

Using Social Determinants of Health to Inform Fatality Review

June 7, 2017
2:00 – 3:00 p.m. ET



The National Center for Fatality Review and Prevention

Housekeeping

- **Webinar is being recorded and will be available with slides in a few days on our website: www.ncfrp.org. The Center will notify participants when it's posted**
- All participants will be muted in listen only mode
- Questions can be typed into the Question Window. Due to the large number of participants, we may not be able to get to all questions in the time allotted. The Center will answer all questions and post the answers on the NCFRP web site:

<https://www.ncfrp.org/>

Moderator

CAPT Madelyn Reyes, MA, MPA, RN, DNP
Senior Nurse Consultant
Healthy Start and Perinatal Services, HRSA



About the National Center

- The National Center for Fatality Review and Prevention is a resource and data center that supports child death review (CDR) and fetal and infant mortality review (FIMR) programs around the country.
- Supported with funding from the Maternal and Child Health Bureau at the Health Resources and Services Administration, the Center aligns with several MCHB priorities and performance and outcome measures such as:
 - Healthy pregnancy
 - Child and infant mortality
 - Injury prevention
 - Safe sleep

The Center is funded in part by Cooperative Agreement Number UG7MC28482 from the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB).

The National Center for Fatality Review and Prevention

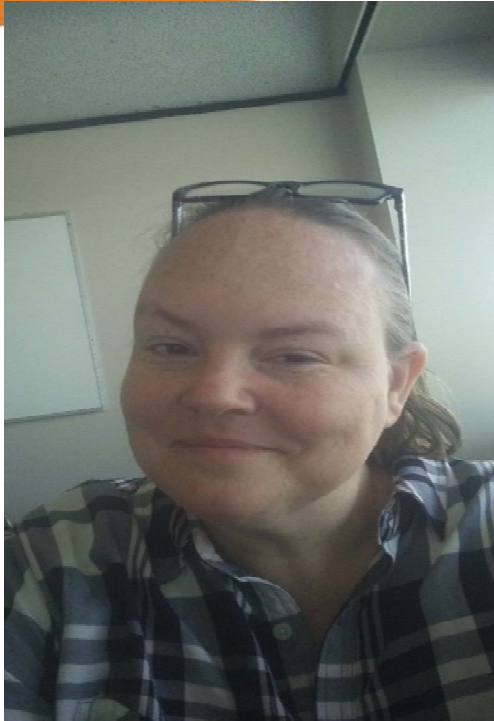


MCHB's Vision for the Center

- Through delivery of data, training, and technical support, the Center will assist state and community programs in:
 - Understanding how CDR and FIMR reviews can be used to address issues related to adverse maternal, infant, child, and adolescent outcomes
 - Improving the quality and effectiveness of CDR/FIMR processes
 - Increasing the availability and use of data to inform prevention efforts and for national dissemination

Ultimate goal: improving systems of care and outcomes for mothers, infants, children, and families

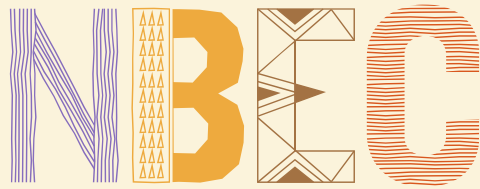
Speaker Panel



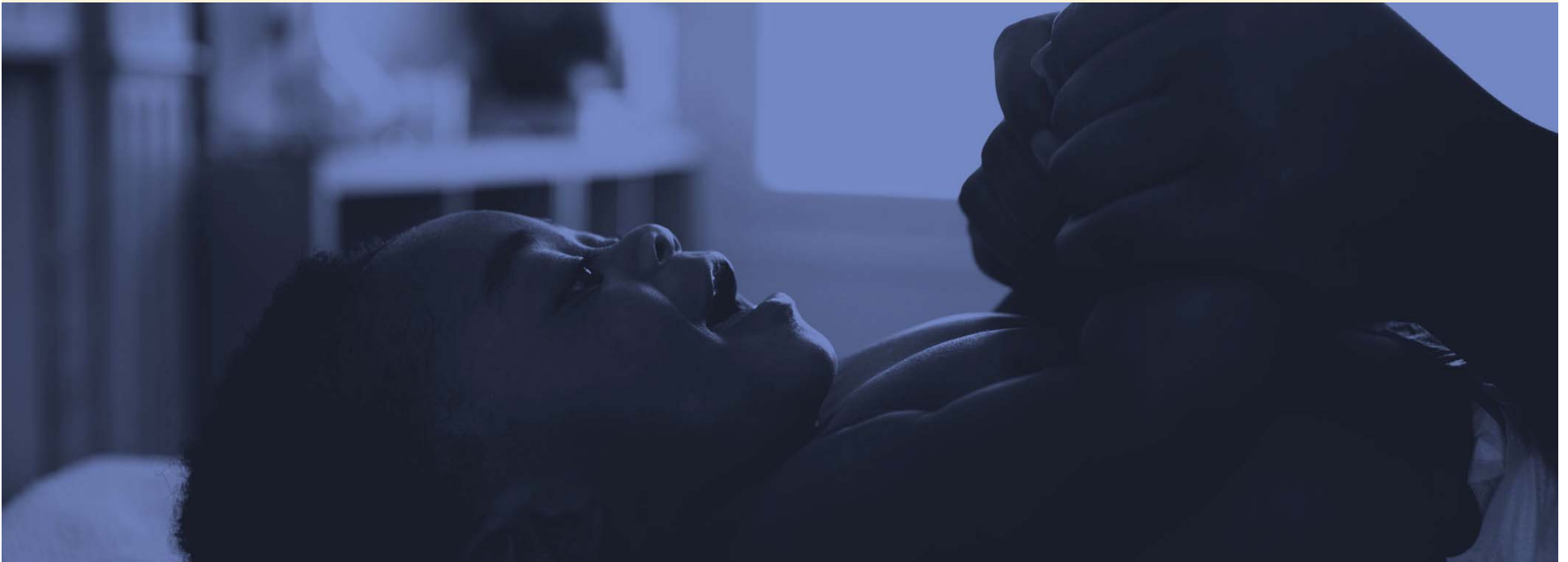
Susan Hurtado, Community Specialist
Tulsa Oklahoma Fetal and Infant Mortality Review Program.



