Consensus-driven Standards on Social Determinants of Health

Interoperability Standards Workgroup April 26, 2022

Evelyn Gallego, CEO, EMI Advisors LLC, & Senior Advisor, Gravity Project

Asha Immanuelle, Maternal Health Equity Program Manager, Center for Black Women's Wellness, and Population Health Advisor & Community Liaison, Gravity Project

Topics

- The Gravity Project: Recap
  - USCDI v2 and Next Steps
  - Gravity Standards Applied to Maternal Health Equity
- Gravity Recommendations to ISA

The Gravity Project: Recap

A Social Determinants of Health Lexicon

- **Social Determinants of Health**: "*the conditions in which people are born, grow, live, work and age," which are "shaped by the distribution of money, power and resources.*
  - Can offer both positive and negative forces
    - Positive Forces > Protective Factors
    - Negative Forces > Social Risks

- **Protective Factors:** characteristics or strengths of individuals, families, communities or societies that act to mitigate risks and promote positive well-being and healthy development.
- **Social Risks:** Adverse social conditions associated with poor health.
- **Social Needs:** Patient-prioritized social risks.

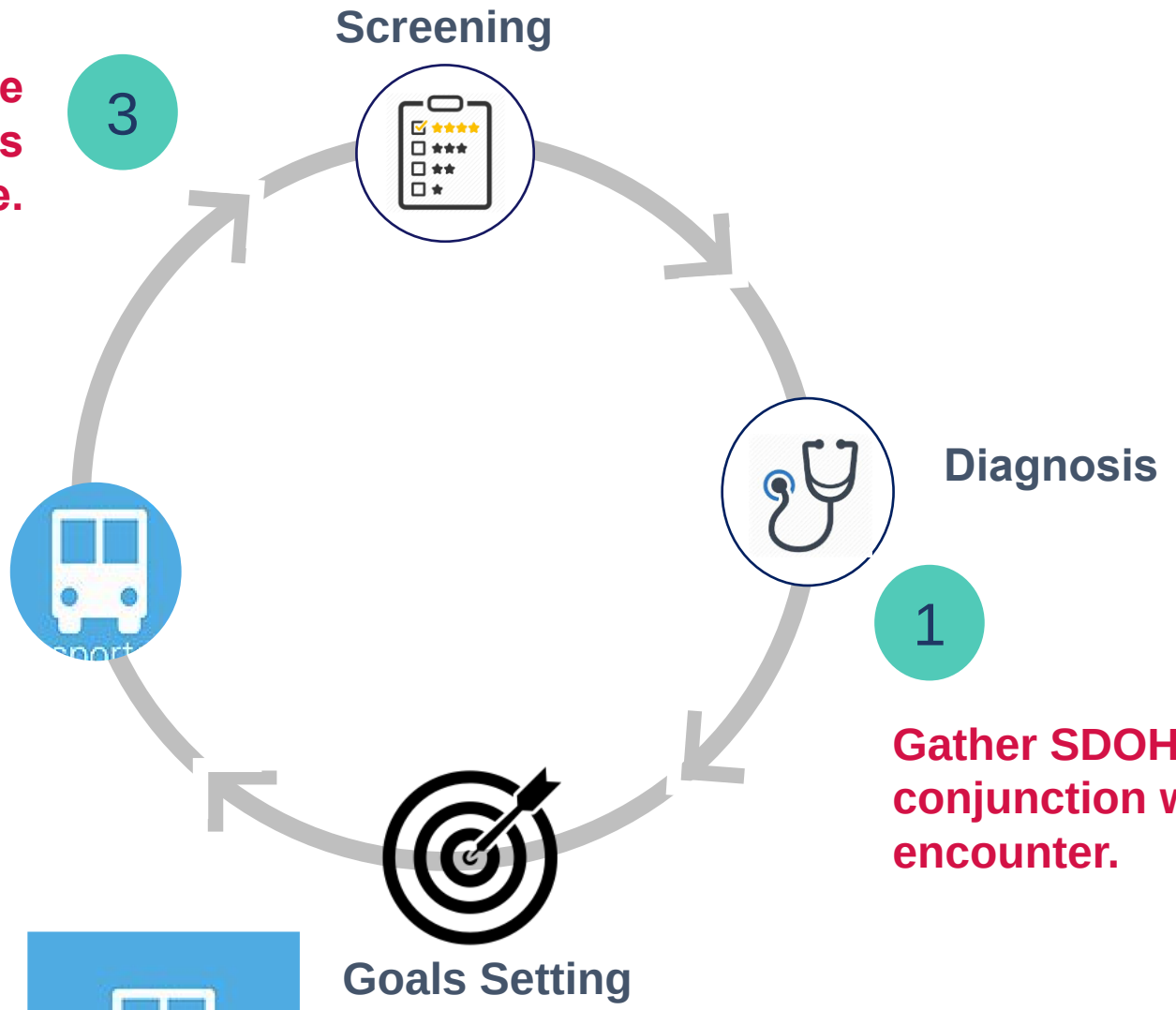
Alderwick and Gottlieb (2019) Meanings and Misunderstandings: A Social Determinants of Health Lexicon for Health Care Systems
Center for the Study of Social Policy (2018) About Strengthening Families™ and the Protective Factors Framework

