



*Strategies to Achieve Alignment, Collaboration, and Synergy
Across Delivery and Financing Systems*

**Closing Gaps in Health and Social Services for Low-
Income Pregnant Women**

*Research In Progress Webinar
November 20, 2019
12:00-1:00 pm ET/9:00-10:00am PT*

Agenda

Welcome: Carrington Lott

Presenters: Irene Vidyanti, PhD, MEng • Los Angeles County Chief Information Office
William Nicholas, PhD, MPH • Los Angeles County Department of Public Health
Erin Saleeby, MD, MPH, FACOG • Los Angeles County Department of Health Services

Commentary:

Q&A: Carrington Lott



Irene Vidyanti is a Data Scientist for the Los Angeles County Chief Information Office (CIO). Her expertise is in using data science and systems science to evaluate the impact of interventions on multiple sectors and to drive data-driven decision-making at both operational and strategic levels. She is the Principal Investigator for this study. She is currently also the co-lead for a project to assess Countywide performance on supporting strong children, families, and communities in LA County.

Prior to joining the CIO, she was a Data Scientist at the Department of Public Health. She received her PhD in Industrial and Systems Engineering from University of Southern California and her Bachelor's and Master's degrees in Information and Computer Engineering from Cambridge University.



In October 2015 Will Nicholas joined the LA County Department of Public Health (DPH), where he directs the Center for Health Impact Evaluation Center (CHIE). In that role he has authored four health impact assessments (HIAs): one on a local affordable housing ballot measure (Measure JJJ), one on a local homeless services ballot measure (Measure H), one on the City of LA's Mobility Plan 2035, and one on cannabis regulation. Before joining DPH, Dr. Nicholas spent five years at the UCLA Center for Healthier Children, Families and Communities, where he co-directed the Los Angeles/Ventura Study Center of the National Children's Study. While there, he was also a lecturer at the UCLA Fielding School of Public Health, where he taught a course on children's health and health policy. Prior to his appointment at UCLA, he spent three years as Director of Research at the California Endowment where he oversaw the research and data development grant portfolio and the development of the data infrastructure for a statewide place-based initiative called Building Healthy Communities. Prior to that, Dr. Nicholas spent six years as a Senior Research Analyst at First 5 LA, Los Angeles County's Proposition 10 Commission, where he commissioned and managed evaluation and research grants related to early childhood health and development. Nicholas has also served as an Associate Policy Analyst for the Rand Corporation where he conducted policy research on childhood asthma and was involved in a number of health care quality improvement projects including and evaluation of the Chronic Care Model and the IHI's Breakthrough Series, and as a Research Analyst for the Los Angeles County Health Department's Tobacco Control Program.

Dr. Nicholas, a resident of Los Angeles, received a B.A. in Spanish Literature from the University of California, Berkeley; an M.A. in Latin American Studies and an M.P.H. in Population and Family Health from UCLA; and a Ph.D. in Health Policy from Yale University.



Dr. Erin Saleeby received her Master's in Public Health in Health Care Leadership & Prevention, and her Medical Degree from University of North Carolina, Chapel Hill. She completed her residency training at UCSF followed by a Robert Wood Johnson Clinical Scholars Fellowship at UCLA. She is board certified by the American Board of Obstetrics and Gynecology, and serves as Director of Women's Health Programs and Innovation – Los Angeles County Department of Health Services since 2011 as well as Chair of the Department of Obstetrics and Gynecology at Harbor-UCLA Medical Center. She has been Principal Investigator in LA County for the Centers for Medicare and Medicaid Innovations Center's Strong Start Initiative – MAMA's Neighborhood (Maternity Assessment Management Access and Service Synergy throughout the Neighborhood for health), an Office of Population Affairs grant for HIV testing Expansion and Bi-directional Linkage to care, and now a HRSA Healthy Start program grant. She also participates in other national collaboratives such as: National Contraceptive Quality Measures Workgroup and the National Family Planning and Reproductive Health Association.

Study Overview

Study Timeframe

05/01/2019 - 04/30/2021

Study Aims

- to evaluate the short- and long-term outcomes of the MAMA's initiative
- to assess how organizational and implementation issues affect outcomes

Collaborators

**LA County Chief Information Office,
Department of Public Health, Department of
Health Services, WIC, USC Children's Data
Network, other LAC departments**

Study Team

Department	Name	Role
CIO (Chief Information Office)	Irene Vidyanti	Principal Investigator
DPH (Department of Public Health)	William Nicholas	Co-Principal Investigator
DHS (Department of Health Services)	Erin Saleeby	Co-Investigator
CIO	Ricardo Basurto-Davila	Co-Investigator
CIO	Chun Liu	Analyst
DPH	Laura Stroud	DPH Project Manager
DPH	Lisa Greenwell	Analyst
DPH	Faith Washburn	Analyst
DHS	Ashaki Jackson	Analyst
CIO	Siva Ganesan	CIO Project Manager

	Preterm birth	Low birthweight
LAC DHS	19%	14%
LA County	9%	7%

	Substance abuse	Intimate partner violence	Housing stability
DHS	19%	30%	16%

Poor birth outcomes among low-income pregnant women

- At LAC Department of Health Services (DHS), >95% of births are covered by Medicaid
- The rates of preterm birth and low birthweight in 2013 were twice as high as rates for all births in the County

The role of social stressors in influencing outcomes

Social stressors contributing to poor birth outcomes and poor health outcomes later in life are common in the DHS prenatal population

Need to address SDOH

Reducing inequities in birth outcomes requires a multipronged approach involving **many sectors and partners**, and across the life course.

Challenge

Critical period of intervention: during pregnancy and the first year of a child's life.

