CityMatCH Annual Conference
Portland, Oregon
September 14, 2018

Cradle Kalamazoo - Collective Impact in Action

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¹Western Michigan University Homer Stryker M.D. School of Medicine, ²YWCA of Kalamazoo ³Kalamazoo Health and Community Services, ⁴National Birth Equity Collaborative
Getting in the Door and Staying There
Lisa Graves MD
Associate Dean, WMed & Cradle Clinical lead
Kalamazoo County
Three Year Moving Average Infant Mortality Rate, By Race
-1997 to 2017*-

*2014-2016 & 2015-2017 are estimated, not the official rates.
“Large-scale social change requires broad cross-sector coordination....”

“...yet [we] remain focused on the isolated intervention of individual organizations.”

COLLECTIVE IMPACT – The Parts

• COMMON AGENDA

• BACKBONE SUPPORT

• SHARED MEASUREMENT

• CONTINUOUS COMMUNICATION

• MUTUALLY REINFORCING ACTIVITIES
• Complex issues require **multidisciplinary strategies & interventions**.

• No one solution or organization will be able to solve infant mortality by themselves.

• Cradle’s overall goal is to improve infant mortality, knowing that only **10-20% of health is impacted by clinical care**.
GETTING STARTED

PHASE 1: GENERATING IDEAS AND DIALOGUE: 2014

ACTIVITIES
- One-on-one meetings with stakeholders
- Kickoff Conference (November, 2014)
- Media coverage

- Build awareness
- Build Community Partners
- Identify the issue in the community
- Learn from the past

Equity Focus  Data-Driven  Collective Impact  Community Engagement
PHASE 1: GENERATING IDEAS AND DIALOGUE: 2014

PHASE 2: STRATEGIC PROCESS: 2015

Funding:

- Identify priority areas
- Identify strategic partners
- Analyze baseline data and key issues
- Map the landscape and use data to make case

ACTIVITIES
- Community Workshops (March & May, 2015)
- Fundraising
- Research Race X SES further
- Strategic Planning Consultant / Process

Equity Focus — Data-Driven — Collective Impact — Community Engagement

Rooted in Strategy

• Identify priority areas
• Identify strategic partners
• Analyze baseline data and key issues
• Map the landscape and use data to make case

Community Engagement
CRADLE GOALS

• **Cradle Kalamazoo:** In the next 10 years, Cradle is organizing strategies to **create zero disparities** in infant mortality and an overall infant mortality rate of **less of 3.0** per 1,000 lives births.

Overall well-being of all children & families in Kalamazoo
ALIGNING STRATEGY WITH CAUSE

Problem

Cause

1. Fragmented Systems of care
2. Stress from poverty & discrimination
3. Lack of opportunity & access
4. Health Literacy

Strategic Objectives

1. Coordinating perinatal **home visitation network**,
2. Incorporating health equity into practices & policies,
3. Providing reproductive health education,
4. Providing **safe sleep education**.
ORGANIZING

PHASE 1: GENERATING IDEAS AND DIALOGUE: 2014

PHASE 2: STRATEGIC PROCESS: 2014-15

PHASE 3: INITIAL ACTION: 2015-16

Funding:
- Kalamazoo County Health Plan
- Michigan Health Endowment Fund

ACTIVITIES
- Announced plan at annual meeting
- Workgroups to develop each objective
- Hired administrative backbone
- Public Health Marketing
- Fundraising

Facilitate community outreach
Identify funding
Establish shared metrics

Equity Focus
Data-Driven
Collective Impact
Community Engagement
IMPLEMENTATION

PHASE 1: GENERATING IDEAS AND DIALOGUE: 2014

PHASE 2: STRATEGIC PROCESS: 2014-15

PHASE 3: INITIAL ACTION: 2015-16

PHASE 4: ORGANIZE FOR IMPACT: 2016 - 2018

Funding:
- Create infrastructure and process
- Create common agenda, goals and strategy
- Continue to engage

ACTIVITIES
- Baby Hotline
- Implement Data Hub
- Fundraising
- Continuum of care

Equity Focus | Data-Driven | Collective Impact | Community Engagement
CRADLE ACHIEVEMENTS 2014-2018