Project Scope

- Develop data standards to represent and exchange patient level SDOH data documented across four clinical activities:
  - Screening
  - Assessment/diagnosis
  - Goal setting
  - Treatment/interventions.
- Test and validate standardized SDOH data for use in patient care, care coordination between health and human services sectors, population health management, public health, value-based payment, and clinical research.

Domains grounded by those listed in the NASEM "Capturing Social and Behavioral Domains in Electronic Health Records" 2014

Gravity Conceptual Framework & Use Cases



3

Gather and aggregate SDOH data for uses beyond point of care.

1

Gather SDOH data in conjunction with a patient encounter.

2

Document and track SDOH related interventions to completion.

Public Collaboration

Gravity has convened over **2,000+** participants from across the health and human services ecosystem:

- Clinical providers
- Persons and patient advocates
- Community-based organizations
- Standards development organizations
- Federal and State governments
- Payers
- Technology vendors

Public calls biweekly on Thursdays at 4-5:30 pm ET

https://confluence.hl7.org/pages/viewpage.action?pageId=46892669#JointheGravityProject-GravityProjectMembershipList

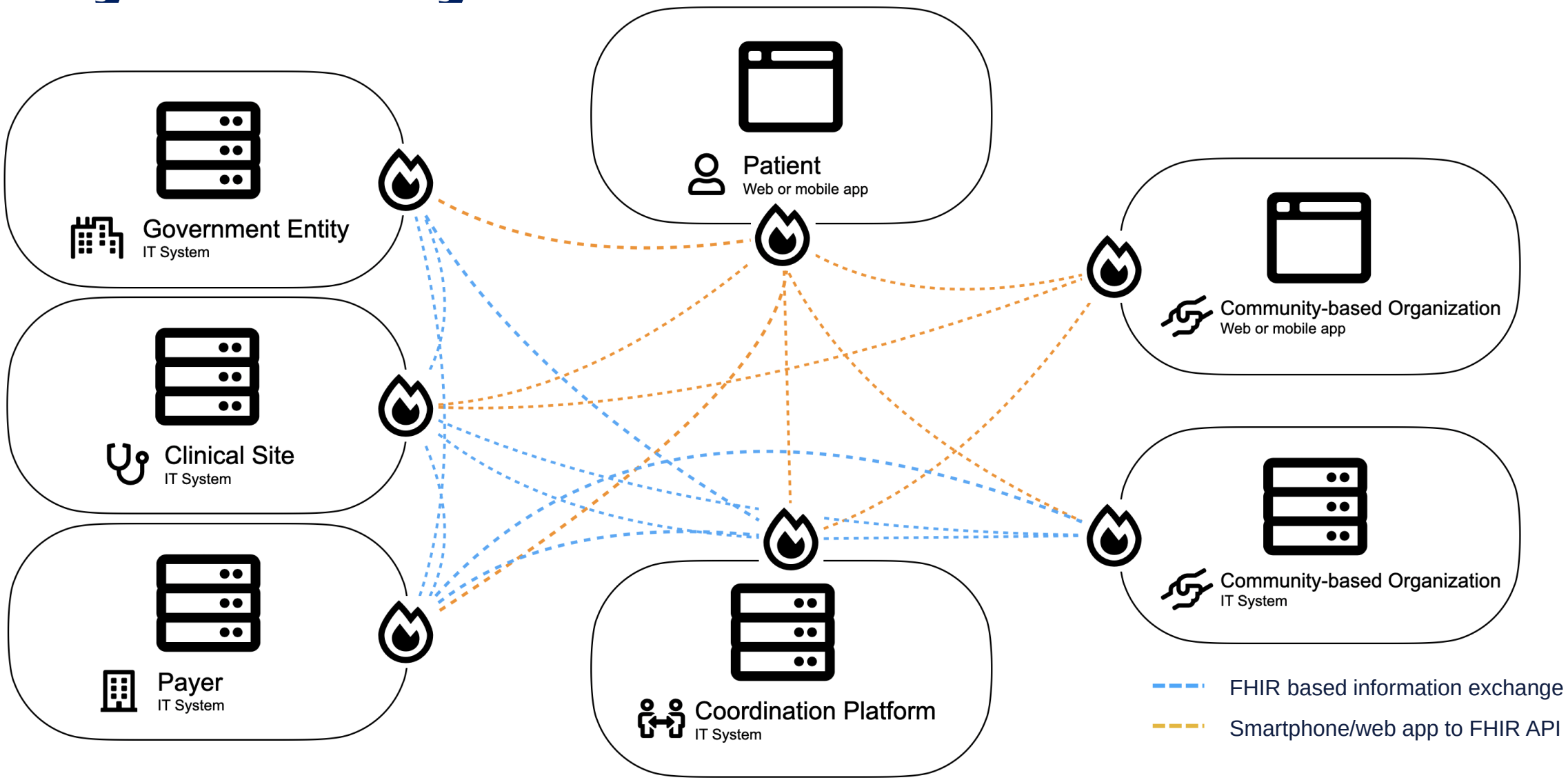
USCDI v2 + Gravity Project's next steps