However, the comprehensive services and supports needed are often **siloed** within distinct agencies across different sectors, leading to:

- service fragmentation
- poor alignment with mothers' needs, and
- inequities in access

About MAMA's Initiative

MAMA'S Locations: 8 SPAs + CRDF Women's Jail



Disparities by system

	Percent preterm births	Percent low birth weight infants
California	10.8%	6.9%
Los Angeles County	11.4%	7.4%
DHS deliveries	16.9%	13.0%
Malawi	18.1%	8.0%
DHS SPA 6 and 8 deliveries	19.2%	14.0%

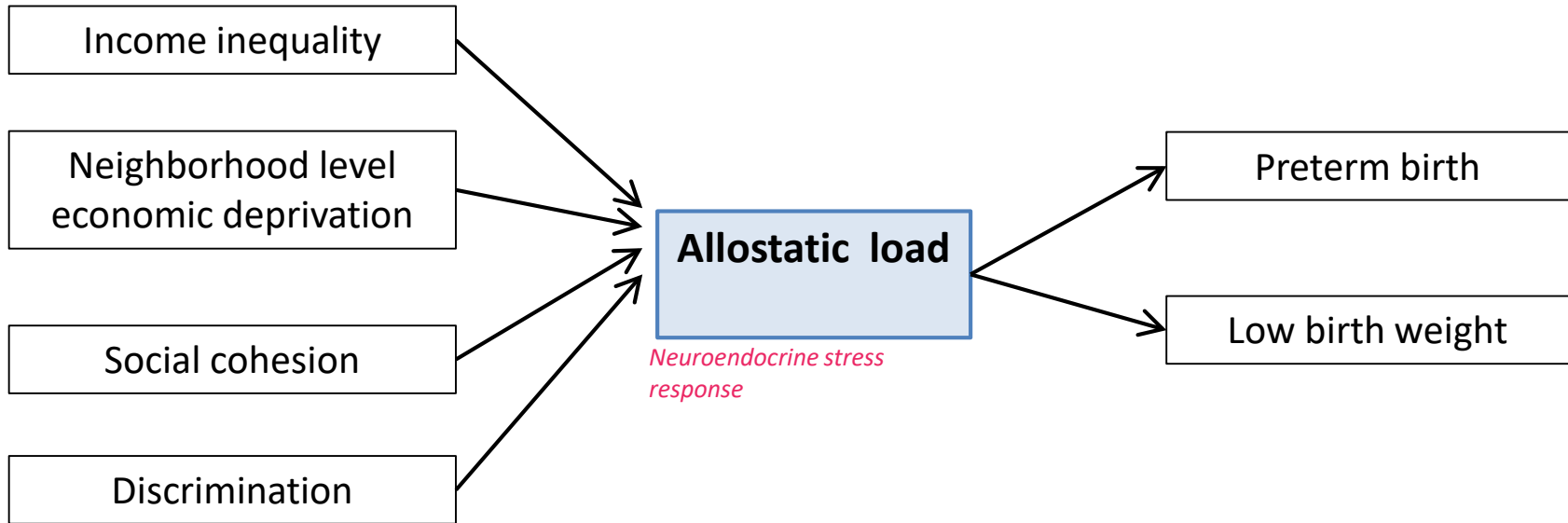
MAMA'S Neighborhood – a synergistic plan

- Maternity
- Assessment
- Management
- Access and
- Service synergy

throughout the

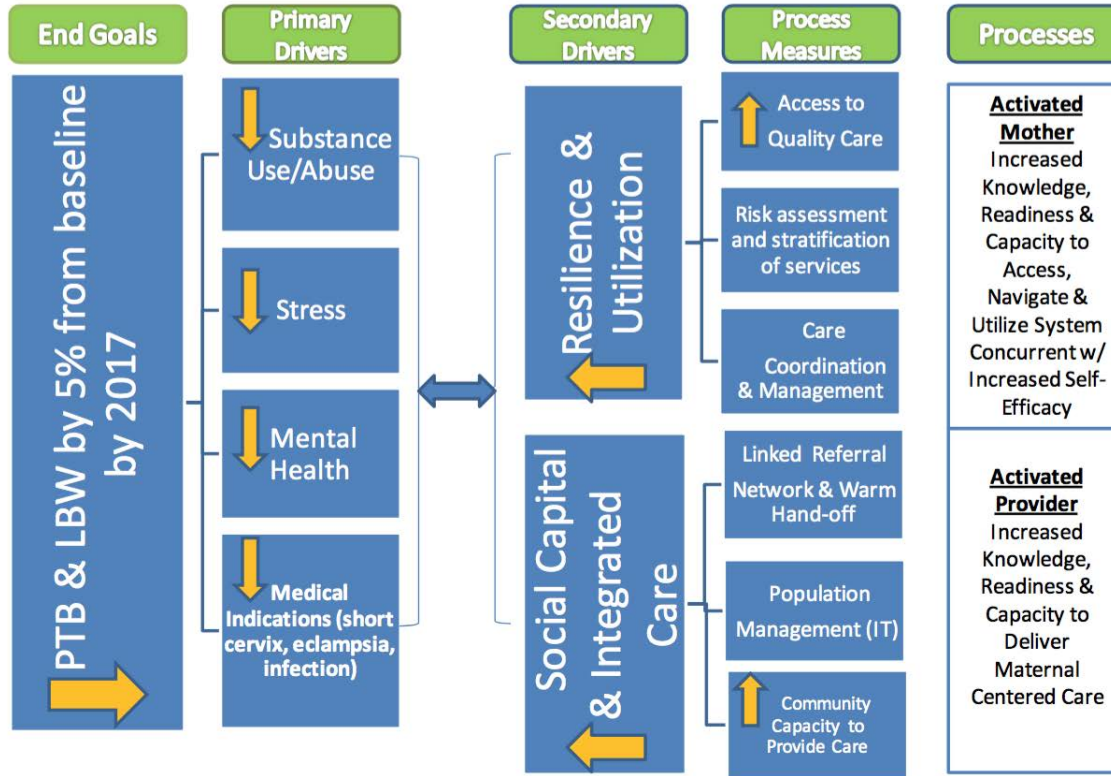
- Neighborhood for health – *going beyond borders of the clinic to the community* with community based partners & **MAMA'S Visits** (home visits)

Social determinants of preterm birth/low birth weight



Kim, 2013; Misra 2003; Reagan, 2005; Lu, 2010

Strong Start Initiative: MAMA's Neighborhood



Program Core Assumptions

1. Poor birth outcomes are often the result of multiple factors, including medical, social, and environmental determinants
2. Screening and identification of high-risk mothers is inconsistently implemented
3. Intensity of service provision is not currently aligned with identified risks
4. Care is fragmented and lack of coordination leads to missed opportunities to mitigate the determinants of poor outcomes