• Administrative & Data Backbone raised $1.8 million (2014-2018) to support admin, data, and expanded programming

• Coordinated over 400 meetings with 30 community partners at 8 committees

• In 2017-2018, Hosted 22 community events with a total of 784 attendees and volunteers
<table>
<thead>
<tr>
<th>Home Visitation</th>
<th>Safe Sleep</th>
<th>Reproductive Health</th>
<th>Health Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Built Care Coordination Registry with 7 perinatal HV programs</td>
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<td>• Commitment for IM from City &amp; County Commissions</td>
</tr>
<tr>
<td>• Supported care coordination between programs with Frontline meetings</td>
<td>• Designed standardized education and messaging</td>
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<td>• Review of equity in initiative</td>
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WHERE WE STARTED: Cradle’s first structure (2015)

**Steering Committee**

**Administrative Backbone**
- Oversee day-to-day
- Marketing
- Status of projects

**Data Backbone**
- Database/Care Coordination Registry
- Mom’s Experience Survey
- Cradle Kalamazoo Research

**Best Babies Zone**

**Community Engagement /CHWs**
- Frontline Meetings

**FIMR**

**Home Visitation Subcommittee**

**Reproductive Health Subcommittee**

**Safe Sleep Subcommittee**

**Health Equity Subcommittee**

**Awareness** ↔ **Equity Focus** ↔ **Intentional**
CRADLE RE-STRUCTURE

Cradle Kalamazoo Governance Board
Collectively this Board will support shared strategic and operational leadership by: (1) promoting **coordinated action**, (2) ensuring institutional alignment around a shared vision and shared accountability, (3) facilitating open communication, and (4) supporting collective funding efforts.

This Board will have a Fund Development Committee Chaired by UWBCKR to decide funding priorities, ensure transparency and support collective funding (i.e. donor development, endowment, grant writing).

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**Strategic & Vision**

Cradle Executive Director

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**Ex-Officio**

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**Operation & Implementation**

Coordinated Care
- SDON Collaboration Platform
- Clinic to Community
- Care Coordination Registry
- Community Based Participatory Research
- Fetal Infant Mortality Review

Coordinated Care

Research, Data & Eval.
- Coordinated Care
- Case Coordination Registry
- Community Based Participatory Research
- Fetal Infant Mortality Review

Partnership & Strategy
- Reproductive Health

Admin
- Implementation
- Operational Staffing
- Social Media & Website

Communication & Marketing
- Branding
- Messaging
- Safe Sleep
- Steering

Partnership & Strategy

Coordinated Care
- Home Visitation (CHWs, Case Managers, Doulas)
- Street Outreach
- Community Education

Community Engagement
- Best Babies Zone
- Community Events
- Community Residents
- Partner Agencies

Health Equity
- Partnership Development
- Social & Clinical Strategy
- Streamlined Process
- Training

Community Engagement

Public Policy
- Advocacy

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**Community Partners**

Ascension Borgess
- WMed
- FHC
- Bronson
- KCHCS
- YWCA
- NMA
- KZCF

30+ Cradle Kalamazoo Community Partners

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**Operations Partner**

**Hiring Executive Director & housing admin staff**
Coordinating Across Agencies & Programs
Terra Bautista (Healthy Babies Healthy Start Coord)
“Alone we can do so little…”
Cradle Hotline… 2-1-1 Gryphon Place

Call 269-888-KIDS for your baby needs!
With a single phone call, pregnant and newborn families in Kalamazoo County can connect to crucial services and resources to improve health and infant survival.

Anyone can call 269-888-KIDS (5437) to help get connected to programs that support families both inside and outside the home.