Joia Crear-Perry, MD, FACOG
Founder and President of the National Birth
Equity Collaborative



NATIONAL BIRTH EQUITY COLLABORATIVE



Social Determinants of Health to Inform Fatality Review

Joia Crear-Perry MD, Founder/President

National Birth Equity Collaborative

birth equity (*noun*):

1. The assurance of the conditions of optimal births for all people with a willingness to address racial and social inequalities in a sustained effort.

Joia Crear-Perry, MD
National Birth Equity Collaborative



Mission

To reduce Black maternal and infant mortality through research, family centered collaboration and advocacy.

Goal


Reducing black infant mortality rates by 25% in the next 5 years in cities with the highest numbers of Black infant deaths and to reduce Black IMR to at or below the national average in these sites in the next 10 years.




NATIONAL BIRTH EQUITY COLLABORATIVE

*Our vision is that every Black infant
will celebrate a healthy first
birthday.*

Learning Objectives



Become familiar
with the work of
the National Birth
Equity
Collaborative



Identify significant
Social Determinants
of associated with
Louisiana's infant
mortality



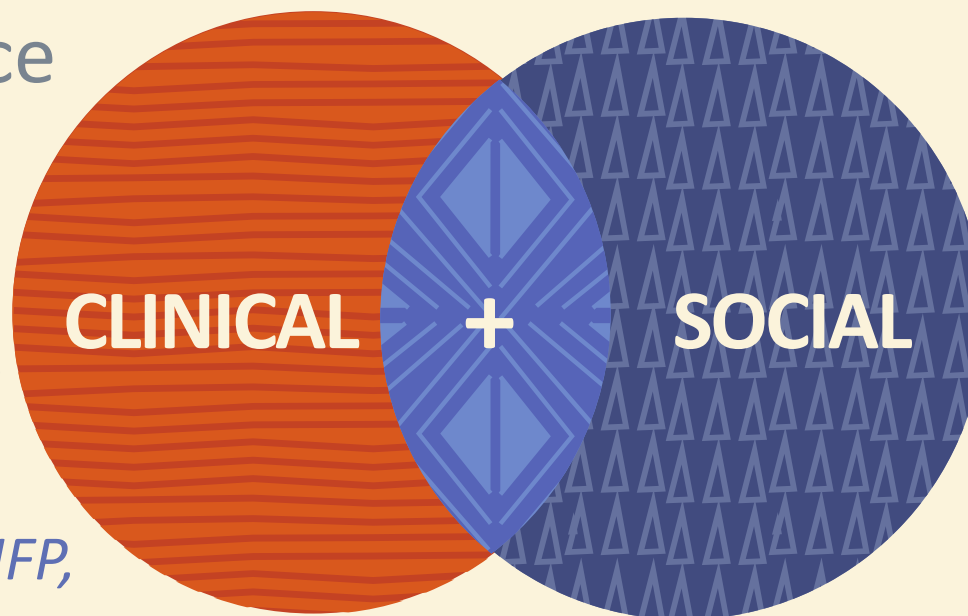
Explore opportunities for
fatality review panels to
address SDHI

NBEC Focus

- Human Rights Framework applied
- Dismantling systems level inequities
- Reproductive Justice
- Education on SDHI

“Working in this area of overlap is part of the reason why programs like Healthy Start, Case Management, NFP, and Centering experience much of their success.”

— Arthur James, M.D.



NBEC Programs

**Safe Landing
Birth Equity Solutions
Black Mamas Matter
Campaign for Black Babies**

Safe Landing

High-risk Home Based Intervention for NICU Babies

Safe Landing is NBEC's home-based intervention model targeting at-risk infants leaving the Neonatal Intensive Care Unit (NICU). Facilitators provide culturally appropriate support to at-risk families through the infants' first birthdays by conducting regular home visits, connecting families to social services.

Providing training in culturally appropriate home-visitation practices to home visitation staff working through insurance companies and managed Medicaid providers.

Birth Equity Solutions

NBEC works with organizations, communities and stakeholders to develop and implement strategies to achieve birth equity goals. We provide training and technical assistance for organizations that value community voices and strive to improve the lives of Black families.

- Maternal Mortality (PAMR)
- Infant Mortality (FIMR)
- Reproductive Justice
- Family Health/Family Planning
- Focus Groups and Interviews
- Messaging and Social Marketing
- Community Engagement
- Organizing/Advocacy
- Health Policy
- Anti-Racism and Equity Workshops

Black Mamas Matter

Black Mamas Matter is a Black women-led cross-sectorial alliance. We center Black mamas to advocate, drive research, build power, and shift culture for Black maternal health, rights, and justice.



The Naked Truth: Death by Delivery



Campaign for Black Babies

- CITIES WITH HIGHEST BLACK INFANT DEATHS

*1 in 4 black infant deaths occur in these places.