A comprehensive, coordinated approach that includes three core pillars of health (physical, mental, social) is required to address the issue responsibly

To refocus → must redesign

New process of care

- Patients, not providers, in the drivers seat
- Assessment and engagement
- Outreach and connections in the Neighborhood

New content of care

- Groups & Classes
- Resiliency
- Mobile home/community visits

New structure of clinics

- Putting social needs “up front”
- Improving the patient experience

Care Team – shifting paradigms

- **Care Coordinator** – point person for access/contact/navigation
- **Collaborative Care** – multidisciplinary approach
- **Unit Based Teams** – all working together to find solutions
- **Neighborhood Network** – MD is one piece in broad landscape of care

Assessing Risk for PTB/LBW in MAMA's

The 90 minute intake
assessment

Risk Domain	Scale Used
Substance Use	T-ACE
Tobacco	
Interpersonal Violence (IPV)	STaT + WEB
Social Support	MOS-SSS
Housing Instability	DHHS Housing Status Assessment
Food Access	US Adult Food Security Survey
Generalized Anxiety	GAD-7
Depression	CES-D-10
Biomedical Risk	Clinical Intake



Prescription For Health

PATIENT INFORMATION

First Name: MARY Care Coordinator: Latoya Green
Last Name: TESTER MRN: 2957700
Facility:

Drug Use

AADAP- Substance Abuse Services for Youth and Adults 2900 S. Crenshaw Blvd, Los Angeles, CA (ALL LOCATIONS) 90016
Contact: Front Desk Phone: (323) 293-6284 WebSite: <http://www.aadapinc.org/>

Avalon-Carver Community Center 4920 South Avalon Boulevard, Los Angeles, CA 90011
Contact: Front Desk Phone: 323-232-4391 ext. 137 WebSite: <http://www.avalon-carver.org/>

Tobacco Agency

LA Care Health Plan 1055 West 7th Street 10th Floor, Los Angeles, CA 90017
Contact: Front Desk Phone: 888-452-2273 WebSite: www.lacare.org

Interpersonal

Children's Bureau of Southern California - Carson Family 460 East Carson Plaza Drive Suite 122, Carson, CA 90746
Contact: Front Desk Phone: 213-342-0100 WebSite: www.all4kids.org

Food Insecurity

City of Long Beach WIC 1043 Elm Ave, Ste 401, Long Beach, CA 90810
Contact: Front Desk Phone: 562-570-4242 WebSite: www.longbeach.gov/health/mcah/wic.asp

Generalized Anxiety

DHS Psychiatry 1000 West Carson Street, Torrance, CA 90509 90509
Contact: Front Desk Phone: 310-222-3137 WebSite: <http://www.harboruclapsych.com/setting/>

Depression

Enki Mental Health 160 S. 7th Street, La Puente CA 91747
Contact: Front Desk Phone: 866-227-1302 WebSite: <http://www.ehrs.com/>

MAMA'S Neighborhood Network



Community Mental
Health



Incentivized Providers



Ecological/
Participatory & Multi-
disciplinary



Housing



Mother-
Centered/Humanistic
Services



Domestic/Intimate
Partner Violence



WICs, Food Banks,
Farmers Markets,
Churches



Connected & Coordinated
Svs



Community Agency
Assisted

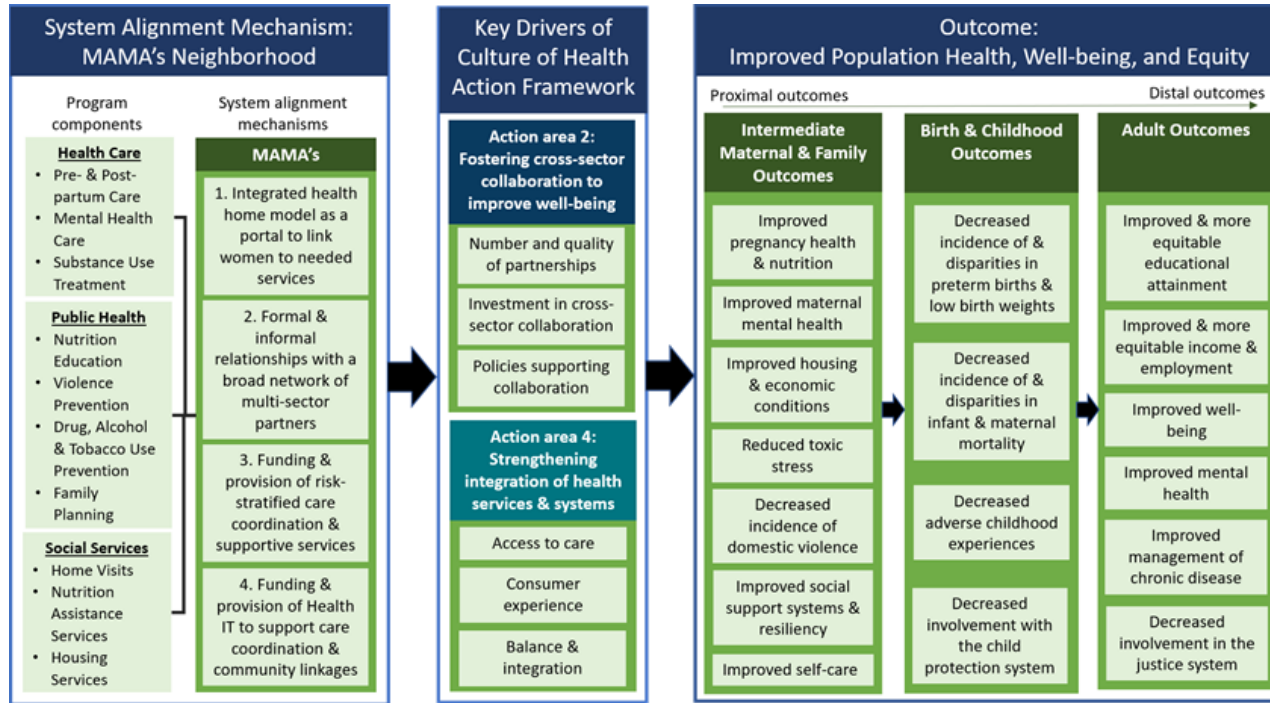


Substance Abuse Svs









Research Questions and Methodology

Theory of Change Logic Model



Research questions

<i>Research questions</i>	<i>Quantitative analysis</i>	<i>Qualitative analysis</i>	<i>Network analysis</i>
What are the short- and long-term outcomes of the MAMA's initiative?			
How do outcomes among MAMA's clients compare to outcomes among mothers who did not participate in the program, specifically: <ul style="list-style-type: none"> • Maternal and birth outcomes • Longer-term cross-sector outcomes? 			
How do the program impact health equity?			
<ul style="list-style-type: none"> • Are the needs of the high-risk groups adequately met? • Has the program helped to reduce inequities in maternal and birth outcomes? 			
How do organizational and implementation issues affect outcomes?			
How effectively has MAMA's aligned linkages across social, health care, and public health services?			