For more information visit www.CradleKalamazoo.com

Cradle Hotline (888-KIDS) & 2-1-1 Screening
• 100+ calls into hotline
• 10,000 2-1-1 callers screened annually for pregnancy
• 61 women enrolled in home visitation program

https://www.youtube.com/watch?v=GBC5Gu8MQFU&t=1s
### CRADLE COORDINATION ACHIEVEMENTS

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CRADLE Home Visitation Coordination

Clinic Clinic Clinic Clinic Clinic

Healthy Babies Healthy Families Nurse-Family Savior's Maternal Infant Healthy Start America Partnership Home Health Services Eliminating racism empowering women
In Kalamazoo, Michigan Helping Each-Time Receive Support Twenty Hands LLC Kalamazoo

It takes a village
CLINIC TO COMMUNITY COORDINATION

COORDINATED CARE
“... together we can do so much”

9 data-sharing participants:
• Seven home visiting programs
• Two CHW programs
  Multiple community programs
• Early childhood home visiting
• Service presentations

48 weekly meetings since 2017

254 Cases reviewed
• Thirty-eight brain-storming
• Two hundred-sixteen hand-offs
COORDINATED CARE STRATEGIES

1. Clinic to Community
   • Home Visitation (case managers, doulas, CHWs)
   • Planning for automatic, universal referral

2. SDOH Collaboration Platform, ASCENSION BORGESS TAV
   • Promote coordination between clinic & community resources

3. Community to Clinic
   • Street outreach, resource linkage & re-engagement
   • Community education

4. Care Coordination Registry
   • Updated contact info for enrollment / retention
   • Referral portal for agencies, clinics, & community
SDOH COLLABORATION PLATFORM

Pilot an electronic care coordination platform
Coordinated Care: CHW Strategy

YWCA

WMED

KCHSD

CHW

Clinic to Community

Community Engagement

Community to Clinic
Clinic to Community

- Time of Delivery
- Inter-Agency Providers Staff Departments
- OB/GYN Care Team
- Medical Appointment

Community to Clinic

- Community Relationships
- Pregnancy Testing
- Community Educational Classes
- Neighborhoods

- Increased support for families
- Wrap-Around Case Sharing
Outreach increases community-engagement:

- Awareness
- Willingness
- Access
Taking Clinical Continuum-of-Care into Neighborhoods and Homes

Carmen Green MPH
(National Birth Equity Collaborative, Cradle Health Equity Consultants)
Overview

• Capacity Building grant from MDHHS – Minority Health

• Goal to eliminate racial and ethnic health disparities through implementing culturally appropriate, evidence-based approaches
Overall Program & Evaluation

- Purpose of this grant is to support goal: ensuring health equity and cultural competency of programs, policies, and providers.

- Partnering with **3 clinical sites** (Ascension Borgess, Bronson, Family Health Center) to improve cultural competency of clinical processes and procedures that impact maternal and infant health.
Mission
To reduce Black maternal and infant mortality through research, family centered collaboration and advocacy.

Goal
Reducing black infant mortality rates by 50% in the next 10 years.

Our vision is that every Black infant will celebrate a healthy first birthday with their families.
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*
Root Causes

- Institutional Racism
- Class Oppression
- Gender Discrimination and Exploitation

Power and Wealth Imbalance

- Labor Markets
- Globalization & Deregulation
- Housing Policy
- Social Safety Net
- Social Networks

Social Determinants of Health

- Safe Affordable Housing
- Living Wage
- Quality Education
- Transportation
- Availability of Food
- Social Connection & Safety

Psychosocial Stress / Unhealthy Behaviors

in the Distribution of Disease, Illness, and Wellbeing

Adapted from R. Hofrichter, *Tackling Health Inequities Through Public Health Practice*. 
<table>
<thead>
<tr>
<th></th>
<th>Make health equity a strategic priority</th>
<th>Develop structure &amp; processes to support health equity work</th>
<th>Deploy specific strategies to address the multiple determinants of health on which health care organizations can have a direct impact</th>
<th>Decrease institutional racism within the organization</th>
<th>Develop partnerships with community organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demonstrate leadership commitment to improving equity at all levels of the organization</td>
<td>Establish a governance committee to oversee and manage equity work across the organization</td>
<td>Health care services (CLAS, CHW, co-design processes)</td>
<td>Physical space: Buildings &amp; design</td>
<td>Leverage community assets to work together on community issues related to improving health &amp; equity</td>
</tr>
<tr>
<td>2</td>
<td>Secure sustainable funding through new payment models</td>
<td>Dedicate resources in the budget to support equity work</td>
<td>Socioeconomic status (fair pay &amp; opportunity for employees)</td>
<td>Health insurance plans accepted by the organization</td>
<td>Health insurance plans accepted by the organization</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>Physical environment</td>
<td>Reduce implicit bias within organization policies, structures &amp; in patient care</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td>Healthy behaviors</td>
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Some of the underlying reasons for lack of effectiveness of RCAs in improving patient safety include the lack of standardized and explicit processes and techniques to:

