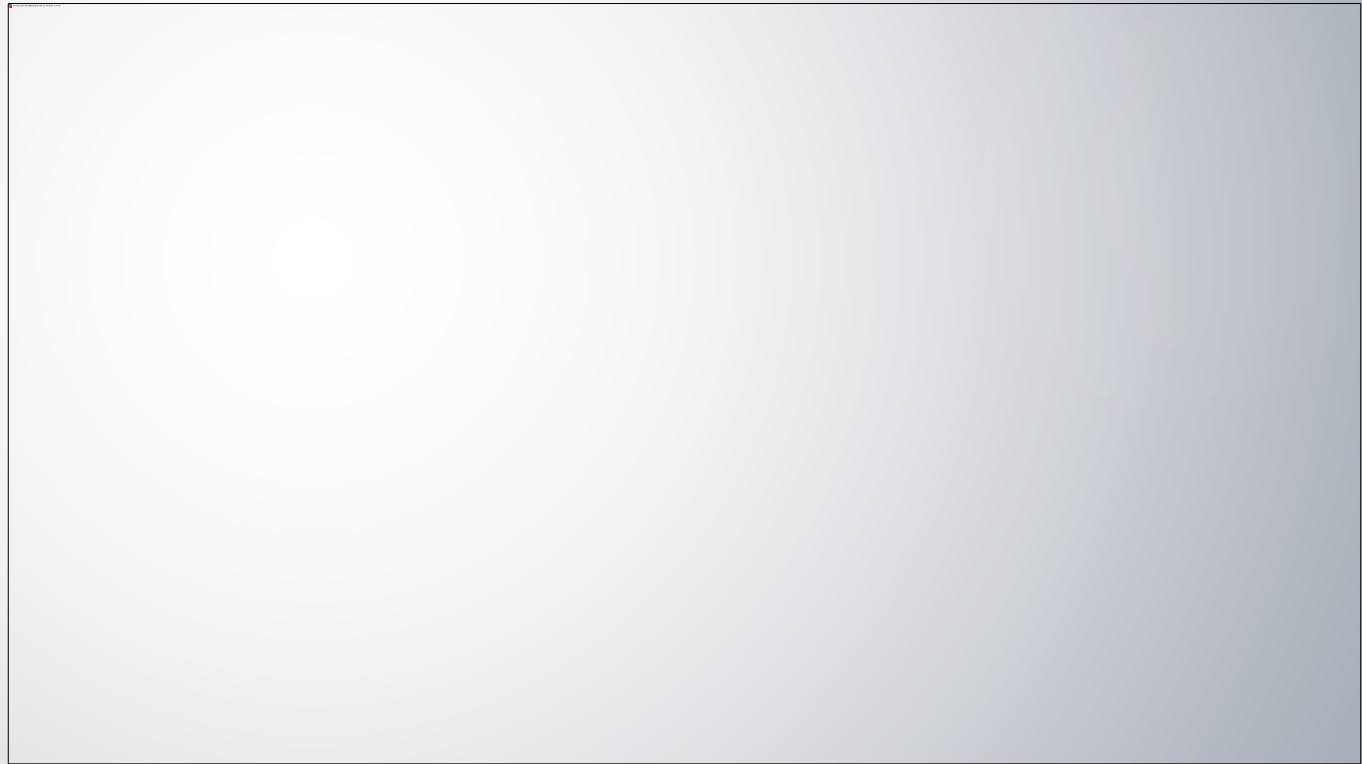
*Participants' explanation of health and what it means to be healthy*

- Avoiding or moderating alcohol, drugs, and smoking
- Knowing your family history
- Maintaining mental health
- Eating nutritious foods
- Participating in physical activity/exercising
- Sleeping
- Taking vitamins/supplements
- Maintaining an optimal weight
- Being spiritual
- Avoiding stress
- Managing finances
- Being surrounded by a good environment
- Healthy relationships with peers, co workers, friends, and romantic partners
- Maintaining personal hygiene
- Avoiding law enforcement
- Not being sick/Not feeling pain

## 2. Hindrance to Health

*Any perceived social or environmental factors that contribute to one's unhealthy behaviors or overall poor health. Excludes an individual's specific actions or unhealthy behaviors.*

- Accessibility
  - Different Quality
  - Family
  - Government
  - Lack of Knowledge
  - Money
  - Neighborhood
  - Weather