FHIR Implementation Guides (IG) / Use Cases (UC)	Activities / Data Elements	USCDI v2	Domains for each Activity**	Code Systems / Value Sets
• SDOH Clinical Care IG • **SDOH Social Care UC*** • **SDOH Quality Measurement UC*** • **SDOH Population Health IG*** • **SDOH Research IG*** • **SDOH Public Health UC***	• SDOH Assessments • SDOH Problems/Health concerns • SDOH Goals • SDOH Interventions • **Consent** • **Outcomes*** • **Data aggregation*** • **Accounting for Care*** • **Health insurance***		• Food Insecurity • Housing Instability • Homelessness • Inadequate Housing • Transportation Insecurity • Financial Insecurity • Material Hardship • Employment Status • Educational Attainment • Veteran Status • Psychological Stress • Social Connection • Intimate Partner Violence • Elder Abuse • Health Literacy • Health Insurance Coverage Status • Medical Cost Burden Beyond mid-2022 • Digital Inequity* • Neighborhood: Food Access,* Neighborhood Safety* • Minority Stress* • Measures of Discrimination/Bias* • Adverse Childhood Experiences* • Protective Factors*	• LOINC ▪ Assessments ▪ Goals ▪ Outcomes (e.g., quality measures) • SNOMED-CT ▪ Problems/Health concerns (clinical) ▪ Goals ▪ Interventions (clinical) • ICD-10-CM ▪ Problems/Health concerns (claims/risk stratification/data aggregation) • CPT/HCPCS ▪ Interventions (claims)