- CITIES WITH ACTIVE CAMPAIGNS FOR BLACK BABIES

*Meeting our 5-year and 10-year goals in all 20 places means saving 3,000+ babies.

• LOS ANGELES

MILWAUKEE

DETROIT

• BOSTON

• NEW YORK

• PHILADELPHIA

• WASHINGTON, DC

CLEVELAND

BALTIMORE

CHICAGO

ST. LOUIS

CHARLOTTE

MEMPHIS

ATLANTA

RURAL MISSISSIPPI

DALLAS

NEW ORLEANS

ORLANDO

HOUSTON

MIAMI

Campaign for Black Babies

Mixed methods research, parent-centered collaboration, collective impact and advocacy to effectively reduce Black infant mortality in the cities with the highest burden of Black infant death.

Campaign Activities

- ***Center the voices and experiences of Black women and families***
- Conduct research informing a national report to be released to local stakeholders, and policy-makers.
- Encourage collective impact by convening local and national stakeholders committed to disaggregating data, customizing strategies, and advocating for systems change.
- Promote evidence-based culturally appropriate interventions effectively reducing Black infant mortality.

Leading Causes of Infant Death



Sudden Unexpected
Infant Death Syndrome



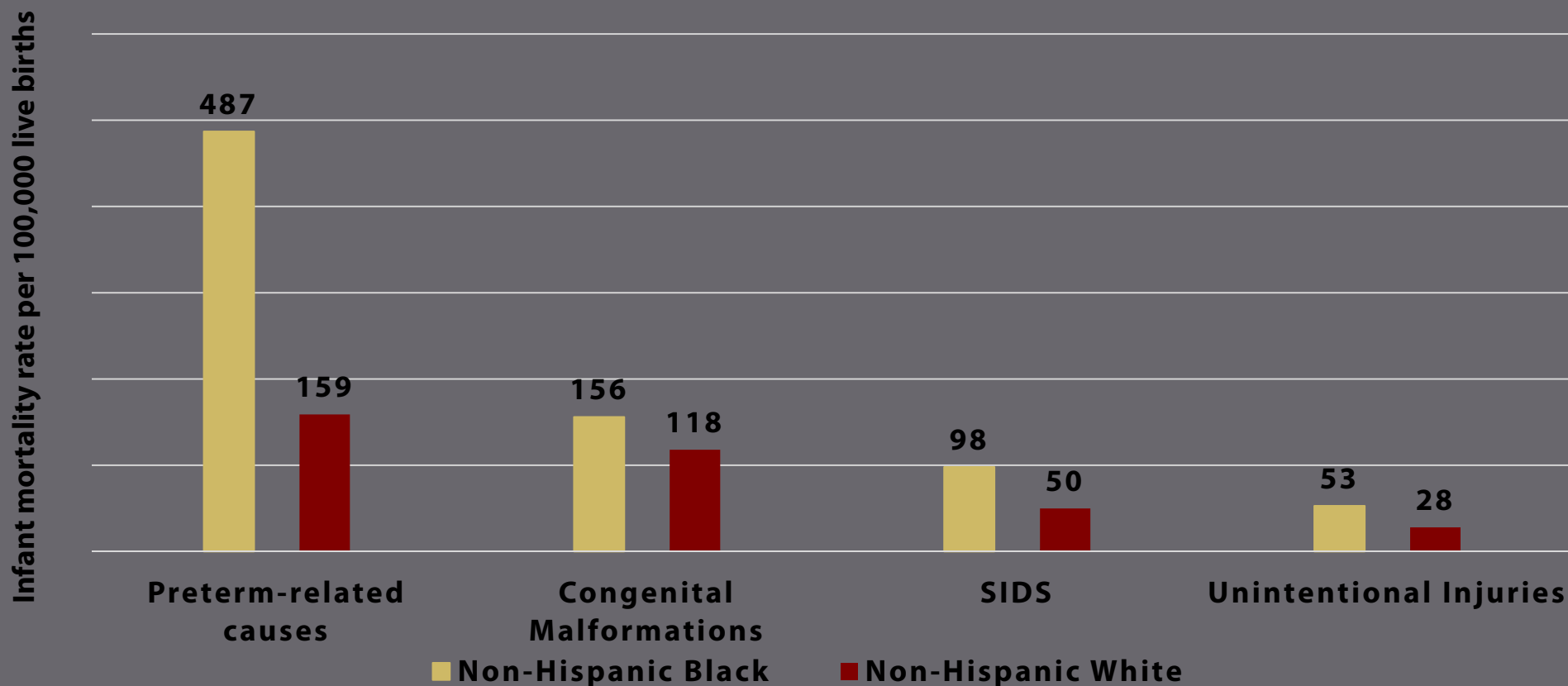
Congenital
Malformations



Preterm
Related Conditions

Disparities in Infant Mortality in the U.S.

Infant Mortality Rates for Selected Causes of Death Among Non-Hispanic Black and Non-Hispanic White Mothers, 2010



A photograph of two women sitting at a table in a modern office or meeting space. The woman on the left is wearing glasses and a patterned top, resting her chin on her hand. The woman on the right is holding a tablet and looking at it. A laptop, a coffee cup, and a tablet are on the table. A large window with a grid pattern is in the background. The entire image has a blue tint.

