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

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

Research-in-Progress Webinar
November 10, 2021
12-1pm ET

Agenda

Welcome: Carrington Lott, MPH

Presenters: Irene Vidyanti, PhD, MEng • LACounty Chief Information Office

William Nicholas, PhD, MPH • LA County Department of Public Health

Commentary: Kelly O'Connor Kay • Maternal Mental Health NOW

Q&A: Carrington Lott

Presenter

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.

Presenter

In October 2015 Will Nicholas joined the LA County Department of Public Health, where he directs the Center for Health Impact Evaluation. 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. 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, 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.

Commentary Speaker

Kelly O'Connor Kay, Executive Director, oversees the programmatic, fundraising and marketing operations of Maternal Mental Health NOW. Her goal is to ensure that all of Los Angeles County's new families have the resources they need to address maternal mental health disorders so that they can grow and thrive. Kelly previously served as Maternal Mental Health NOW's Development Director for 7 years. Before joining Maternal Mental Health NOW's team (which coincidentally corresponded with her own transition to motherhood), Kelly worked for several nonprofit organizations in the human services and environmental fields in the US and the UK as a freelance fundraising consultant and staff member. Kelly is a graduate of Northwestern University, having received a BS in Communication Studies & Sociology. She also holds a MS in Elementary Education from Brooklyn College, part of the City University of New York.

About MAMA'S Initiative

Background

Poor birth outcomes in Los Angeles County Department of Health Services (LAC DHS) necessitates a different approach
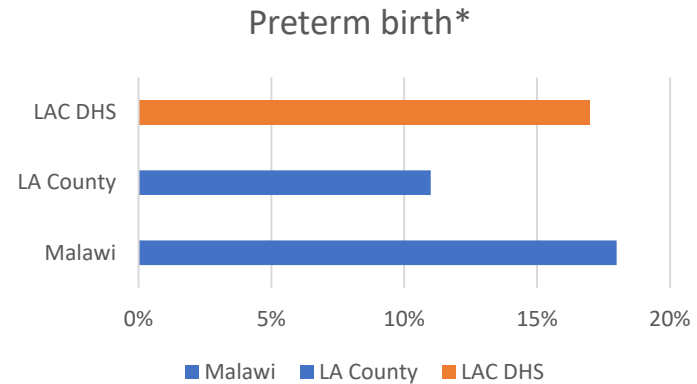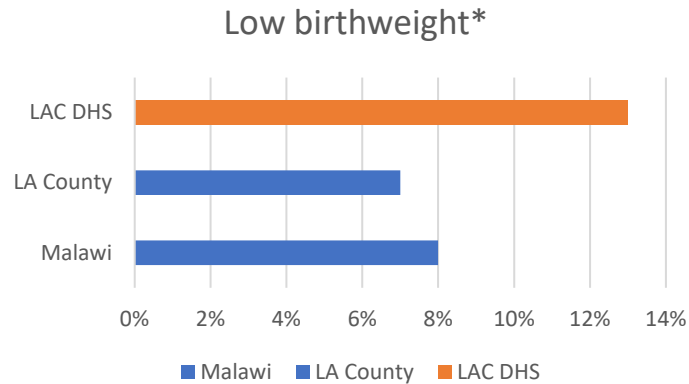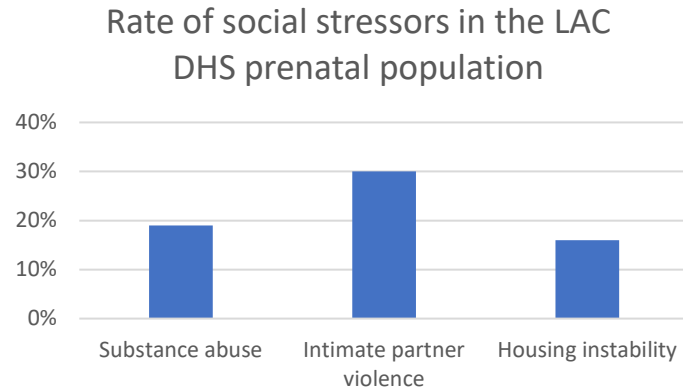

*LAMBS 2010; March of Dimes, 2010; WHO, 2010

A Different Approach

To influence outcomes, need to breach agency silos to address social stressors

- Social stressors contributing to poor outcomes are common in the DHS prenatal population
- Need to offer comprehensive services and supports to address social stressors alongside health care provision
- The MAMA'S Neighborhood initiative assesses clients' needs and connects clients to housing, social services, mental health treatment, and other needed services

Rate of social stressors in the LAC DHS prenatal population

	Substance abuse	Intimate partner violence	Housing instability
	19%	30%	16%

MAMA'S Neighborhood Initiative

Maternity **A**ssessment **M**anagement **A**ccess and **S**ervice Synergy throughout the **Neighborhood**

Program core assumption: A **comprehensive, coordinated approach** that includes **three core pillars of health** (physical, mental, social) is required to address poor birth outcomes