- Identify hazards and vulnerabilities that impact patient safety and then prioritize them to determine if action is required
- Identify systems-based corrective actions
- Ensure the timely execution of an RCA and formulation of effective sustainable improvements and corrective actions Ensure follow-through to implement recommendations
- Measure whether corrective actions were successful
- Ensure that leadership at all levels of the organization participate in making certain that RCAs are performed when appropriate, in a timely manner, and that corrective actions are implemented to improve patient safety
Rules to 5 whys

Rule 1. Clearly show the “cause and effect” relationship.

Rule 2. Use specific and accurate descriptors for what occurred, rather than negative and vague words. Avoid negative descriptors such as: Poor; Inadequate; Wrong; Bad; Failed; Careless.

Rule 3. Human errors must have a preceding cause.

Rule 4. Violations of procedure are not root causes, but must have a preceding cause.

Rule 5. Failure to act is only causal when there is a pre-existing duty to act.
“5 Whys” Exercise

**EVENT**: What happened?

**PATTERN**: What’s been happening?

**STRUCTURE**: Why is it happening? What are the tangible and intangible structures determining the results we see?

1. Why is that?
2. Why is that?
3. Why is that?
4. Why is that?
5. Why is that?

**ACTION**: What are the implications for action?
Phase 1:

• Identified 3 clinical sites

• Assessed cultural competency of policies and procedures that impact maternal/infant health (*pre-assessment*)

• Met with sites to review assessment & talk about needs

• Drafted recommendations
Overall Program & Evaluation

Phase 2:

• Reviewed recommendations (universal intake process, earlier access to care, equity trainings, substance abuse trainings, HR practices)

• Implement recommendations (training evaluations)

• Plan to assess after 1 year (post-assessment consultant evaluation, summary/process report)
Current Work

- **Phase 2: Early Access to Care**
  - Updated and documented intake processes & workflow
  - Created reports with entrance to care data
  - Updated intake process for first prenatal visit
  - Working to create & implement unified SDOH questionnaire
  - Offered trainings
  - Post Assessment and review in September

- **Sustainability:**
  - Processes and procedures incorporated into each clinic
  - Connecting with partner agencies for continued training needs
  - Incorporate into internal QI processes
Successes & Challenges

**Successes**
- Engagement from clinical partners
  - Unified approach to SDOH across Kalamazoo
- Changing culture around access to care
  - Support for early access to care
  - Median first prenatal visit now occurring in first trimester
- Interest in trainings
  - 8 events completed
  - 2 planned

**Challenges**
- Securing an external consultant
- Consistent follow-up with multi-sector partners
Best Practices

HRSA MCH CoIIN

Association of Maternal & Child Health Programs (AMCHP)
FL, IL, KY, MA, NC, NM, NV, OH, OR, RI, SC, TX, WI
Social determinants of health

National Institute for Children’s Health Quality (NICHQ)
AR, MS, NY, TN
Sudden Unexpected Infant Death

Project Concern International (PCI)
CoIIN Team States: AZ, CA, NM, TX
Early prenatal care & social determinants of health