Secondary Data Sources:

- MAMA's Administrative and Intake Data
- Los Angeles County Vital Records (Birth Records and Birth Cohort)
- Linked longitudinal data:
 - LAC Information Hub linking data across County departments (social services, housing, health, mental health, justice, workforce)
 - USC Children's Data Network (CDN) linking data to improve safety and well-being of children

Primary Data Sources:

- Key Informant Interviews (KIIs) & Focus Groups (FGs)
- Network Survey

Concurrent embedded mixed methods approach:

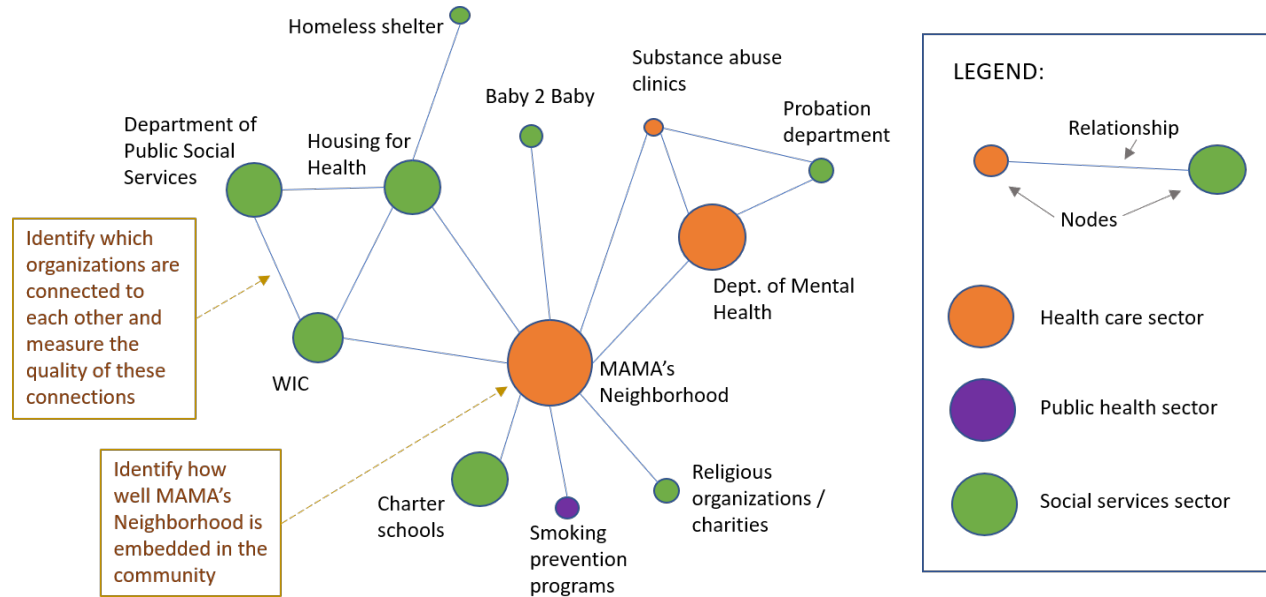
- Quantitative methods including:
 - Statistical analyses to evaluate MAMA's and assess how its components affect outcomes
 - Network analysis to capture partnership dynamics
- Qualitative methods to add contextual depth to our quantitative findings and reveal potential mechanisms underlying quantitative analysis findings
- We will consider the quantitative and qualitative data together to:
 - understand participants' experiences with MAMA's and whether the program was implemented/delivered as intended
 - capture a full range of program outcomes
 - understand how program effectiveness was limited or enhanced by the implementation process

Network Analysis

Network analysis

RQ: How effectively has MAMA's aligned linkages across social, health care, and public health services?

- We will use MAMA's administrative data and network survey data to generate a graphical representation of the partnership network with agencies/entities linked to each other based on referrals
- We will then assess network scores to assess the effectiveness of linkages across sectors within the MAMA's partnership network

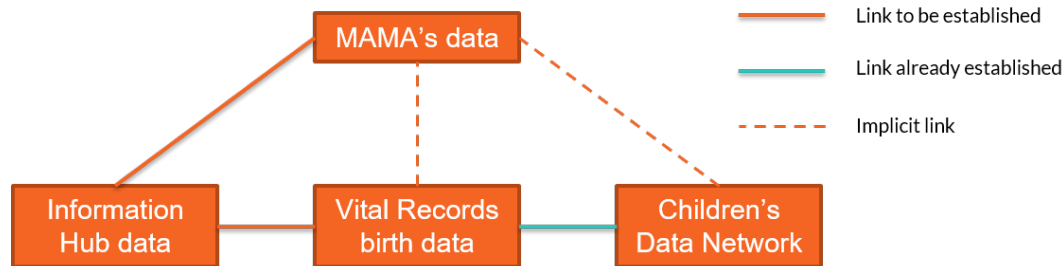


Simplified hypothetical MAMA's partnership network analysis visualization

Quantitative Analysis

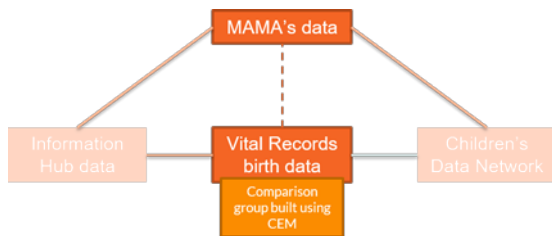
Data linkages:

- We will link and de-identify our four data sources.