- **Assessment**: Consistent **screening and identification** of needs and **risks**, including medical, social, and environmental determinants
- **Management of Access**: **Alignment of intensity of service provision** with identified risks
- **Service Synergy**: **Coordinated and collaborative care across sectors** to mitigate the determinants of poor outcomes
- Throughout the **Neighborhood**: Going **beyond borders of the clinic** to the community with community-based partners & MAMA'S Visits (home visits)

MAMA'S Neighborhood Network

Mother-Centered/Humanistic Services

Connected & Coordinated Svs

Innovation

Community Mental Health

Ecological/ Participatory& Multi-disciplinary

Domestic/Intimate Partner Violence

Community Agency Assisted

Incentivized Providers

Housing

WICs, Food Banks, Farmers Markets, Churches

Substance Abuse Svs

MAMA's NEIGHBORHOOD
a Strong Start for Families

DRUG-FREE ZONE

INCENTIVE

Our Research Questions

	Quantitative analysis	Qualitative analysis	Network analysis
What are the 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: • Birth outcomes, and • Cross-sector outcomes?	📊	💬	
How do the program impact health equity?			
• Are the needs of the high-risk groups adequately met? • Has the program helped to reduce inequities in birth outcomes?	📊	💬	
How effective are the cross-sector linkages?			
How effectively has MAMA'S aligned linkages across social, health care, and public health services?		💬	🔗

Research Method: Concurrent Embedded Mixed-Methods Approach

Quantitative Analysis

- Secondary data:
  - Countywide Information Hub
  - MAMA'S administrative data
  - Birth records
- Difference-in-differences analyses of cross-sector outcomes
- Analyses of birth outcomes
- Analyses utilize matched samples (MAMA'S clients vs propensity-matched comparison group)

Network Analysis

- Primary data:
  - Network survey of MAMA'S Neighborhood community-based partner agencies
- Network map of partnership network
- Network scores

Qualitative Analysis

- Primary data:
  - Patient interviews
  - Provider interviews
  - Key informant interviews
- Analysis based on grounded theory

Quantitative Analysis
Preliminary Results

Where We Are: Quantitative Data Linkage

EXTERNAL DATA

LOS ANGELES COUNTY COUNTYWIDE INFORMATION HUB

MAMA'S Initiative Administrative Data

Probabilistic linkage

Birth Records

County clients
Enterprise ID

Social Services (DPSS, WDACS, DCFS)

Housing (LAHSA)

Justice (Sheriff, Probation, Courts)

Mental Health (DMH)

Health (DHS, SAPC, Medical-Coroner)
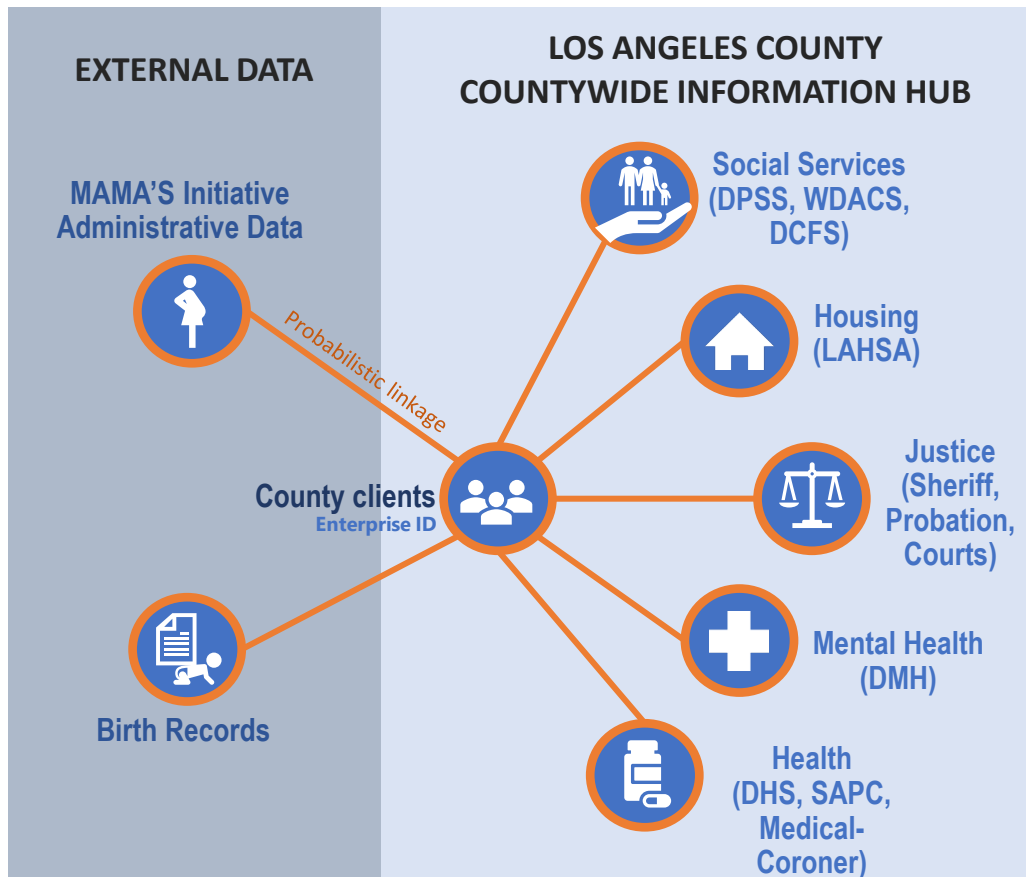
- We are utilizing LAC's Countywide Information Hub to allow assessment of cross-sector impact (health care and mental health utilization, food assistance / CalFresh, income assistance / CalWorks, housing, justice involvement)