Methodology

Mixed Methods Data Collection

Birth Equity Index

Quantitative

- *A comprehensive set (50+) of social determinant indicators were selected to broadly define health and opportunities for better health within the social and physical environment of 20 US metro areas with some of the highest black infant mortality rates in the country. We identified those that were at least marginally associated with black infant mortality rates*

Maternal Interviews

Qualitative

- *The IRB approved **Question Guide** was created from amended FIMR interview protocol, other evidence-based maternal interview question guides, and original questions based on the reproductive justice framework. Partnered with NHSA to identify willing participants to interview, providing an incentive to cover their travel expenses, childcare, and/or time lost from work.*

Maternal Interviews

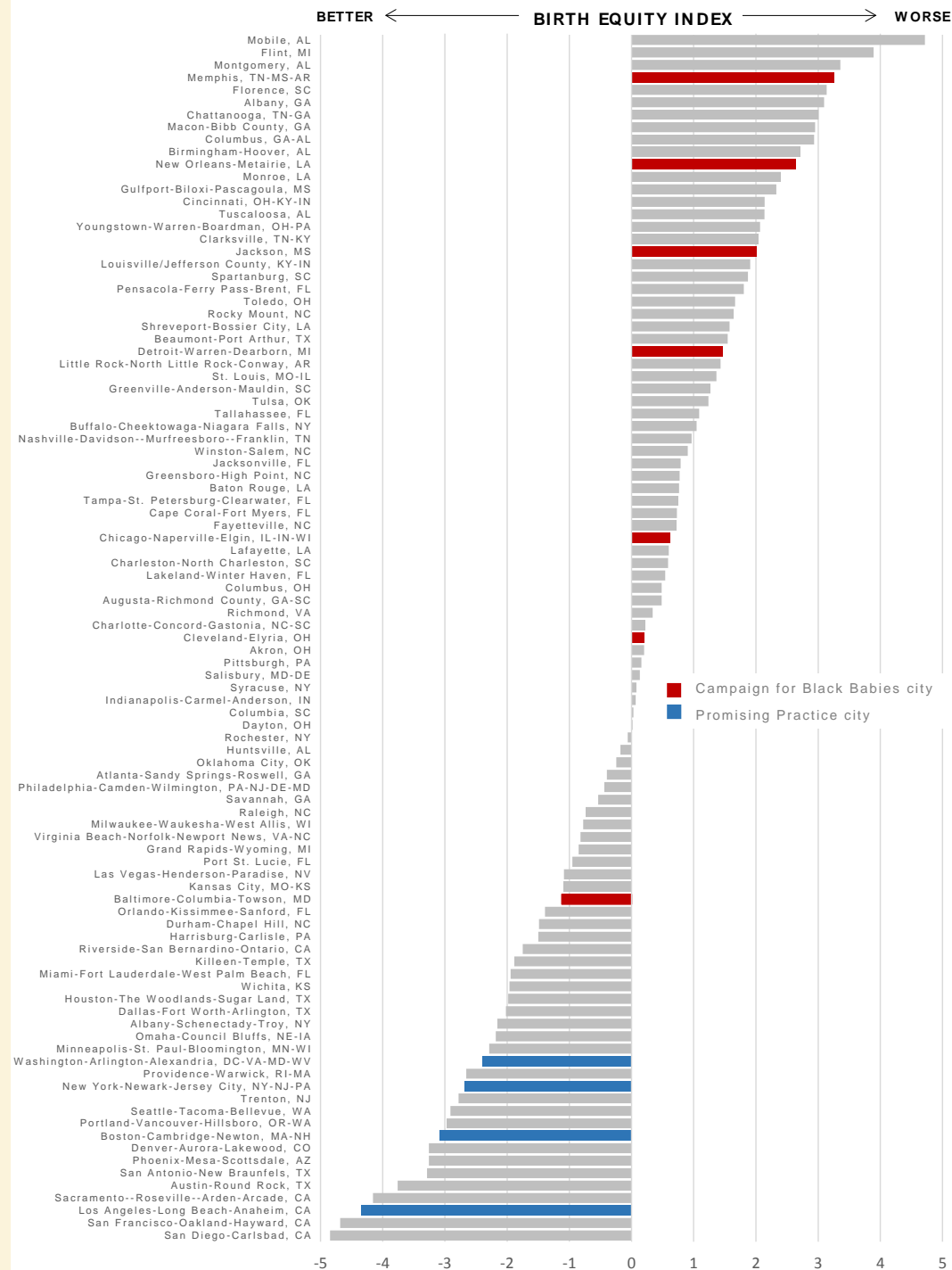
Question Topics

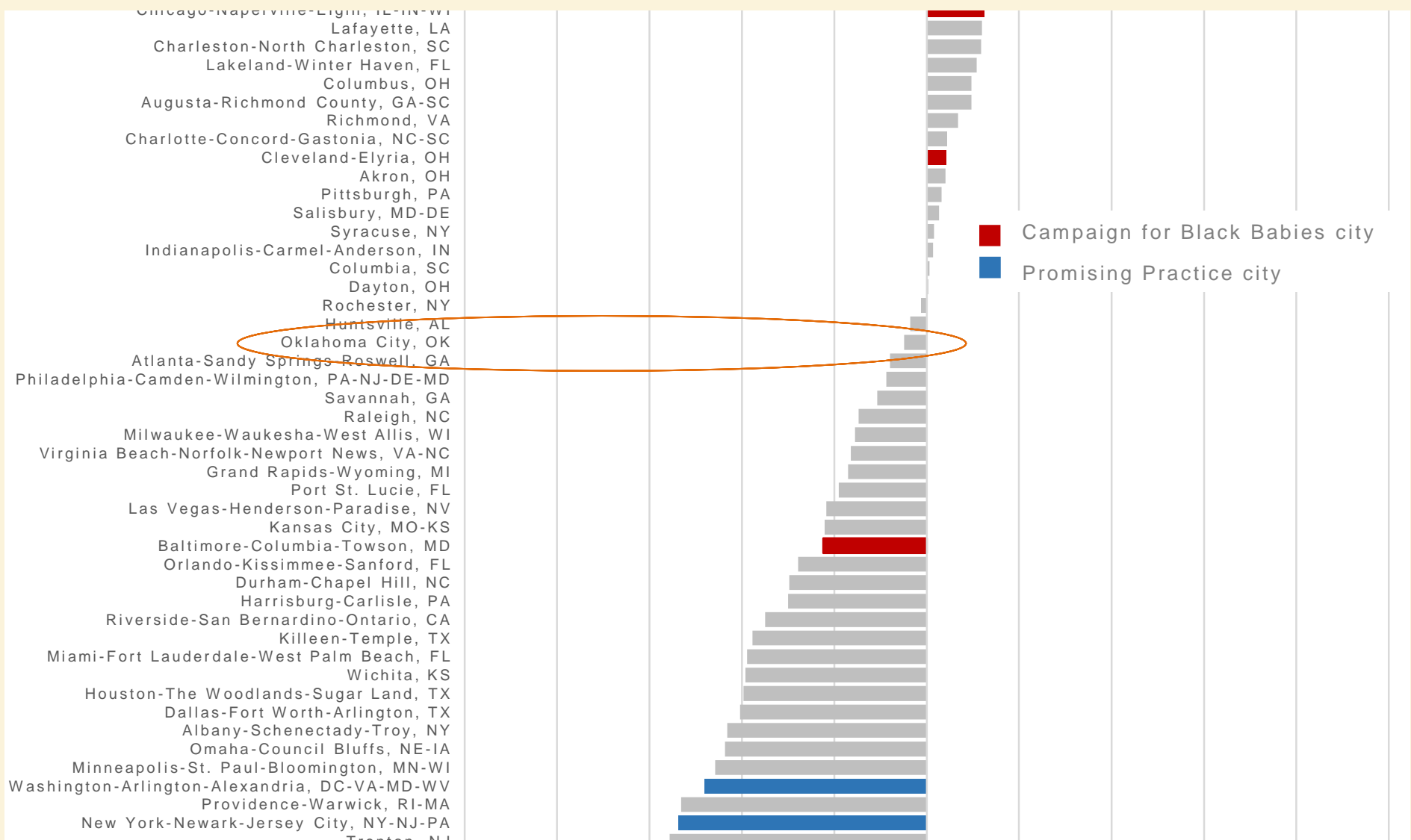
- Trauma
 - Medical History
 - Race/Racism
 - Transportation
 - Housing/Community
 - Clinical Care
 - Economic Insecurity
 - Criminalization and Reproductive Justice
 - Support and Connectedness
 - Grieving and Counseling
- We used a traditional qualitative analysis methods; transcription, codification, analysis, maintaining confidentiality for the participants

Birth Equity Index

Table 1. Indicator description and data source.

Indicator	Definition	Source and year
Education	% of NH Black residents age 25 and older with less than a high school education	American Community Survey, 2009-2013 5-year estimate
Unemployment	% of NH Black residents in the civilian labor force who are unemployed	American Community Survey, 2009-2013 5-year estimate
Residential segregation	Isolation index ranging from 0 (complete integration) to 1 (complete segregation)	Census, 2010
Adult smoking	% of the adult population that currently smokes	BRFSS, 2006-2012 average