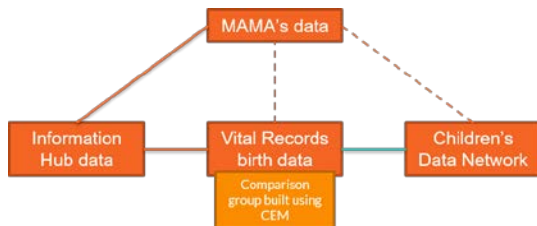
- Since we will have extensive cross-sector data in our linked datasets, we will be able to study:
 - multi-system program utilization
 - how antecedent events in one system affect service use and outcomes in other systems
 - how the patterns of cross-system effects vary over time

- RQ: How do **maternal and birth outcomes** among MAMA's clients compare to outcomes among mothers who did not participate in the program?
- RQ: Has the program helped to reduce **inequities** in maternal and birth outcomes?



- *Outcomes:* Low Birth Weight (LBW), Infant Mortality Rate (IMR), preterm birth, and maternal mortality
- *Data used:* Linked MAMA's data and Vital Records data
- *Comparison group:* Select sample of non-participants resembling MAMA's clients using Propensity Score / Coarsened Exact Matching
- *Analysis method:* Multiple regression controlling for several variables
- *Subgroup analyses:* To assess whether the program reduces inequities in maternal and birth outcomes among different subgroups (i.e. across race/ethnicity categories, across different risk levels)

- RQ: How do longer-term **cross-sector outcomes** among MAMA's clients compare to outcomes among mothers who did not participate in the program?
- RQ: Are the needs of the **high-risk groups** adequately met?



- *Outcomes:* Housing, health care and mental health utilization, food assistance (CalFresh), income assistance (CalWorks), child welfare, justice involvement
- *Data used:* Linked MAMA's, Information Hub, Vital Records, CDN
- *Comparison group:* Select sample of non-participants resembling MAMA's clients using Propensity Score / Coarsened Exact Matching
- *Analysis method:* Difference-in-differences analyses
- *Subgroup analyses:* To assess whether the high-risk group have improved cross-sector outcomes due to linkages to services

Qualitative Analysis

Qualitative Analysis: Overview

- Data collection, analysis and write-up conducted by contracted researchers in consultation with county research and MAMAs program staff
- Focus Groups: 3-4 groups with MAMAs providers; 3-4 groups with MAMAs patients (English and Spanish)
- Key Informant Interviews: 8-10 interviews with Senior staff from MAMAs program and key partner agencies

Qualitative Analysis: Focus Groups

- Providers to be recruited in consultation with MAMAs program staff; Will include both medical and non-medical staff
- Patients to be recruited at MAMAs clinic sites with help of MAMAs program staff; mix of parity and risk levels
- Focus group protocols developed in consultation with research staff and MAMAs program staff; Likely topics will include:
 - Factors across multiple domains that contribute to successful adherence to cross-sector care plans
 - Factors across multiple domains that contribute to positive patient outcomes across sectors
 - Ways that MAMAs handles high risk patients/situations
 - Perceptions of distinguishing characteristics of MAMAs versus other perinatal programs

Qualitative Analysis: Key Informant Interviews

- Key informants to be recruited from leadership of agencies/organizations involved in LA County efforts to reduce inequities in birth outcomes; likely to include county departments, community-based organizations, and First 5 LA
- Interview protocol to be developed in consultation with research staff and MAMAs program staff; Likely topics will include:
 - County systems-level factors that contribute to successful adherence to care plans
 - County systems-level factors that contribute to positive patient outcomes

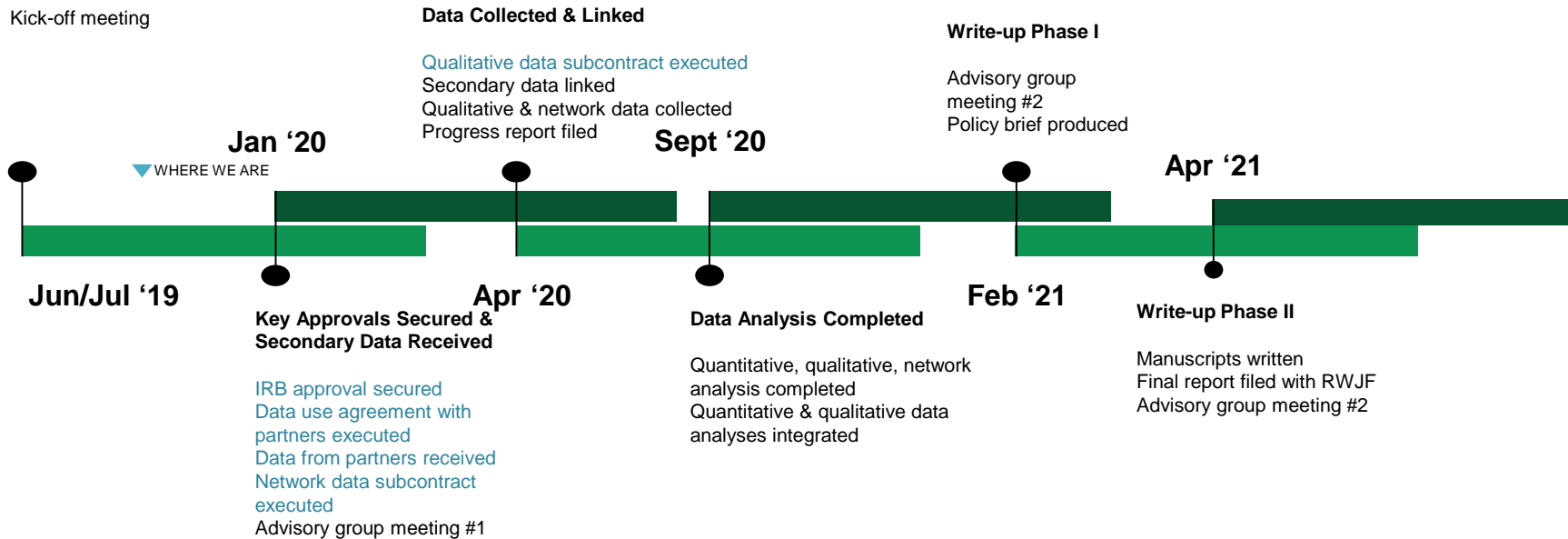
- Key themes from focus groups and key informant interviews will be discussed with research and program staff to inform:
 - Quantitative analysis strategies and model specification, and
 - Interpretation of quantitative analysis findings
- Qualitative findings will also be presented in a stand-alone format to inform:
 - MAMAs program and systems improvements, and
 - Other jurisdictions seeking to reduce inequities in birth outcomes through cross-sector approaches