- We linked MAMA's administrative data to the Information Hub

- We will link birth records to the Information Hub to allow assessment of birth outcomes

- We will use the array of linked data to construct a comparison group of non-participants resembling MAMA's clients, propensity matched on individual characteristics, birth risk factors, social determinants, and service utilization, est. in December

Growth Over Time of MAMA'S & Evolution of Program Implementation

Number of MAMA'S clients by enrollment year
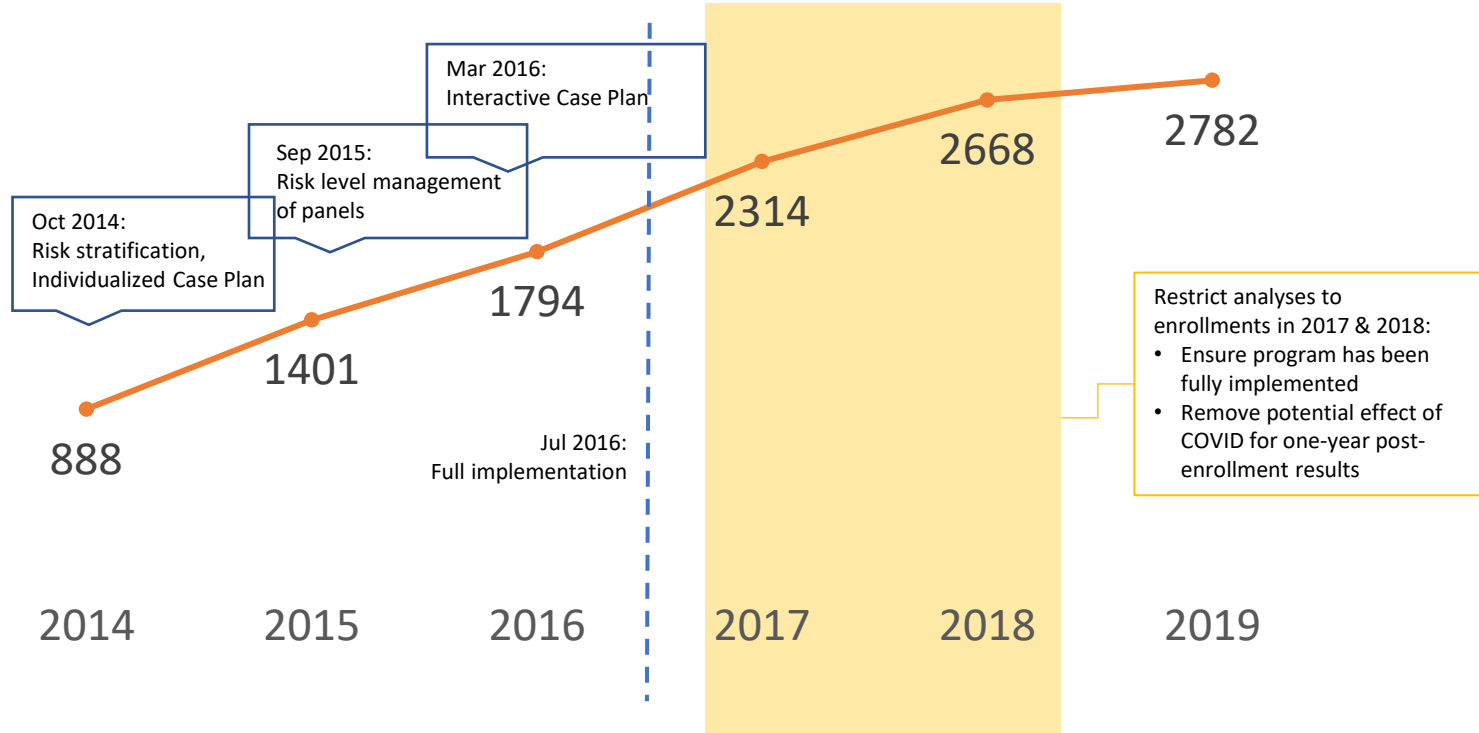
Analysis Sample: MAMA'S clients

Total MAMA'S clients enrolled in 2017 & 2018 (n = 4982)

Excluded: Unmatched to the Information Hub (n = 990)