*Under consideration

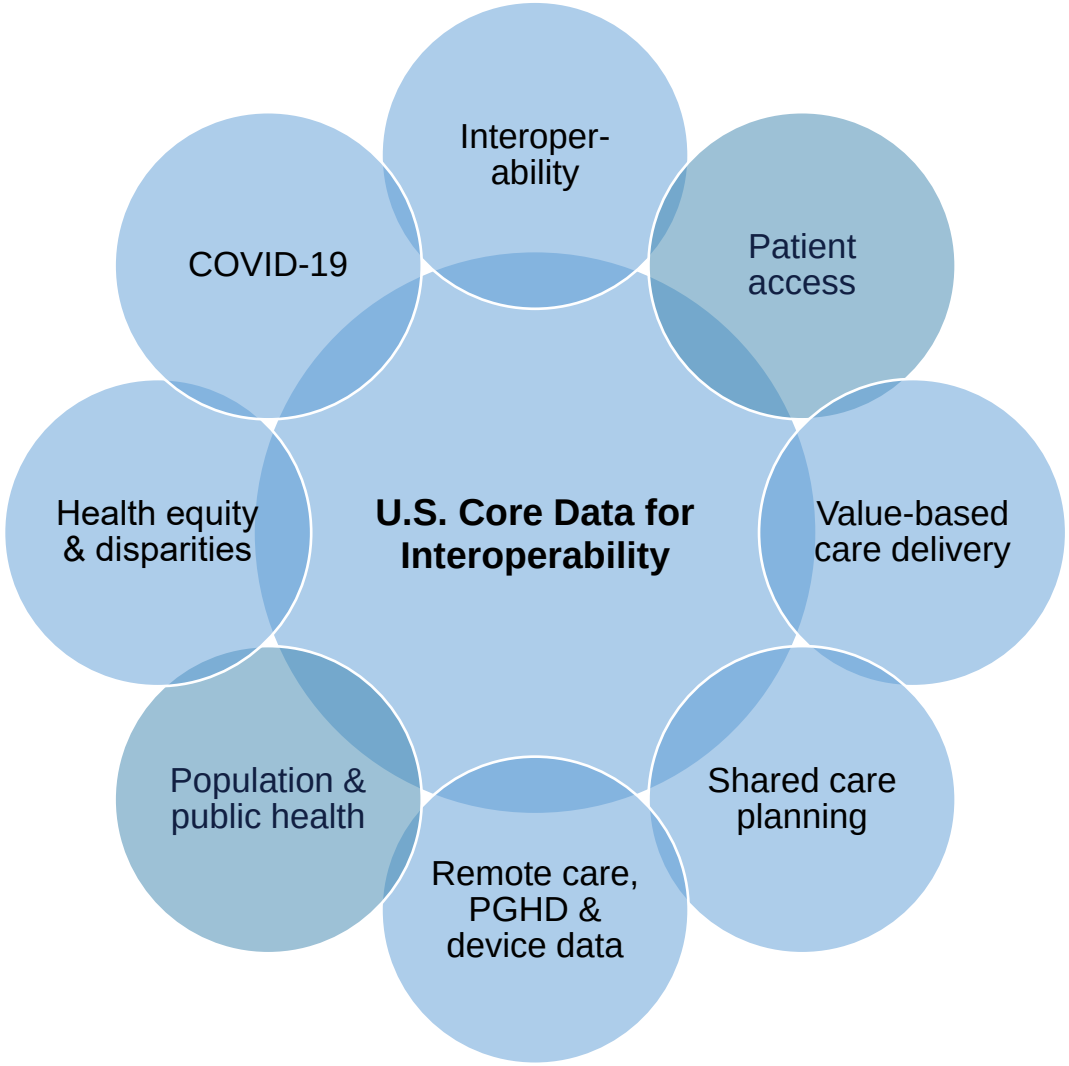
**List not exhaustive for 2022 and beyond. Domains are grounded in then-Institute of Medicine's "Capturing Social and Behavioral Domains in Electronic Health Records" (2014).

SDOH Clinical Care IG STU2 (in ballot): Many testable system interactions



National use cases that depend on USCDI: USCDI with SDOH data serve myriad needs simultaneously

- Interoperability
- Patient access
- Value-based care delivery
- Shared care planning
- Remote care, PGHD, device data
- Health equity and disparities
- Social determinants of health
- COVID-19
- Public and population health
- Precision medicine
- Research
- API/app ecosystem
- Digital quality measures



Interoperability Standards Advisory: Gravity Standards

Summary: SDOH in ISA

- Vocabulary/Code Set/Terminology
  - Social, Psychological, and Behavioral Data
    - Representing: Food Insecurity, Housing Insecurity (homelessness only), Exposure to Violence (Intimate Partner Violence), Financial Resource Strain, Level of Education, Social Connection and Isolation, Stress, Transportation Insecurity
- Specialty Care and Settings
  - Social Determinants of Health
    - Vocabulary/Code Set/Terminology
      - Social, Psychological, and Behavioral Data
    - Content/Structure
      - Care Coordination for Referrals
      - Care Plan

Gravity standards: Missing in ISA

- Vocabulary/Code Set/Terminology
  - **Domains:** Multiple Gravity defined domains: Housing Insecurity Sub-Types: Homelessness, Housing Instability, Inadequate Housing, Elder Abuse, Veteran Status, etc.
  - **Value sets for Gravity domains:**
    - Core Screening Tools for Present Domains:
      - Example> Food security: USDA Food Security Modules, AHC Health Related Social Needs Screening Tool, WellRx, SEEK, We Care, etc.
    - Domain-Level Gravity Project VSAC Value Sets for Diagnoses, Goals, and Interventions
- Services/Exchange
  - **SDOH Clinical Care IG v1.0.0 STU1**
  - **SDOH Clinical Care IG v1.1.0 STU2**
  - **SDOH Clinical Care Reference Implementation**