# 3. Health Concerns

*Any narrative in which participants point out what major concerns they have or have had about their own health or the health of their community*

- Alcohol/Drugs
- Anxiety
- Arthritis
- Asthma
- Cancer
- Diabetes
- Domestic violence
- Environmental hazards
- Enough exercise
- Family history
- Fidgetiness
- Heart disease
- High blood pressure
- High cholesterol
- Illnesses
- Nutrition
- Oral health
- Peer pressure
- Physical growth
- Puberty
- Sexual health
- Smoking
- Vision
- Weight

# 4. Illness Management

*Any narrative about how participants and their peers manage  
acute or chronic illness \*(does not include well visits)\**

- Coach
- Community Health Center/Clinic
- Pharmacy/Drug Store
- Provider

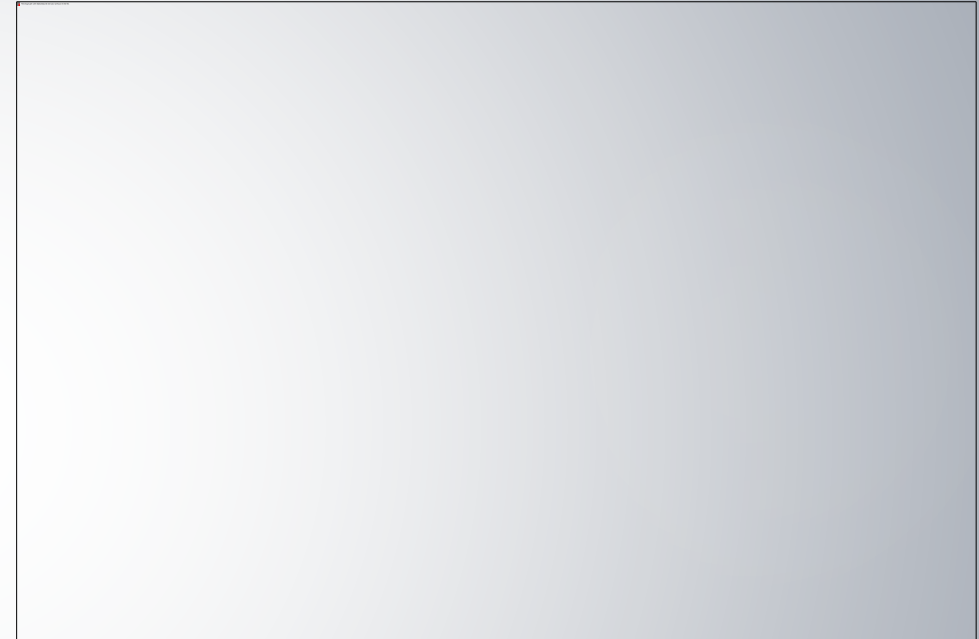
## 5. Assistance with Health and Wellness

➤ Family

➤ Partner

➤ Friends

➤ Community organizations and others



## 6. History of Negative Interactions

*Any narrative about poor interactions between participants and health care institutions, primary care providers, or others. Also includes participants' perceptions about how a future interaction may be negative.*

- Different agendas between patient and provider
- Don't listen
- Inappropriate humor
- Judgmental
- Provide limited information
- Money factor
- Over analyze
- Not relatable
- Slow
- Speculate
- Treat me differently

“A lot of my friends or family, they generally do not want to go to the doctor. [ . . . ] ‘Oh, I don’t need the doctor. The doctor doesn’t even care.’ And maybe someone in the black community, they don’t really want to go to the doctor just because they feel like maybe they don’t get treated the same.”

“So, she’s [the doctor] checking my leg but she’s seen the [court ordered] ankle bracelet on the left one and was like ‘why do you have that, what’s going on?’ It was like ‘that’s not important right now,’ you know . . . ‘take care of me.’ That’s what makes people hold stuff in, when you feel like you can’t talk to somebody because they’re gonna judge you because of it.”