Poor mental health days	Average number of mentally unhealthy days reported in the past 30 days (age-adjusted)	BRFSS, 2006-2012 average
Poor physical health days	Average number of physically unhealthy days reported in the past 30 days (age-adjusted)	BRFSS, 2006-2012 average
Adult obesity	% of adults that report a BMI of ≥ 30	CDC Diabetes Interactive Atlas, 2011
Limited access to healthy foods	% of the population who are low-income and do not live close to a grocery store.	USDA Food Environment Atlas, 2010
Homicide rate	Homicide deaths per 100,000 residents	CDC WONDER mortality data, 2006-2012 average
Air pollution	Daily fine particulate matter (average daily measure in micrograms per cubic meter).	CDC WONDER Environmental Data, 2011
Jail admissions	Annual admissions per 100,000 residents age 15-64	Bureau of Justice Statistics, 2012
Structural racism (Racial inequality in income)	NH White to NH Black ratio of median household income	American Community Survey, 2009-2013 5-year estimate





A photograph of two Black women sitting at a white table in a modern office or meeting space. The woman on the left, wearing glasses and a patterned top, is gesturing with her hand while speaking. The woman on the right, with curly hair and a dark top, is looking at a tablet. On the table are a coffee cup, a notebook, and a tablet. A large window with a grid pattern is in the background. The entire image has a blue tint.

Social Determinants of Infant Mortality

Infant Mortality in Detroit

There were 201,016 births and 1,554 infant deaths in the Detroit Metropolitan Statistical Area from 2010-2013.

29% of the births were Black babies (59,090).

50% of the infant deaths were Black babies (783).

The infant mortality rate among Black infants was almost two and a half times higher than the rate among White infants:

Black infant mortality rate was **13.3** deaths per 1,000 live births.

White infant mortality rate was **5.5** deaths per 1,000 live births.