Total matched to the Information Hub (n = 3992)

Excluded: Poor matching to the Information Hub (n = 325)

Total well-matched to the Information Hub (n = 3667)

Excluded: Multiple enrollments within 2017 & 2018 (n = 54)

MAMA'S sample for analyses (n = 3613 **unique** clients)
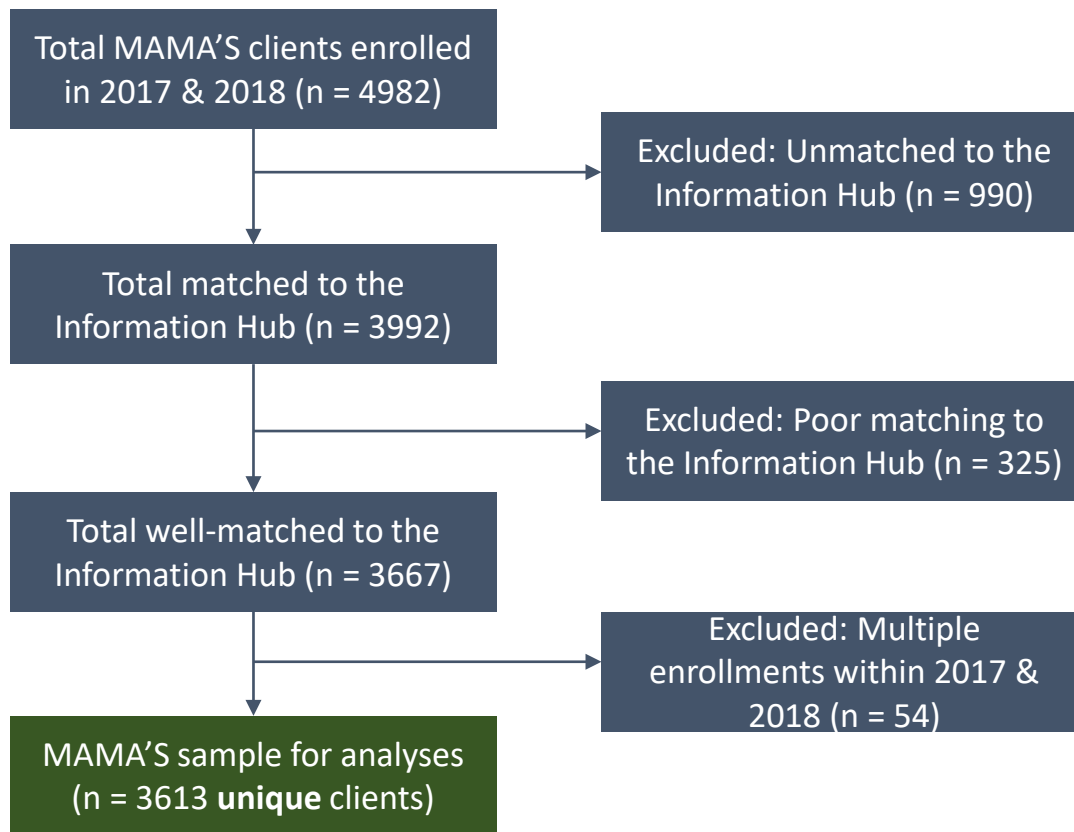
Preliminary Analysis: Cross-sector Impact of MAMA'S

1 YEAR PRE-ENROLLMENT −1y | +1y **1 YEAR POST-ENROLLMENT**

N=3613 → **MAMA'S Neighborhood**

Income Assistance
Increased rates of receipt of income assistance (CalWORKS / GROW)
1205 → 1795

Food Assistance
Increased rates of receipt food assistance (CalFresh)
622 → 1010

Justice
Reduced rates of arrests
149 → 89

Mental Health
Reduced rates of mental health crisis
86 → 55

Health
Reduced rates of ER visits
Birth outcomes: Analysis forthcoming
993 → 730

*Results are preliminary and may change as we refine our approach to analyze the data

Network Analysis
Result Highlights

MAMA'S Neighborhood Network Map

- MAMA'S staff identifies 51 organizations as part of the network. Social service organizations make up around 68% of the network.

- 40 members were invited to participate in a social network analysis survey using the PARTNER tool. 19 members responded (48% response rate). Respondents collectively had 80 partnerships.

- The network is diverse with a low level of density. This means that there is a little connectivity already taking place with opportunities to develop additional connections between members.