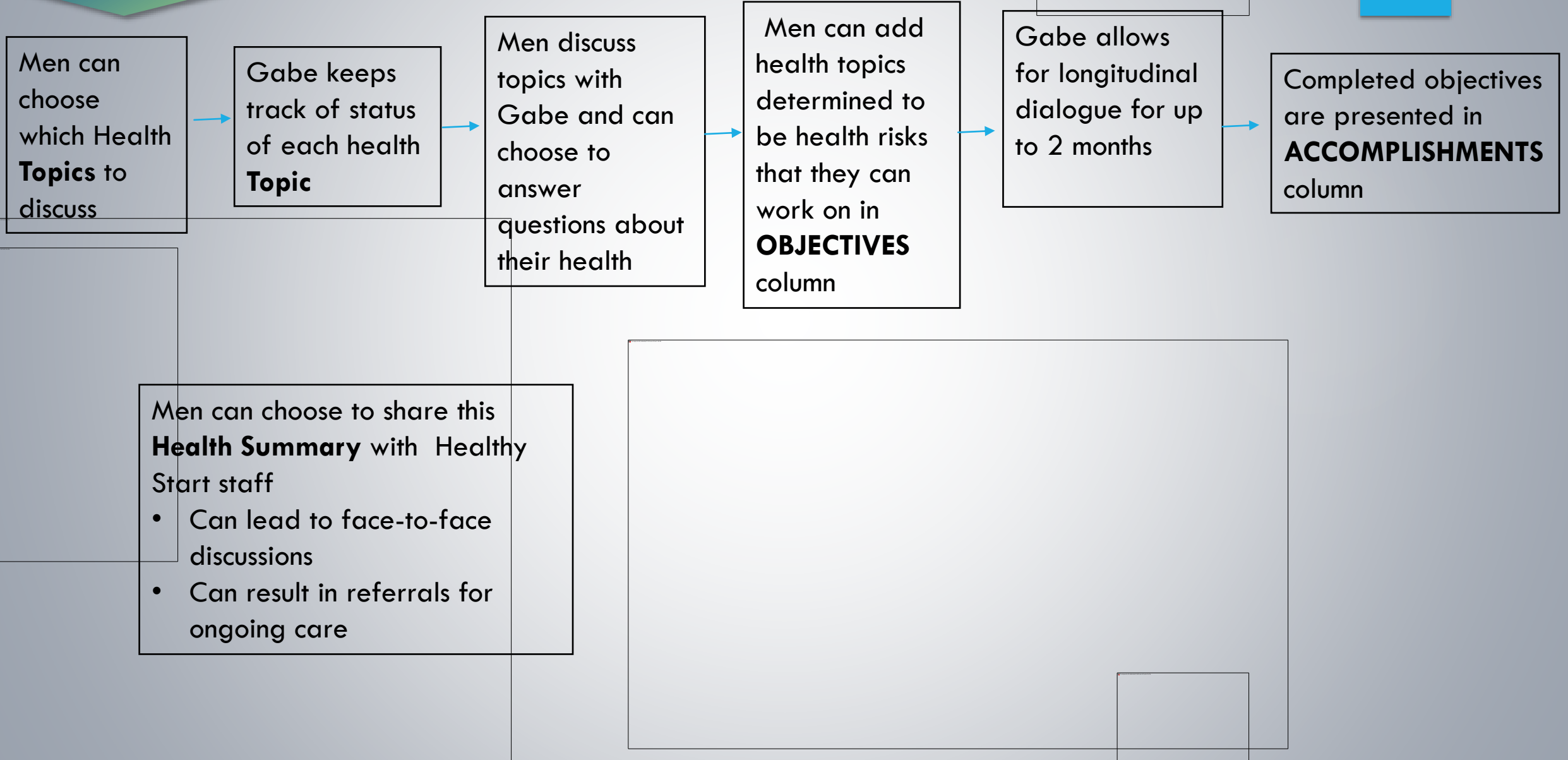
## 7. Components of a Positive Interaction

*Any narrative about good interactions between participants and health care providers, as well as the favorable actions and desired characteristics of these individuals.*