Leading Causes Of Death	Black Infant Deaths	White Infant Deaths
Preterm-related conditions	51%	42%
Congenital anomalies	12%	21%
SUID	2%	3%

Income and Education

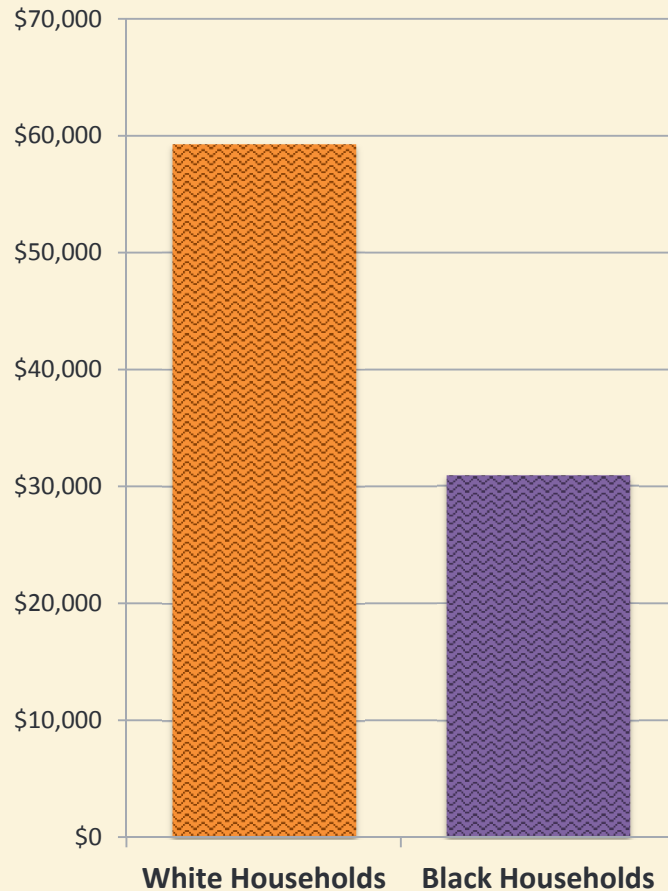
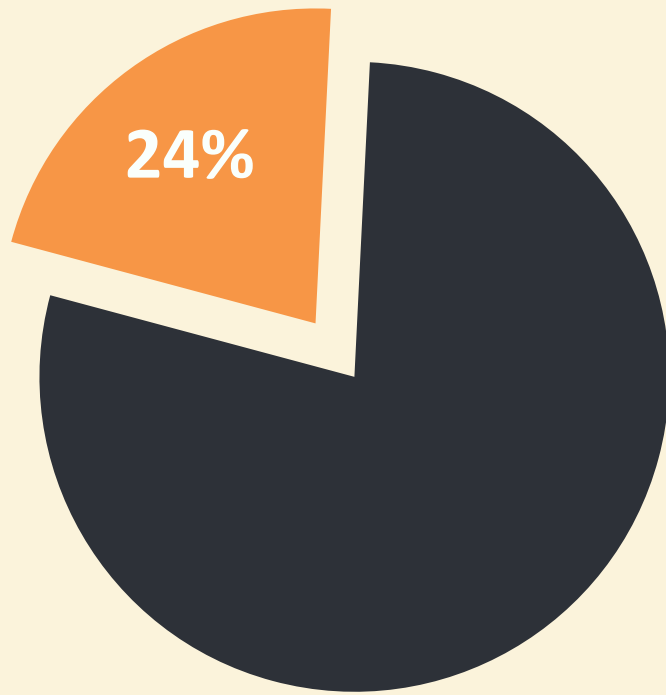


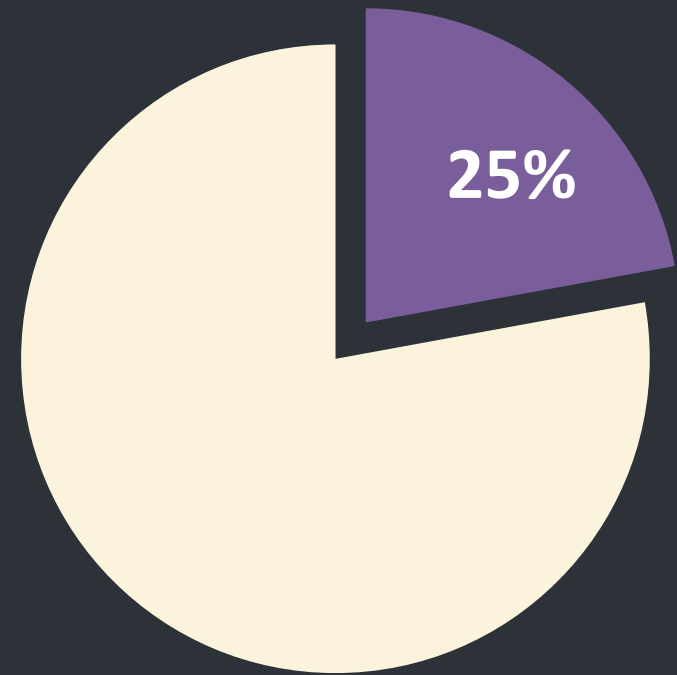
Fig 1.a

Black households in Detroit earn on average about half the annual income of White households (\$30,935 vs. \$59,307). **(Fig 1.a)**

The percentage of Black residents age 25 and older who have a college degree (17%) is about half the percentage among Whites (30%)



24% of Black Adults
versus 15% of white adults
are uninsured.



25% of Black Adults
versus 11% of white adults
are unemployed.