MAMA's Neighborhood Network (n = 80 partnerships)

11 Health Care Organizations

35 Social Services Organizations

5 Public Health Organizations
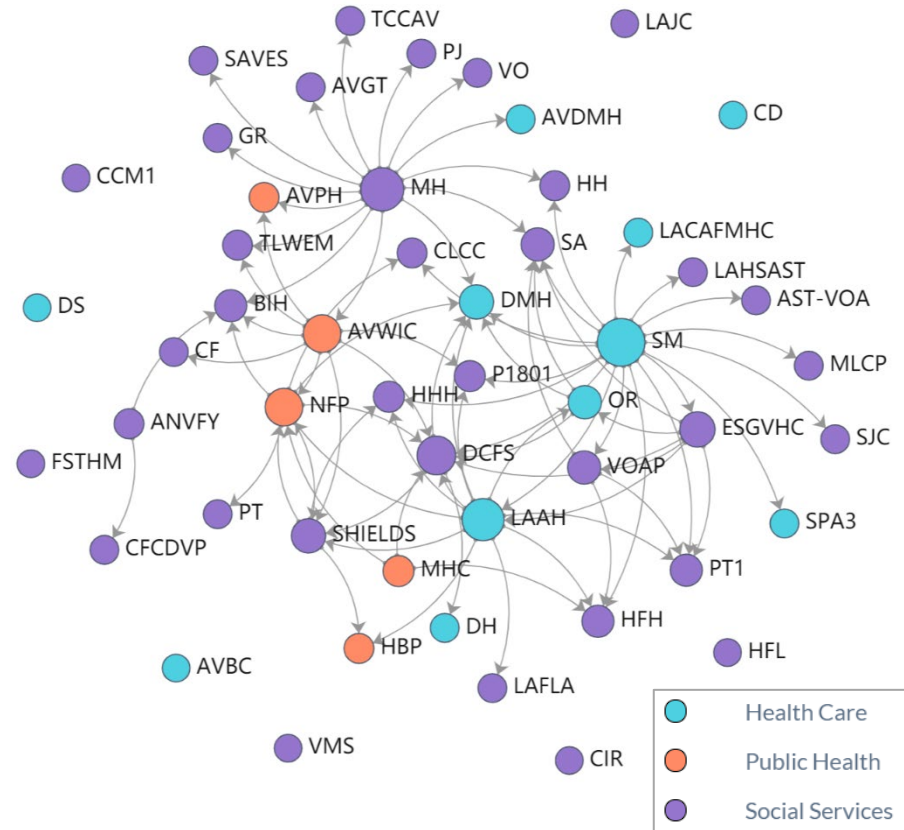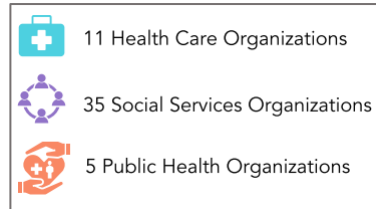
Trust and Value in MAMA'S Neighborhood Network

- Members reported high levels of value and trust within their network partnerships

- Openness to discussion is an area of growth

- High levels of perceived value and trust in network relationships are important in building and maintaining collaborative capacity

- Understanding the perceived value of network relationships is important in leveraging the different ways in which members contribute to the network

- Trust in inter-organizational network relationships facilitates effective information exchange and decision-making and reduces duplication of effort among groups

Trust Score 3.36

Value Score 3.29

Trust Score		
3.46	3.09	3.55
Partner Reliability	Open to Discussion	Supports Missions

Value Score		
3.39	3.2	3.29
Power & Influence	Shared Resources	Level of Involvement

Relationships among Network Partners

- The intuition is that more network connections should indicate a better functioning network, but this approach can be resource intensive
- Connections are somewhat distributed across the levels. If more connections were at the integrated or coordinated levels, the relationships would require more resources to maintain
- Relationships mostly consist of client referrals

Types of Relationships

Increased resources needed at each level

| 44% | 23% | 18% | 6% |

0%   25%   50%   75%   100%

Attend Meetings Together | Cooperative Relationship | Coordinated Relationship | Integrated Relationship
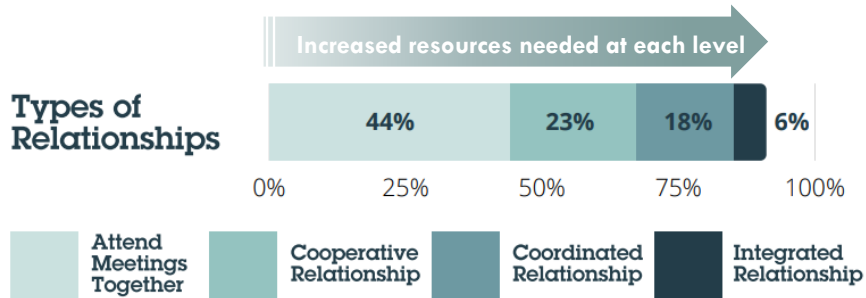
What does your relationship with your partner entail? (n=80)

Client Referrals — 75%
Information Exchange — 23%
Data Sharing — 18%
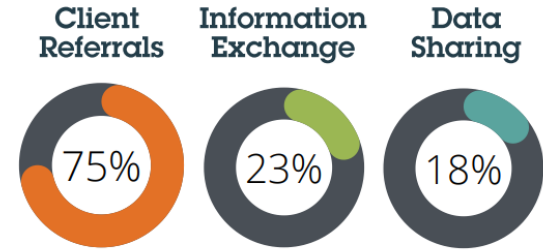
MAMA'S Success in Fostering Cross-sector Collaboration