University of North Carolina - Chapel Hill
CA, DE, NC, OK
Preconception health

AMCHP Innovation Station

<table>
<thead>
<tr>
<th>Practice</th>
<th>State</th>
<th>Primary Interest</th>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td>Healthy Babies are Worth the Wait</td>
<td>Kentucky</td>
<td>Birth Outcomes</td>
<td>Best</td>
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<tr>
<td>Mississippi Interpregnancy Care Project</td>
<td>Mississippi</td>
<td>Birth Outcomes</td>
<td>Emerging</td>
</tr>
<tr>
<td>Early Intervention Partnerships Program (EIPP)</td>
<td>Massachusetts</td>
<td>Health Screening</td>
<td>Emerging</td>
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<tr>
<td>The JJ Way Model of Maternity Care</td>
<td>Florida</td>
<td>Infant Health</td>
<td>Emerging</td>
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<tr>
<td>Touching Hearts and Minds (THM)</td>
<td>Massachusetts</td>
<td>Infant Health</td>
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<td>Tennessee Safe Sleep Project</td>
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<tr>
<td>Florida Newborn Screening Results (FNSR)</td>
<td>Florida</td>
<td>Infant Health</td>
<td>Emerging</td>
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<td>Tampa Bay Doula Program</td>
<td>Florida</td>
<td>Perinatal Health</td>
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<td>Birth and Beyond California</td>
<td>California</td>
<td>Quality Assurance</td>
<td>Promising</td>
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<td>Baby Steps to Breastfeeding Success</td>
<td>Arizona</td>
<td>Quality Assurance</td>
<td>Emerging</td>
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<td>Back to Sleep Nurse Training</td>
<td>Missouri</td>
<td>Workforce &amp; Leadership Development</td>
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<td>Safe Sleep Sweep</td>
<td>New York</td>
<td>Infant Health</td>
<td>Cutting Edge</td>
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<td>Healthy Babies are Worth the Wait Consumer Education Initiative</td>
<td>New York</td>
<td>Birth Outcomes</td>
<td>Promising</td>
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<td>Perinatal Substance Use</td>
<td>Indiana</td>
<td>Substance &amp; Tobacco Use</td>
<td>Cutting Edge</td>
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<td>Moving Beyond Depression</td>
<td>Ohio</td>
<td>Mental Health</td>
<td>Best</td>
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<td>Baby and Me Tobacco Free</td>
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<td>Substance &amp; Tobacco Use</td>
<td>Best</td>
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<td>Developing, Testing &amp; Scale Coordinated Intake &amp; Referral</td>
<td>Florida</td>
<td>Systems Building</td>
<td>Promising</td>
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<td>Welcome Family</td>
<td>Massachusetts</td>
<td>Health Promotion</td>
<td>Promising</td>
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<td>Safe Infant Sleep</td>
<td>Georgia</td>
<td>Birth Outcomes</td>
<td>Emerging</td>
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<td>PCRCN, Prenatal Care Education Program</td>
<td>Florida</td>
<td>Tobacco Prevention</td>
<td>Cutting</td>
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Data as a Health Justice Strategy
Cathy Kothari PhD (Assoc Prof, WMed & Cradle Epi)
COMMUNITY-BASED POPULATION HEALTH RESEARCH
Infants of Color have Worse Birth Outcomes

Laser on Equity

*3-year moving average, 2014-2016, Kalamazoo County
Infant Mortality Rate
Kalamazoo County, 2010-2017 estimate

Parsing Root Causes: Poverty

(37) 5.3
White

(40) 3.2

$   $$$
Infant Mortality Rate
Kalamazoo County, 2010-2017 estimate

Infants of Color

Poverty Risk Not Distributed Equally
Regardless of Income

Infant Mortality Rate
Kalamazoo County, 2010-2017 estimate
Parsing Root Causes: Structural Racism

Moms Health Experiences Survey Study
- Recruited women from postpartum floor
- Recruited 10% of county maternal population
- Phone survey, 2 months postpartum
- Neighborhood & Personal SDOH
% Exposed to Poverty (N=240)

30.1% of White women (n=146)
70.2% of Women of color (n=94)

Poverty is deeper among women of color:
- more likely to be going hungry
- without transportation

Isolated:
- without a support network
- or a network that is just as deprived

* $p < .001$
Segregated into poverty
- Concentrated poverty in 100% higher density Black neighborhoods (11 of 11 census tracts)

VS

- Concentrated poverty in 21.1% of higher density White neighborhoods (8 of 38 census tracts)
Parsing Root Causes: Interpersonal Racism