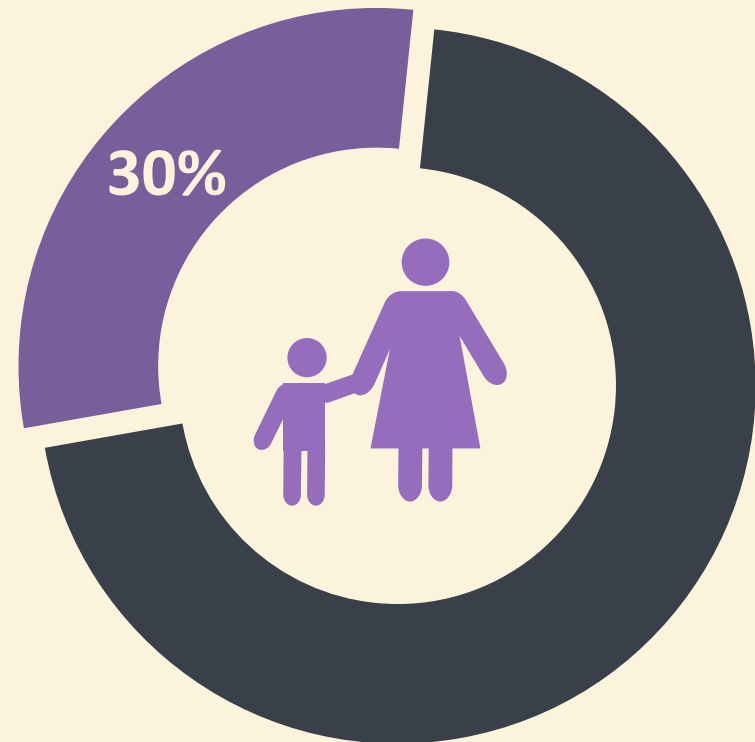
Housing and Neighborhood

17% of households have severe housing problems (at least 1 of the 4 following housing problems: overcrowding, high housing costs, lack of kitchen or plumbing facilities).

9.3% of households have no vehicle available.

7% of Black residents rely on public transportation to get to work vs. **<1%** of White residents.

High racial residential segregation: The Black-White dissimilarity index in Detroit is .74, meaning 74% of one group would have to move to a different neighborhood in order for the two groups to be equally distributed.



30% of children
are in single parent homes





5%

of residents are low-income and do not live close to a grocery store.

15%

of residents did not have access to a reliable source of food in the past year.

There are  **1,747** residents for every **1**  primary care provider

and **1**  mental health provider for every  **536** residents.

Listening to the women of Detroit

Medical Care

Children's Hospital was a waiting game, basically. I kind of feel like they didn't know what to do, but they were acting like they did know what to do. They wouldn't tell me. Y'all knew this baby wasn't going to live. Y'all knew whatever the cause was. To this day, I still don't know... They were like, "Your baby is dead. What you gonna do now?" Basically. "She gone. So, Sorry."

Housing and Neighborhood

[My neighborhood] is not safe for anyone. In Michigan, period, I'm not going to say that Michigan is bad because I love my state. But, it's always something bad, you know what I'm saying? In my mama's neighborhood, it's abandoned houses. In my neighborhood, it's abandoned houses, but they tore some of them down. People got robbed at the stores and stuff like that. People murdering people on the next street.... I'm like 4 blocks from away. I knew the people. They be doing shootings in the air and all this and that. That's just basically everywhere. You are not completely safe anywhere. In the halls, inside the house, yes I felt kind of safe. Outside, you never know. No walking. We don't walk in [here] Never walk in [in my neighborhood]

Transportation

I don't have a car. So you have to ask people to take you here, take you there. Sometimes they can take you there or sometimes they might be busy or don't want to do it. So I have to make sure I catch people at good times.

Infant Mortality in Detroit

Data Update

Black infant mortality rate 2013: **17**

Black infant mortality rate 2015: **14.3**

Social determinants of IM

...in NBEC pilot cities

Black infant mortality rates are 12% lower for every \$10,000 increase in the Black **median household income**.

The Black infant mortality rate increases by 3% with every 1% increase in Black **unemployment**.

The Black infant mortality rate is 3% lower for every 1% increase in the proportion of Black residents with a **Bachelor's degree** or higher.

The Black infant mortality rate is 1% higher for every 1% increase in **racial residential segregation**.

A blue-tinted photograph of two women looking down at a document. A child's hand is visible in the foreground, resting on the document. The text is overlaid in the center.

Fatality Review Opportunities for Engagement in SDHI



Opportunity indicators include:

- High-quality education
- Stable housing
- Sustainable employment
- Healthy and safe environment
- Access to healthy food
- Positive social networks
- Political empowerment

**For this discussion,
OPPORTUNITY =
Social Determinants**



Racial Health Inequities: We made it this way

A consequence of deliberate political action which can be undone with deliberate political action on many levels.

FIMR and CDR panels have major opportunities to build internal capacity and uplift their communities through prioritizing health equity when responding to issues that arise in data and interviews

Using your power to operationalize equity will not only decrease preventable death, but improve quality of life for many.



Preterm Related Conditions

Babies born at 20-37 weeks gestation are at risk for preterm related health conditions

Clinical Risk Factors

- Short cervix
- Previous preterm birth
- Short interval between pregnancies
- History of certain types of surgery on the uterus or cervix
- Pregnancy complications such as multiple pregnancy and vaginal bleeding
- Low pre-pregnancy weight
- Smoking during pregnancy
- Substance use during pregnancy

Social Risk Factors

- **Racial residential segregation (isolation)**
- **Unemployment**
- **Median household income**
- **Structural racism (racial inequality in employment)**
- **Gender inequality in earnings.**

Congenital Malformations

Congenital malformations are birth defects or conditions present at birth. They can cause problems in overall health, how the body develops or how the body works. Most common congenital malformations underlying cause of death include congenital malformation of the heart and chromosomal abnormalities.