Study Timeline

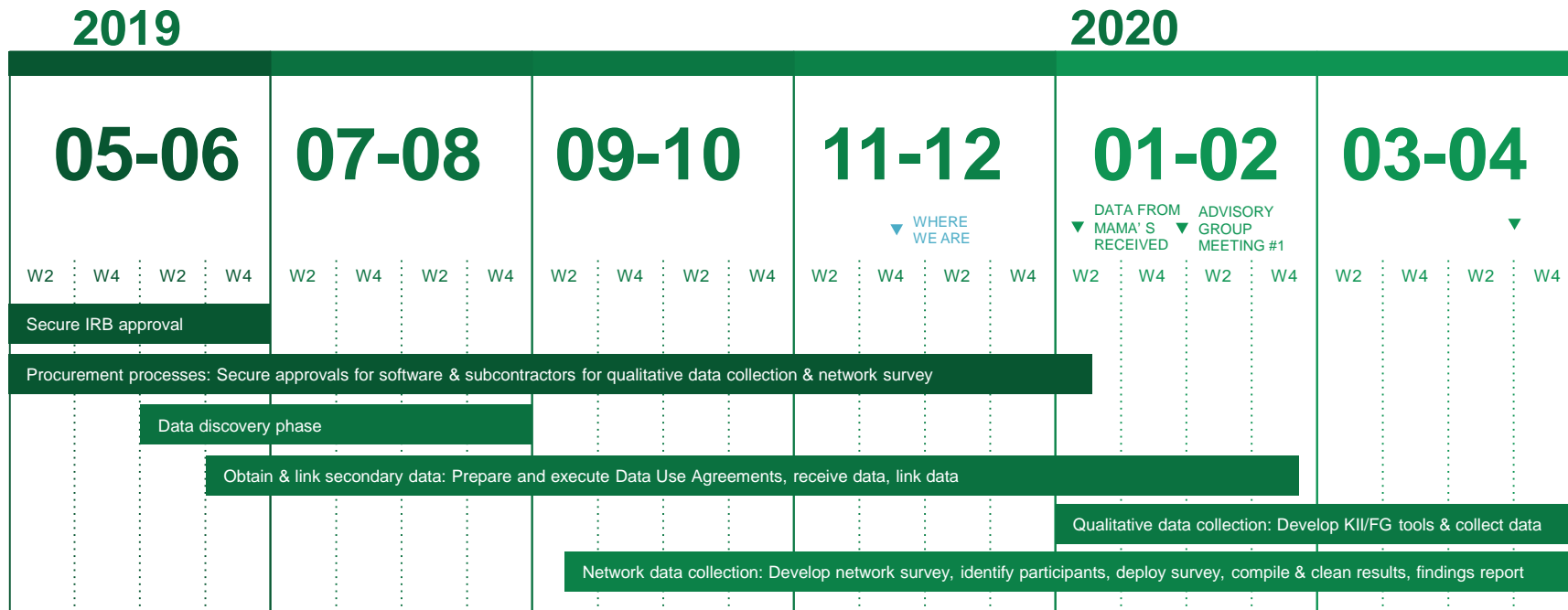
Milestones

Project Launch

Kick-off meeting



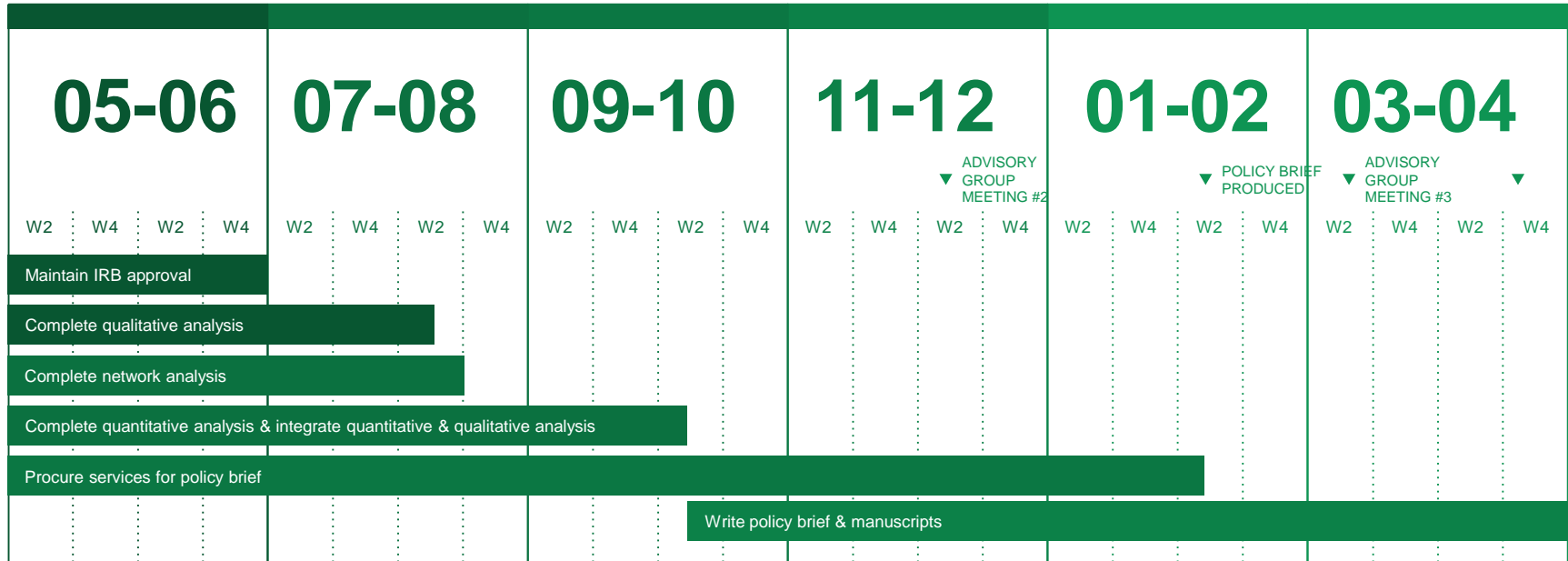
High-level Study Plan: Y1



High-level Study Plan: Y2

2020

2021



Capacity for Supporting System Alignment and System Change

- Alignment with Countywide and departmental priorities
 - → the study can potentially inform multiple ongoing efforts to improve pregnancy, birth, and childhood outcomes, as well as health equity
 - The Health Agency's Center for Health Equity's 2018-2023 Action Plan identifies priority areas to reduce and eliminate health inequities, including reducing the gap in infant mortality rates between White and African American babies by 30%