MAMA'S seems fairly successful in fostering cross-sector collaboration.

how successful do you think MAMA's efforts have been to foster cross-sector collaboration to improve well-being in each of the following ways: (n=9)

Legend:
- Very Successful
- Successful
- Somewhat Successful
- Not successful
- Don't Know

Category	Don't Know	Not successful	Somewhat Successful	Successful	Very Successful
Shared tracking system/database	33%	22.2%		33%	11.1%
Screening protocols/assessments	11.1%		22.2%	55.5%	11.1%
Referral follow-up	22.2%	11.1%	11.1%	33.3%	22.2%
Referral system and process	11.1%	11.1%		44.4%	33.3%
Partnerships with community based organizations			11.1%	66.6%	22.2%
Data sharing	11.1%	11.1%	22.2%	44.4%	11.1%
Care coordination	22.2%		22.2%	22.2%	33.3%
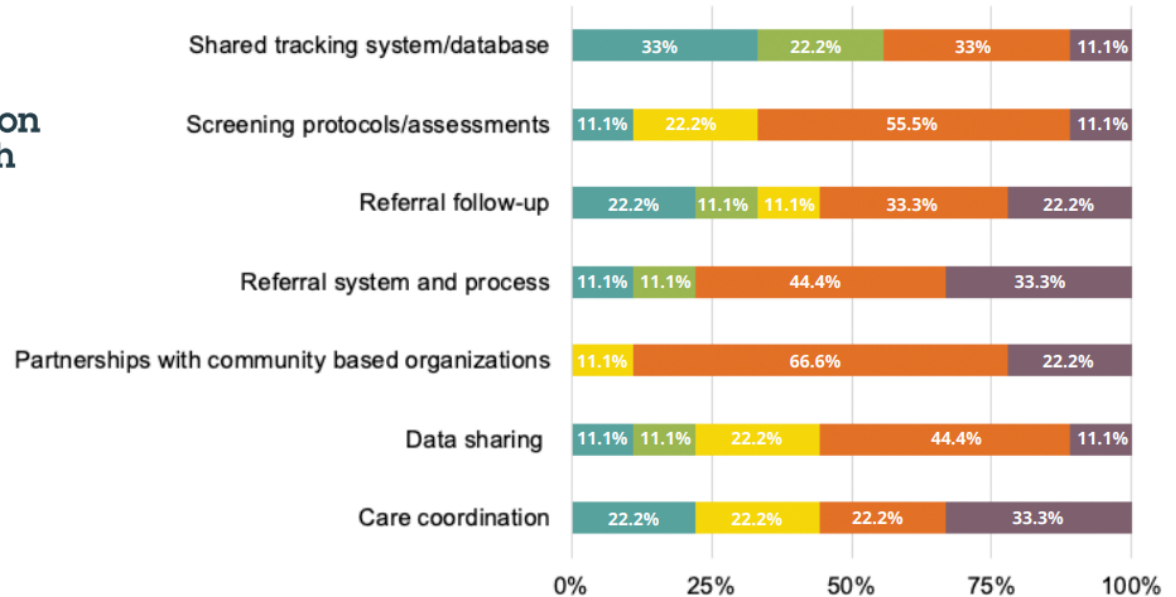
Network Resiliency during COVID-19 Pandemic

Network seems resilient, with many relationships unaffected or strengthened by the pandemic.

Please describe how COVID-19 has impacted your relationship with each of these organizations. (Choose as many as apply)