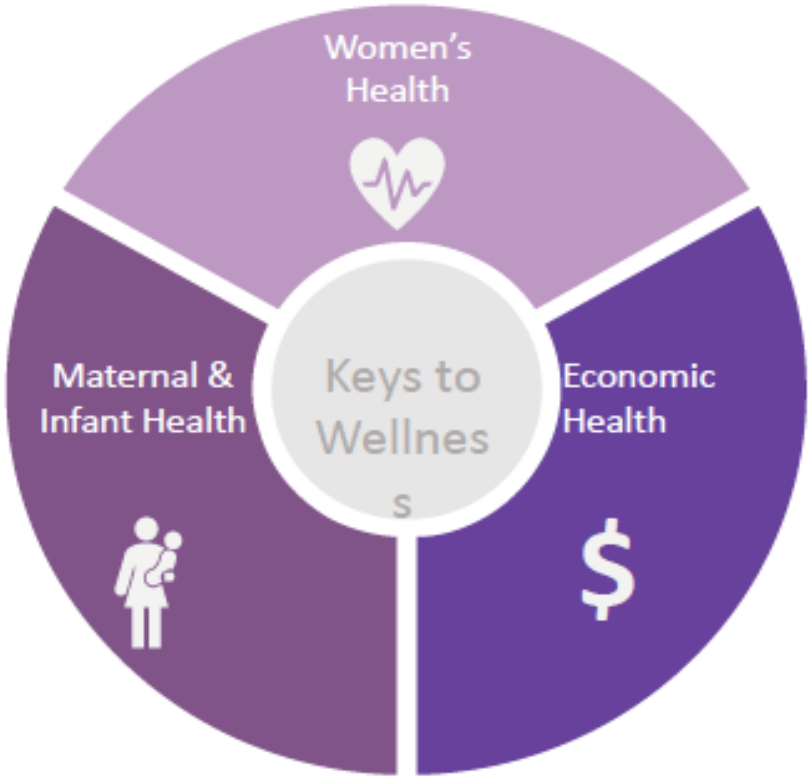
Interoperability Use Case: Gravity Standards Applied to Maternal Health Equity

What Maternal Health Equity Problems Can SDoH Data Solve?

Center for Black Women's Wellness

Our programs

CBWW offers a variety of programs that raise awareness about relevant health issues in the community and educates the community about risk factors and how to prevent diseases



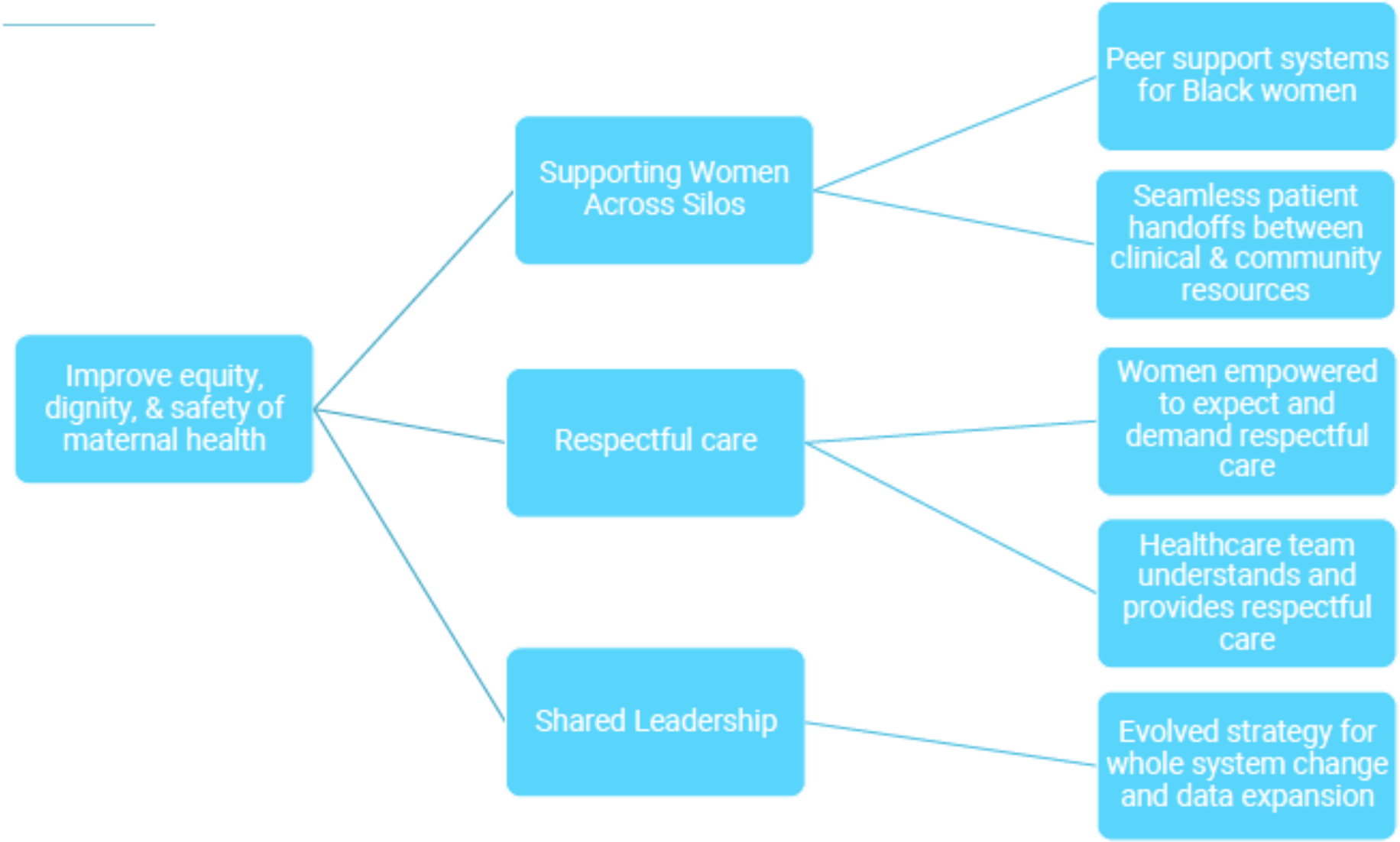
Program:	Benefits:
Women's Health	• Women's health, primary care and mental health • Health education activities • Community-based screening services
Maternal & Infant Health	• Home visitation from pregnancy through 18 months postpartum • Linkages to prenatal care • Resources and support
Economic Health	• Financial literacy • Entrepreneurship • Technical assistance and support