- Engage key stakeholders who will be responsible for making relevant decisions
 - We will convene a Steering Committee composing of decision makers from various County departments and other stakeholders to get guidance on potential dissemination channels and how to present the study results in a way that inform policy and practice

Commentary

LA County African-American Infant Mortality Initiative(AAIM)

S4A
Systems for Action

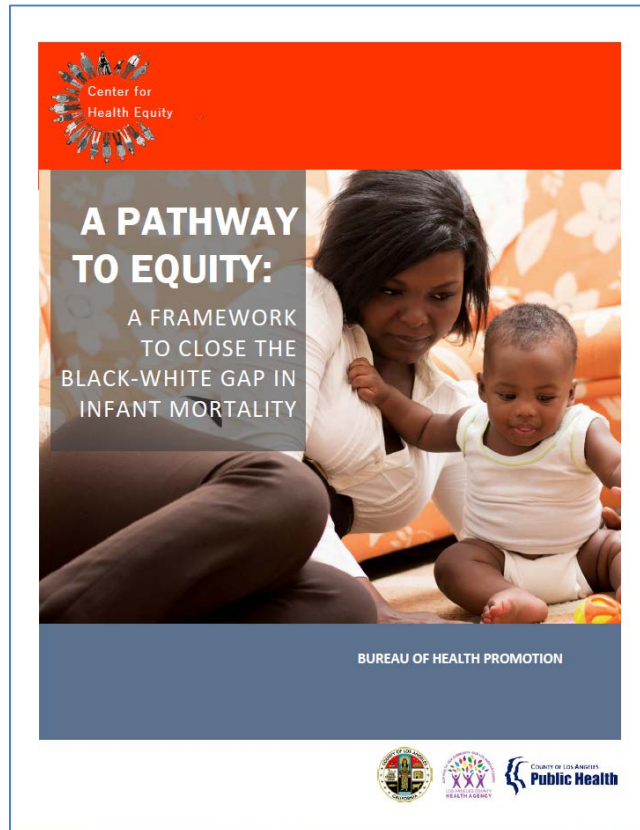
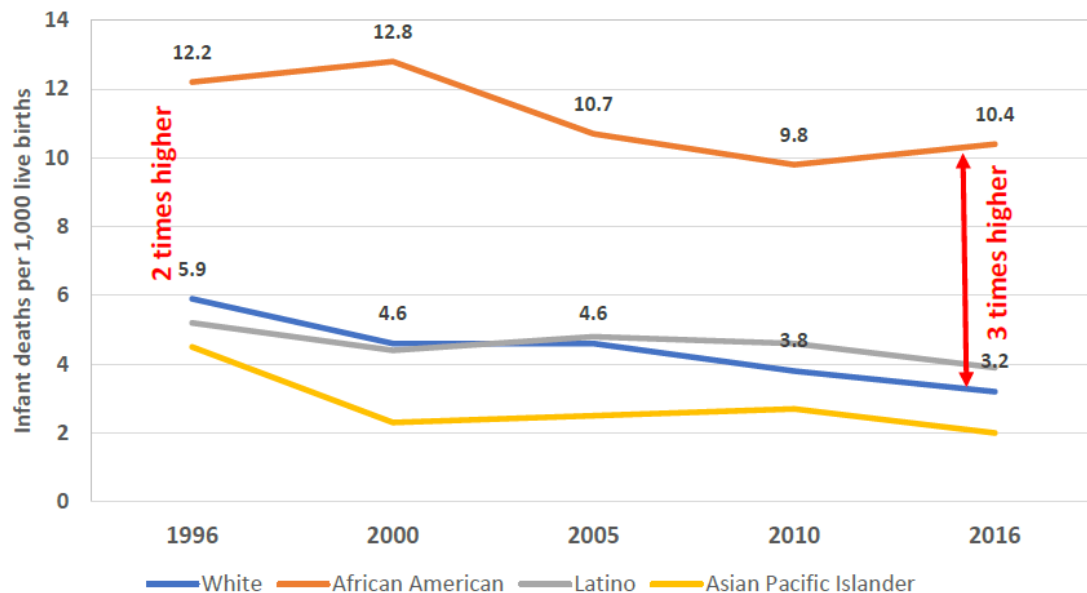
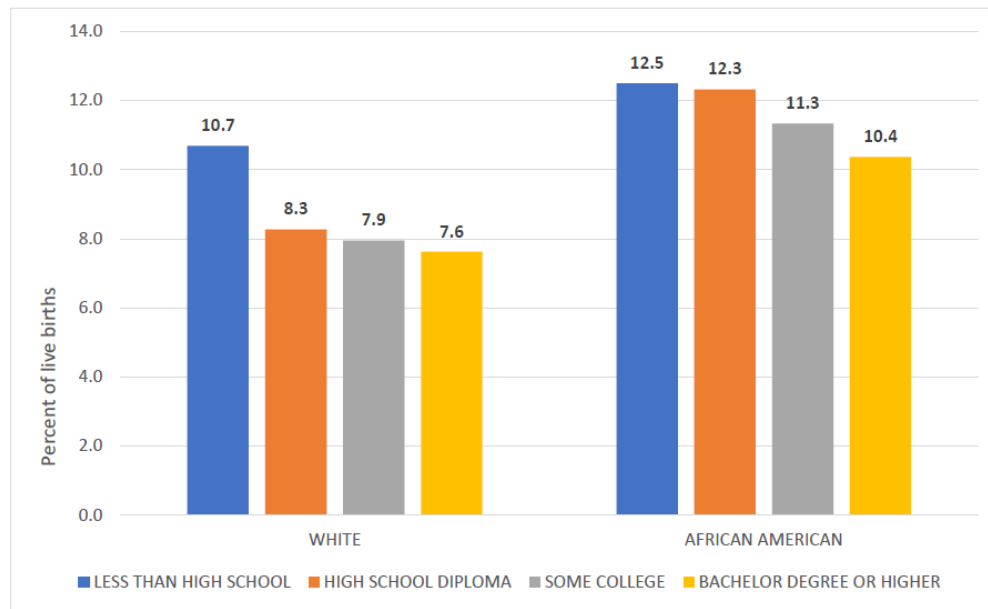