Clinical Risk Factors

- Genetic or inherited causes including chromosomal defects, single gene defects, dominant or recessive inheritance
- Environmental causes including a drug, alcohol, or maternal disease
- Multifactorial birth defects caused by a combination of genes and environmental exposures.

Social Risk Factors

- **Uninsured rates**
- **Prevalence of sexually transmitted infections within the population**
- **Food insecurity**
- **Limited access to healthy foods**

SIDS/SUIDS

The sudden death of an infant less than 1 year of age that cannot be explained after a thorough investigation is conducted, including a complete autopsy, examination of the death scene, and a review of the clinical history. SUID category combines ICD–10 codes for SIDS, other ill-defined and unspecified causes of mortality, and accidental suffocation and strangulation in bed.

Clinical Risk Factors	Social Risk Factors
<ul style="list-style-type: none">• Inadequate prenatal care• Intrauterine growth restriction• Short inter-pregnancy interval• Substance use• Viral respiratory infection• Genetic factors• Sleep environment	<ul style="list-style-type: none">• Education• Income• Single Parent Households

Data Action

- Using Birth Equity Index and stories from maternal interviews
 - Identify barriers and opportunities for improving infant mortality
 - Assess capacity/readiness and address shortcomings (staff, partners, resources, knowledge)
 - Program practices, internal policies and local municipal policy have significant leverage
 - Maintain health and racial equity lens

Opportunities for Engaging in SDHI

Preterm Related Conditions

- Responding to structural racism in housing and job markets
- Reducing Black unemployment
- Increasing median Black household income
- Gender equality in wages and salaries

Congenital Malformations

- Continue decreasing uninsured rates
- Reduce prevalence of sexually transmitted infections
- Support food security and access to healthy foods for low income families

SIDS/SUIDS

- Increase/support high quality education
- Support/provide resources and positive social networks for single parent households

Opportunities for Engaging in SDHI

Strategic Planning

- Do not reinvent the wheel, use available resources to help
- Determine staff and partner readiness for issues of race, power and inequality in your work
- Consider equity in training materials and interview protocol
- Consider equity when assessing data and when developing action plans with collective panel and partners

Coalition Building

- Partner with established organizations who have active community leadership
- Constantly assess and drive home importance of equity, culture-shifting

Evaluation and Maintenance

- Use lessons learned to redirect if needed
- Update FIMR/CDR resources, guides, communications, case reporting systems, etc. according to lessons learned

Policy Change Examples

- Influence partner organizations to prioritize racial equity in their work
- Trainings and workshops for interviewers to develop more cultural competence and manage implicit bias **in response to maternal experiences of racism**
- Work with community action teams to improve city-wide transportation infrastructure **in response to data and maternal experience** (signage, bike lanes, crossing guards, bus schedules, etc)
- Lead community action teams to activate against federal threats to Medicaid and public health infrastructure through the ACA, **in response to overall disinvestment in health and safety**

Thank you

Visit us at birthequity.org



Joia Crear-Perry, MD

Founder President

drjoia@birthequity.org



Life Course Theory Grant

Susan Hurtado

06/07/2017

About Tulsa and TFIMR

In 2015, TFIMR was abstracting data for fetal and infant deaths in three counties. Our Case Review Team was reviewing an average of 120 infant/fetal deaths every year.

Population: 760,000

Two rural counties and one urban county

6 large hospitals

Tulsa IMR was 7.4/1000

41st in the nation for infant mortality

Life Course Theory Grant Overview

Our life course theory grant had two main focuses.

1. To identify protective and risk factors of mothers who had a poor birth outcome.
2. To improve our community education and referral process once risk factors have been identified.

Grant Details

- Our participant sample came from two sources: mothers of babies who were currently in a NICU
- Area mothers who had experienced either a fetal or infant loss and who had participated in a FIMR family interview.

Grant Details

- NICU mothers were provided a care bag with incentives and an invitation to participate in an online survey.
- FIMR mothers were provided an invitation to participate in an online survey.
- All participants received a gift card if they completed the survey
- At the end of the survey, participants were invited to create a personal health goal. Risk factors were “flagged” and referrals and health information was sent out.
- Follow-up was completed by phone at six weeks post interview and again at three months post interview. At the end, participants received a second gift card.

Survey

- Family and Personal Health History
- Diet and Exercise
- Dental Care
- Medication
- Reproductive History and Birth Control Use
- Alcohol and Drug Use
- Mental Health
- Income
- Housing Stability
- Physical Resources
- Social and Family Support
- ACE, Victims of domestic violence or other crimes
- Pregnancy stress
- Safety
- Insurance
- Education

Outcomes

- 170 women completed the initial survey
- 231 goals were created, 74 of which were evaluated.
- 57 completed the entire assessment process through three months post-assessment.
- Over $\frac{1}{4}$ of participants had experienced a fetal or infant loss.

Personal Goals

- Lose weight
- Stop smoking
- Finish school/obtain GED
- Find employment

Goals, 3 month follow-up

- On a 1 – 10 measurement scale, most women said they were about half-way to meeting their goal.
- The main barriers to success were childcare, being around bad habits, and time.
- Perceived family support dropped 20% and perceived social support dropped 50% in the three months post-assessment.

Thanks!
Questions?

QUESTIONS

**Recording of webinar and slides will be posted within a week on
National Center website: www.ncfrp.org**

Next Webinars

Stay Tuned! Our next webinar will be presented in September 2017.

Facebook and Twitter



Thank you!

Additional questions can be directed to info@ncfrp.org



The National Center for Fatality Review and Prevention