Race

Structural Discrimination (SES)

Interpersonal Discrimination (EoD scale)
**Experiences of Discrimination Scale**
1. How often are you treated with less courtesy or respect
2. How often do you receive poorer service than other people
3. How often do people act as if they think you are not smart
4. How often do people act as if they are afraid of you
5. How often are you followed around in stores
6. How often are you threatened or harassed

**Discrimination Index:**
Almost every day, At least once a week, A few times a month, A few times a year, About once a year, Never
0 to 30, higher indicates greater discrimination

*Discrimination Index:

Experiences of Discrimination Scale (Williams, 2012)
CQI – FIMR
Cradle-Kalamazoo Fetal Infant Mortality Review (FIMR) (mid-2015 through mid-2018)

Kalamazoo County FIMR: Two-Tiered Process

1. CASE REVIEW TEAM:
   ..... the front line
   Led by:
   Members:
   - Hospitals, EMS
   - OB & Pediatric primary care
   - Behavioral health
   - Public Health, Home visitors
   - Criminal justice, Courts
   - Child welfare, Domestic violence
   - Community members

   Member Responsibilities:
   - Provide case-related information
   - Attend Case Review meetings
   - Maintain confidentiality
   - Draft actionable recommendations

   Goals:
   a) Review individual cases,
   b) Identify system gaps,
   c) Draft recommendations

2. COMMUNITY ACTION TEAM:
   .....leadership
   Led by:
   Members:
   - Institutional administrators
   - Community leaders
   - Government
   - Funders

   Member Responsibilities:
   - Leverage institutional resources
   - Focus on community realities
   - Commit to collective impact
   - Data driven, Evidence based action

   Goals:
   a) Synthesize data,
   b) Prioritize issues,
   c) Take action
FIMR: The Process

1. SURVEILLANCE
   - DEATH NOTIFICATION & MONITORING

2. REVIEW
   - ABSTRACT RECORDS
   - INTERVIEW FAMILY
   - CASE SUMMARY

3. ROOT CAUSE
   - MULTI-DISCIPL. REVIEW
   - IDENTIFY SYSTEM GAP(S)
   - RECOMMENDATIONS

4. PREVENTIVE ACTION
   - POLICY
   - COMMUNITY ACTION TEAM
   - STATE ADVISORY COUNCIL
   - NATIONAL FIMR
Core Team:
- co-leads
- abstractors
- family interviewers
- coordinator
- MPH, MSW interns

Review Team:
- 42 members
- 15 organizations:
  - Medical
  - Public health
  - Social service
  - Criminal justice
  - Education
  - Behavioral health

Accomplishments:
• Held 34 monthly meetings
• Reviewed 56 cases of infant / stillbirth death
  • 76% with interviews (in last year)
• Identified multiple social / health system gaps
• Recommendations to Cradle Steering Team (CAT)
  • Created process for submitting recommendations to the state
  • Helped conduct state training
• Presenting at national medical QI conference
• National Workgroups on Disparities
• Mentor site, Nat’l Ctr Fatality Review & Prevention
CARE COORDINATION
REGISTRY
OBJECTIVES

- Facilitate access:
  - Home Visitation referral portal for agencies, clinics, & community
  - Gryphon Place 2-1-1 Hotline

- Frontline support:
  - Updated contact info for retention
  - Close the loop on open referrals through case sharing

- System-level CQI, continuum of care

- Accountability, health disparity outcomes

Coordinating Resources: Data Backbone

CRADLE CARE COORDINATION REGISTRY

INPUTS:

- AUTOMATED, WEEKLY EXPORTS (HV / CHW program records)
- Home Visitation REFERRAL PORTAL (algorithm for HV eligibility matching)

OUTCOMES

- (access to care, birth, infant survival)

...OUTPUTS

- HV / CHW ASSISTANCE
- INCOMING REFERRALS
- CARE COORD.
- SYSTEM CQI
EXPANSIONS

completed…
1. Agency-based CHW pilot
exports / referrals

in process…
2. Community self-referrals

funded, planned…
3. Street-reach CHW
exports/referrals
4. Interconceptional women,
infants, fathers
5. Clinic, office referrals
6. EHR- birth / death exports
Coordinating Resources: Process Metrics