n = 80 relationships

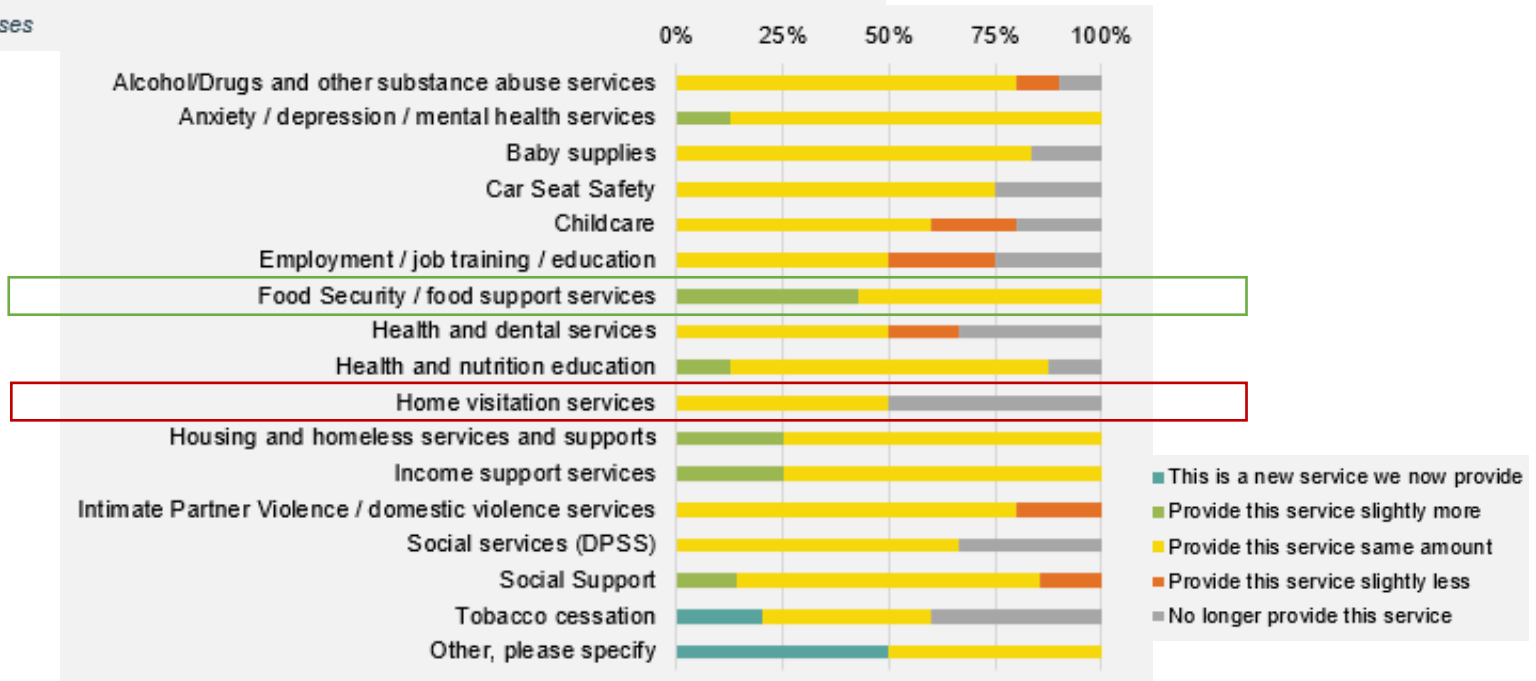|	
Our relationships started because of a COVID related topic	4%
COVID has required us to work more closely together	6%
COVID has strengthened our relationship	8%
COVID has required us to increase our collaboration	4%
COVID has required us to decrease our collaboration	6%
COVID has required us to postpone programs or projects we were working on together	3%
COVID has had no impact on our relationship	26%
Other	0%
Don't Know	38%

Network Resiliency during COVID-19 Pandemic

Services offered changed during pandemic, with more food security services, reduced home visitations.

Q31: Please indicate the level of change that has occurred to the following types of services your organization/program/department provides for pregnant woman and families during the response to COVID-19? (Choose as many as apply)

n = 12 responses

Services listed:
- Alcohol/Drugs and other substance abuse services
- Anxiety / depression / mental health services
- Baby supplies
- Car Seat Safety
- Childcare
- Employment / job training / education
- Food Security / food support services
- Health and dental services
- Health and nutrition education
- Home visitation services
- Housing and homeless services and supports
- Income support services
- Intimate Partner Violence / domestic violence services
- Social services (DPSS)
- Social Support
- Tobacco cessation
- Other, please specify

Legend:
- This is a new service we now provide
- Provide this service slightly more
- Provide this service same amount
- Provide this service slightly less
- No longer provide this service

Qualitative Analysis
Result Highlights

MAMAs Patient/Provider Interviews

Conducted by Southern California Center for Nonprofit Management
(Phone Interviews substituted for Focus groups due to COVID-19)

20 MAMAs Patient Interviews

- 12 English/8 Spanish
- All identified as African American/Black or Hispanic/Latina
- MAMAs tenure ranged from 4 months to 5+ years
- Patient experiences included: homelessness, jail, domestic violence, substance use disorders, high risk medical conditions
- Representation from all 4 geographic areas targeted by MAMAs

18 Provider Interviews

- 13 with neighborhood care team (care coordinator, social worker, RN, health educator)
- 5 physician staff members
- Representation from all 4 geographic areas targeted by MAMAs

MAMAs Patient/Provider Interviews

Patient Interview Guiding Questions

- Patient experiences with various components of MAMAs service delivery
- Factors affecting patient experiences and engagement

Provider Interview Guiding Questions

- Perceptions of MAMAs program components
- Factors affecting patient engagement with the MAMAs program and patient outcomes

Context: Key Program Components

Patient Intake

- Psychosocial Intake (care coordinator)
    - Cornerstone of program—patients given a risk score and assigned to high, medium or low risk care groups
    - Lengthy assessment with sensitive questions
    - Psychosocial referrals made based on risk assessment
    - High (and some medium) risk patients enrolled in MAMAs Visits (Home Visitation program)
- Medical Intake (nurse)
    - All patients also receive a medical intake—medical risk also factored into global risk score
    - High medical risk patients assigned to high-risk OB clinic
    - Mid-risk patients assigned to intermediate OB generalist
    - Low-risk patients receive care from midwives or mid-level clinician