CBWW

The Center for Black Women's Wellness is a premier, community-based, family service center committed to improving the health and well-being of underserved Black women and their families.

www.cbww.org

IHI Better Maternal Outcomes Project



CBWW

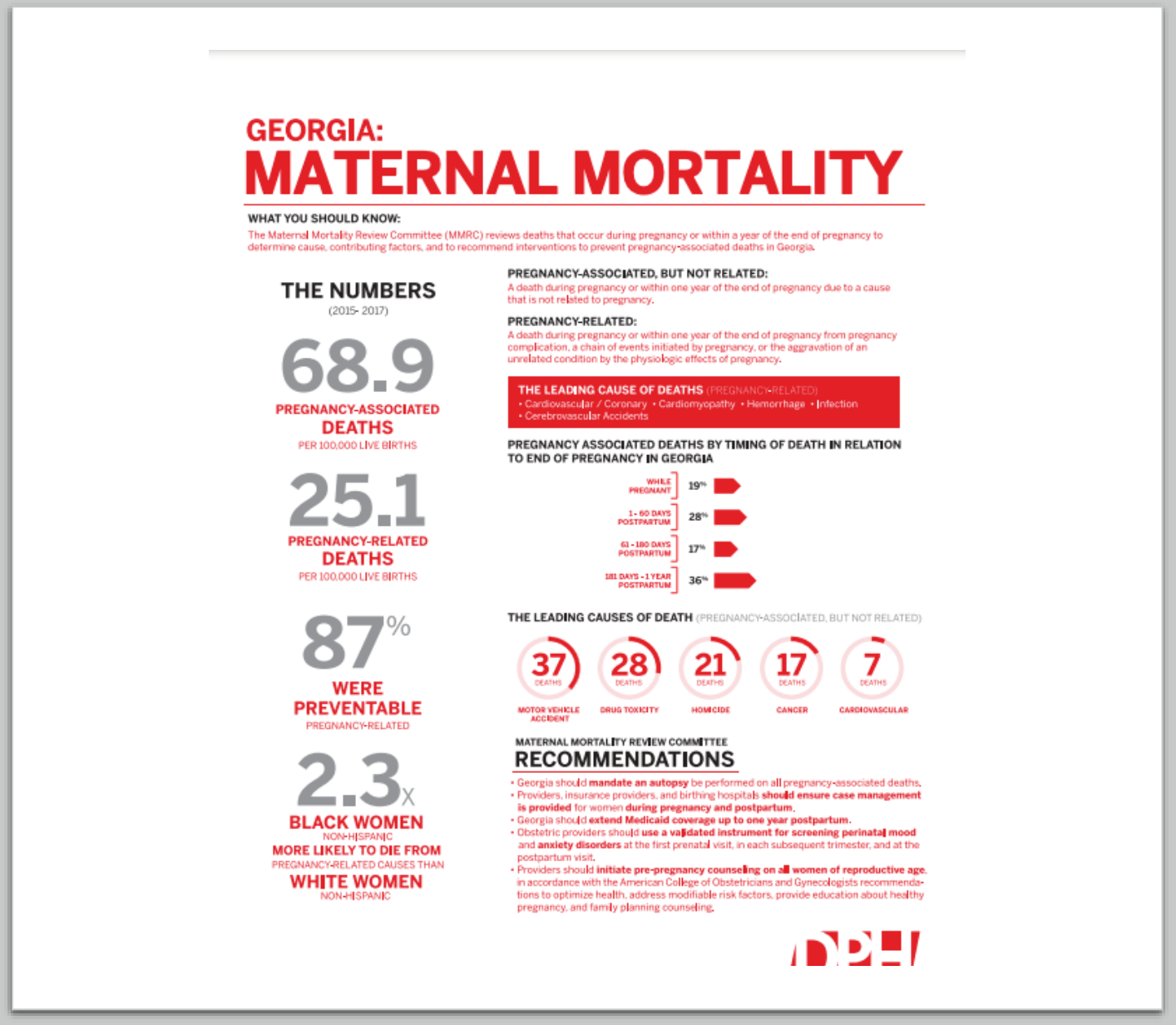
The Center for Black Women's Wellness is a premier, community-based, family service center committed to improving the health and well-being of underserved Black women and their families.