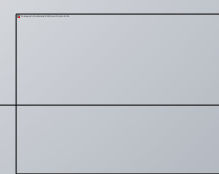
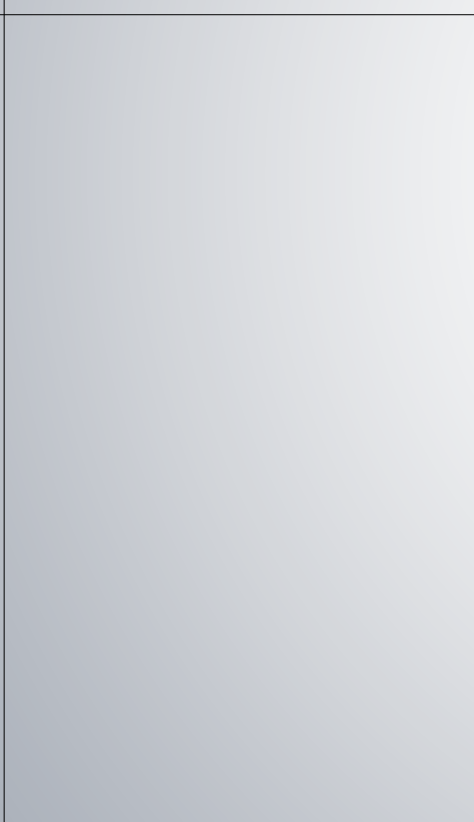
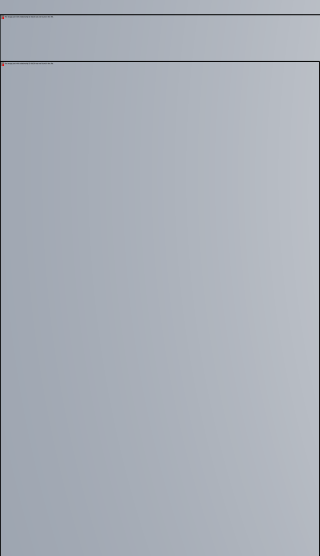
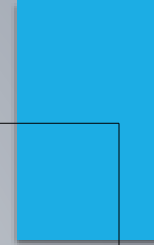
- Answer questions
- Ask questions
- Availability
- Brevity
- Body language
- Calm and caring delivery
- Educate
- Follow-up
- Listen

The Innovative Approach to Preconception Care for Young African American Men webinar is hosted by the Healthy Start TA & Support Center at NICHQ.

# Based on What Men Told Us – We Created Gabe



The Innovative Approach to Preconception Care for Young African American Men webinar is hosted by the Healthy Start TA & Support Center at NICHQ.



# Pilot of Men's Health Assessment

n=29, 76% ≤25 yo, 75% unemployed, most recruited from YouthBuild Providence, New Haven HS and Philadelphia

Risk	no. (%)	Risk	no. (%)
No or limited telephone access	8 (28%)	PTSD	9 (30%)
Unreliable access to housing	18 (62%)	Excessive Alcohol	14 (48%)
History of incarceration	14 (48%)	Tobacco	15 (52%)
No access to health insurance	4 (14%)	Heroin use	1 (3.4%)
No primary care provider	6 (21%)	Texting while driving (in last month)	10 (33%)
Use of Emergency Room for primary care	14 (48%)	Feel unsafe in neighborhood	3 (10%)
<b>Not discussed RLP with provider</b>	26 (90%)	Victim of IPV	3 (10%)
No or inconsistent use of condoms*	19 (76%)	Perpetrator of IPV	1 (3%)
History of STIs	5 (17%)	Don't exercise regularly	13 (45%)
Stress	7 (24%)	Don't get recommended fruits and veggies	29 (100%)
Depression	2 (7%)	Consume large quantities of processed foods	25 (86%)

\*out of 25 men who reported being sexually active

# Summary of Findings

## Health Behaviors

- Men do not routinely access primary health care providers when managing their health
- Black/AA men seek health information and advice from family, friends, and trusted community members

## Use of Technology

- Willing to use technology that meets them where they are as an alternative to going to the doctor
- Want to know that the health information they are receiving is accurate
- Willing to “talk” about sensitive health issues with a computer that they see as non-judgmental
- Many health issues were identified in the pilot study

# Discussion

➤ Q: Is Gabe appropriate in the  
Healthy Start setting?

- Is it feasible?
- If feasible, how should it be used?
- What are some factors that can limit the ability to use Gabe in Healthy Start?



# Closing

Danisha Charles  
Healthy Start TA & Support Center  
NICHQ



# Satisfaction Survey





The image part with relationship ID r1d2 was not found in the file.

Can be found on the EPIC website or  
[bit.ly/hs-deadlines-and-events](https://bit.ly/hs-deadlines-and-events)

Thank You!