PREGNANT POPULATION:
7,095 women

3,725 women

INCOMING REFERRALS*
(1,916 Women)

51.4% of Cradle-eligible women

34.1% Enrollment Rate

ENROLLED**
(654 WOMEN)

17.6% of Cradle-eligible women

* Prenatal referrals in during 29-month period: January 1, 2016 through April 15, 2018
** Enrolled up through June 15, 2018
*** Retained through eligibility period as of September, 2017
### CARE COORDINATION REGISTRY: System-level CQI (2016 through mid-2018)

#### PREGNANT POPULATION:

| Women | 3,725 | 7,095 |

#### INCOMING REFERRALS* (1,916 Women)

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<tr>
<th>Race</th>
<th>Women</th>
<th>% of Referred</th>
<th>% of Popul.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non</td>
<td>636</td>
<td>55.8 %</td>
<td>23.4 %</td>
</tr>
<tr>
<td>White</td>
<td>504</td>
<td>44.2 %</td>
<td>76.6 %</td>
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<td>776</td>
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<tr>
<td>SES</td>
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<tr>
<td>Medicaid</td>
<td>1075</td>
<td>97.0 %</td>
<td>43.5 %</td>
</tr>
<tr>
<td>Private</td>
<td>33</td>
<td>3.0 %</td>
<td>56.6 %</td>
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<tr>
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<td>808</td>
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<td></td>
</tr>
<tr>
<td>PPBO</td>
<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>121</td>
<td>11.0 %</td>
<td>6.5 %</td>
</tr>
<tr>
<td>No</td>
<td>982</td>
<td>89.0 %</td>
<td>93.5 %</td>
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<tr>
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<td>813</td>
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</tbody>
</table>

#### ENROLLED** (654 WOMEN)

<table>
<thead>
<tr>
<th>Race</th>
<th>Women</th>
<th>Enrollment Rate</th>
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</thead>
<tbody>
<tr>
<td>Non</td>
<td>337</td>
<td>53.0 %</td>
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<tr>
<td>White</td>
<td>225</td>
<td>44.6 %</td>
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<tr>
<td>SES</td>
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<tr>
<td>Medicaid</td>
<td>527</td>
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<tr>
<td>Private</td>
<td>20</td>
<td>60.6 %</td>
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<tr>
<td>PPBO</td>
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<tr>
<td>Yes</td>
<td>56</td>
<td>46.3 %</td>
</tr>
<tr>
<td>No</td>
<td>558</td>
<td>56.8 %</td>
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<td>648</td>
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</tr>
</tbody>
</table>

* Prenatal referrals in during 29-month period: January 1, 2016 through April 15, 2018
** Enrolled up through June 15, 2018
Measuring Impact: Outcomes

Enrolled in Home Visitation program

- (10 Enrolled)
- (13 Enrolled)

$ $$$
Measuring Impact: Outcomes

Enrolled in Home Visitation program

CRADLE REGISTRY
Clinic to Community Links

(223)
Expected: 1 death
Actual: 1 death

$  (10 Enrolled)

White

(13 Enrolled)

$ $$
Measuring Impact: Outcomes

CRADLE REGISTRY
Clinic to Community Links

Enrolled in Home Visitation program

(336) Expected: 5 deaths
Actual: 0 deaths

Infants of Color
(10 Enrolled)

(223) Expected: 1 death
Actual: 1 death

White
(13 Enrolled)

$ $$$$
Thank You!!

Funding:

United Way of the Battle Creek and Kalamazoo Region
changethistory.org

LIVE UNITED
United Way

Healthy Babies
Healthy Start
In Kalamazoo, Michigan

Kalamazoo Community
Foundation

Eliminating racism
empowering women
YWCA Kalamazoo

BORGESS
Ascension

MDHHS
Michigan Department of Health & Human Services

Michigan Health
Endowment Fund

Health
Kalamazoo County
Plan