Collaborative Care Meetings

- Regularly scheduled at each MAMAs site and attended by Clinical staff, neighborhood care team and auxiliary providers
- Facilitates communication between Neighborhood Care Team and Clinical Care Team

Thematic Findings: Intake Process

- Psychosocial intake should prioritize confidentiality, taking into consideration virtual and in-person circumstances

- COVID-19 made this challenging since some intakes had to be conducted virtually

- Letting patient know ahead of time what to expect was viewed as beneficial by patients and staff

- Separate psychosocial and medical intakes help patients build rapport with both care teams and help surface needs and concerns that may not have been revealed through a single combined intake, but places a significant burden on the patient

- Overall patients valued and appreciated the time and attention received and providers felt that the intake process helped empower patients to understand and navigate their care more effectively

"I think that's why it took longer for the appointments...but I see why because I'm sure that all the moms had a bunch of questions, and she would take her time. She wasn't rushing through every single person. If she did that, then part of the customer service wouldn't be as good. But you can tell she was dedicated, and she really loved her job because she would take

Thematic Findings: Collaborative Care Process

- Collaborative Care Team meetings strengthen professional relationships among care team members which encourages better communication between meetings and improved care
  - "Mini-huddles" formed when certain patients are scheduled to come in

- Collaboration facilitated by having all types of providers under one roof
  - Open communication among care team allows for rapid scheduling of patients needing urgent, multidisciplinary care ("prenatal care triage")

"The nice thing about having the MAMA's program in our clinic and having wraparound services is that you don't have to send them to a different clinic or different site for these things. I know the social workers really well. I can just walk over to their office or call them and say, "So,-and-so is here. She's really struggling with this. Can you come talk to her?" I can walk over to our CCs. I can walk over to the medical legal people and say, "Hey, she's wondering how the application for that housing thing is going." And so, everybody is right there in our clinic."

Thematic Findings: Referrals

- Effectiveness of referral process depends on:
  - Availability of referral service in-house
  - Resources available in each community—housing resources universally scarce in relation to need
  - **Relational skills of MAMAs Care Coordinators**

- Reliance on relational skills of care coordinators who exercise a great level of discretion due to a lack of uniform systems of referral and follow-up

Interviewer: "Are there ways that you confirm whether a patient has completed the referral?"

Provider: "I just basically rely on either a social worker or the [care coordinators] to report back to me. Or at the [Collaborative Care] Meeting to give an update on if the patient was able to connect with what we had talked about. Or at the next time I see them for their OB appointment, we check in about that."

Thematic Findings: Patient Engagement and Retention

Reinforcing factors

- Building trust by listening carefully and purposefully, providing safe spaces, and instilling confidence in patients
- Voluntary nature of participation and lack of behavioral requirements
- "Baby boutique" incentive program
- Maintaining active and persistent communication with patients

Barriers

- High-Risk status/life stressors (e.g., housing instability, justice system involvement, substance use)

"They helped me a lot because I am a recovering alcoholic, as well. Being able to open up and talk freely about those things helped me turn my life around and realize that I have to be a sober parent. Because the other parent for my older kids is not. They gave me strength. They gave me hope."

"We've had patients who have had – who were using, who've been placed into substance use disorder treatment facilities during their pregnancy and been able to actively manage their withdrawal and get them on Suboxone in the pregnancy and take care of them and their baby. And I think we've had a number of success stories like this where high-risk moms have been able to really stay connected with prenatal care."

Next Steps

Next Steps

Quantitative Analysis

- Construction of comparison group using propensity score matching
- Analyses of birth outcomes
- Difference-of-differences analyses of cross-sector outcomes

Qualitative Analysis

- Finish key informant interviews

**Integration of Quantitative, Qualitative, and Network Analysis**

Thank you

The S4A MAMA'S Team

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- Ricardo Basurto-Davila, *Los Angeles County Chief Information Office*
- *Southern California Center for Nonprofit Management*
- *Visible Network Labs*

Commentary

Questions?
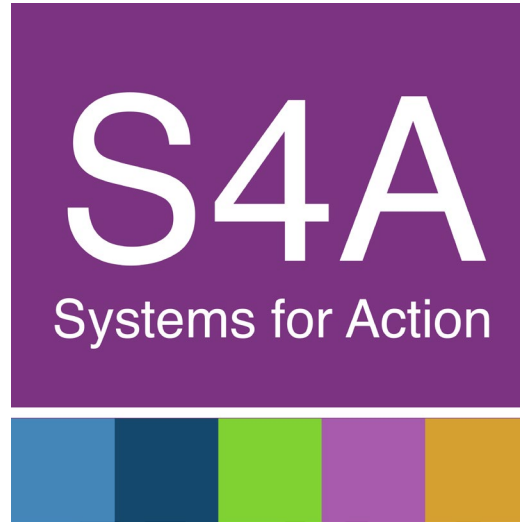
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Acknowledgements

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