www.cbww.org

87% pregnancy-related deaths PREVENTABLE

- Leading causes of pregnancy-related death:
  - **Cardiovascular/Coronary**
  - **Cardiomyopathy**
  - **Hemorrhage**
  - **Infection**
  - **Cerebrovascular Accidents**

- **Black women are 2.3X more likely to die from pregnancy related causes than white women.**



GEORGIA:

MATERNAL MORTALITY

WHAT YOU SHOULD KNOW:

The Maternal Mortality Review Committee (MMRC) reviews deaths that occur during pregnancy or within a year of the end of pregnancy to determine cause, contributing factors, and to recommend interventions to prevent pregnancy-associated deaths in Georgia.

THE NUMBERS

(2015- 2017)

68.9
PREGNANCY-ASSOCIATED DEATHS
PER 100,000 LIVE BIRTHS

25.1
PREGNANCY-RELATED DEATHS
PER 100,000 LIVE BIRTHS

87%
WERE PREVENTABLE
PREGNANCY-RELATED

2.3X
BLACK WOMEN
NON-HISPANIC
MORE LIKELY TO DIE FROM
PREGNANCY-RELATED CAUSES THAN
WHITE WOMEN
NON-HISPANIC

PREGNANCY-ASSOCIATED, BUT NOT RELATED:
A death during pregnancy or within one year of the end of pregnancy due to a cause that is not related to pregnancy.

PREGNANCY-RELATED:
A death during pregnancy or within one year of the end of pregnancy from pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

THE LEADING CAUSE OF DEATHS (PREGNANCY-RELATED)
- Cardiovascular / Coronary
- Cardiomyopathy
- Hemorrhage
- Infection
- Cerebrovascular Accidents