Figure 1: Infant Mortality by Race/Ethnicity Los Angeles County, 1996 to 2016



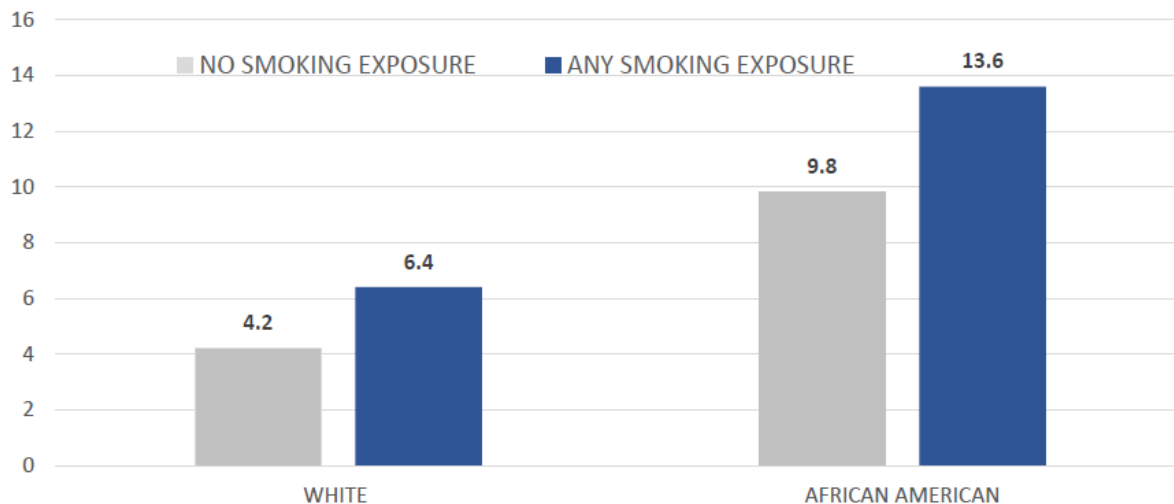
Source: California Department of Public Health, Death Statistical Files, 1996-2016

Figure 2: Preterm Birth by Mother's Race/Ethnicity and Education Attainment
Los Angeles County, 2016



Source: California Department of Public Health, Linked Birth and Death Statistical Files, 2016.

Figure 3: Prevalence of Low Birth Weight Births by Mother's Race/Ethnicity and Smoking Exposure, LAMB 2012&2014



Source: Los Angeles Mommy and Baby (LAMB) Project, 2012&2014 Stacked data; smoking exposure is defined as smoking in the six before pregnancy, smoking during pregnancy, or exposure to secondhand smoke during pregnancy.

How?

- Address **racism** through implicit bias training for 100,000 LA County employees
- Address **poverty** by prioritizing high risk pregnant women in affordable housing placements; maximizing use of Earned Income Tax Credit among high risk pregnant women
- Address **exposure to violence** during pregnancy through LA County Office of Violence Prevention in partnership with perinatal programs
- Enhance **public awareness** of the problem through communications and social media campaigns

How?

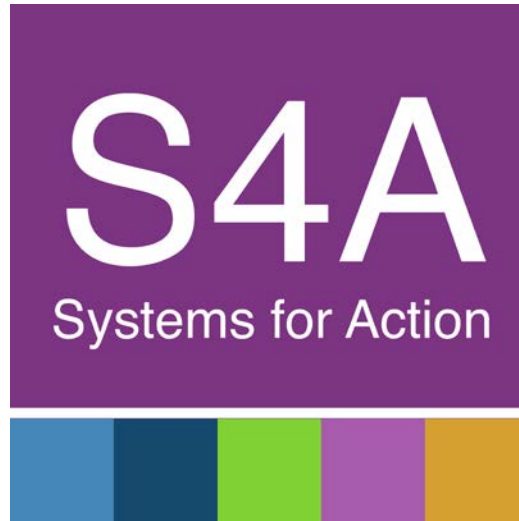
- Taking on **social isolation** by promoting group models of prenatal care
- Building **social support** through expanded home visitation programs and father engagement
- Training home visitation providers to help women **recognize stress** and address it through social support and self-care
- Building women's parenting **self-confidence** through breastfeeding support, home visiting and mothers' groups
- Building community

How?

- **One Key Question:** “Would you like to become pregnant in the next year?”
- **Risk Reduction:** Screening and referral to cessation programs
- **Universal Access to Effective Medical Interventions:** To avert preterm births
- **Enhanced Mental Health Services:** For pregnancy related depression and anxiety as well as ongoing mental illness
- **Early Referral to Services:** For women whose babies are born preterm or with congenital health or developmental problems

- Women Affected by Birth Outcome Inequalities
- Other County Agencies
- Community-Based Organizations and Providers
- Birth Hospitals
- Philanthropy and Health Care Payers
- California Department of Public Health and Statewide Advocacy Organizations

Questions?



www.systemsforaction.org

Upcoming Webinars

- **December 4th, 2019 12 p.m., ET**

Systems for Action Individual Research Project

[Strengthening the Carrying Capacity of Local Health and Social Service Agencies to Absorb Increased Hospital/Clinical Referrals](#)

Danielle M. Varda, PhD, Associate Professor, School of Public Affairs, and Director, Center on Network Science, University of Colorado Denver, and Katie Edwards, MPA, Executive Director, The Nonprofit Centers Network

- **January 8th, 2020 12 p.m., ET**

Systems for Action Individual Research Project

TBD

Acknowledgements

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*Center for Public Health Systems
and Services Research*

and