PREGNANCY ASSOCIATED DEATHS BY TIMING OF DEATH IN RELATION TO END OF PREGNANCY IN GEORGIA

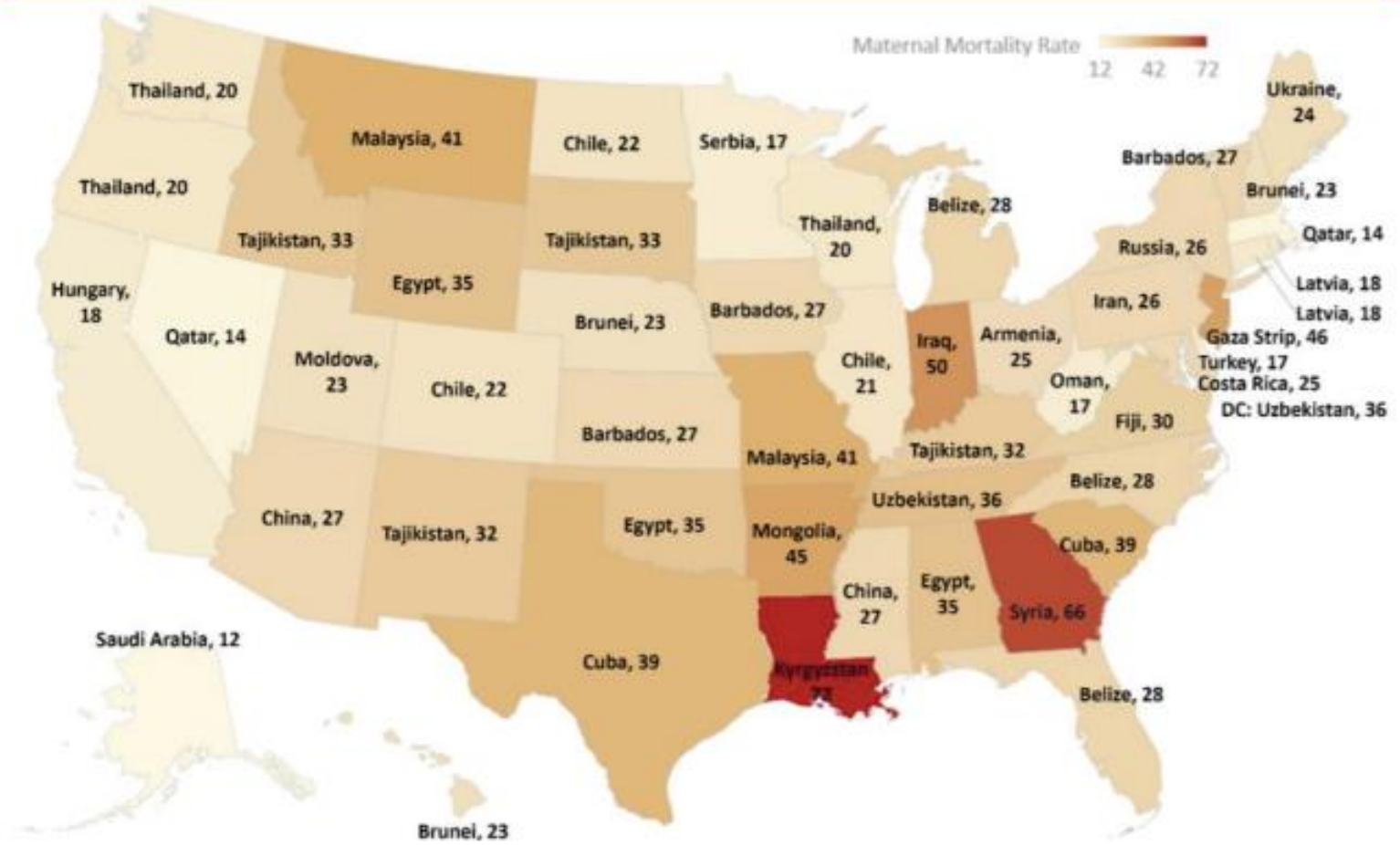
THE LEADING CAUSES OF DEATH (PREGNANCY-ASSOCIATED, BUT NOT RELATED)

MATERNAL MORTALITY REVIEW COMMITTEE

RECOMMENDATIONS

- Georgia should **mandate an autopsy** be performed on all pregnancy-associated deaths.
- Providers, insurance providers, and birthing hospitals **should ensure case management is provided** for women **during pregnancy and postpartum.**
- Georgia should **extend Medicaid coverage up to one year postpartum.**
- Obstetric providers should **use a validated instrument for screening perinatal mood** and **anxiety disorders** at the first prenatal visit, in each subsequent trimester, and at the postpartum visit.
- Providers should **initiate pre-pregnancy counseling on all women of reproductive age**, in accordance with the American College of Obstetricians and Gynecologists recommendations to optimize health, address modifiable risk factors, provide education about healthy pregnancy, and family planning counseling.

Maternal mortality rates (MMR) in the United States compared with MMR in other countries [1]



Why is this work necessary?

Johnson & Johnson

1) Chinn. US maternal mortality: research gaps, opportunities, and priorities. Am J Obstet Gynecol 2020.
2) https://www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html

HOW DO SDOHS CONNECT TO HEALTH EQUITY?

Health equity means that everyone has a fair and just opportunity to be as healthy as possible. Social determinants of health such as poverty, unequal access to health care, and housing instability all contribute to health inequalities. ***To achieve health equity, we need to eliminate health disparities and address social determinants of health.***

The Health Equity Institute
http://healthequity.sfsu.edu
1600 Holloway Avenue, HSS 359
San Francisco, CA 94132
P: 415-405-2540

HEALTH EQUITY INSTITUTE for Research, Practice & Policy

San Francisco State University

Find us on:

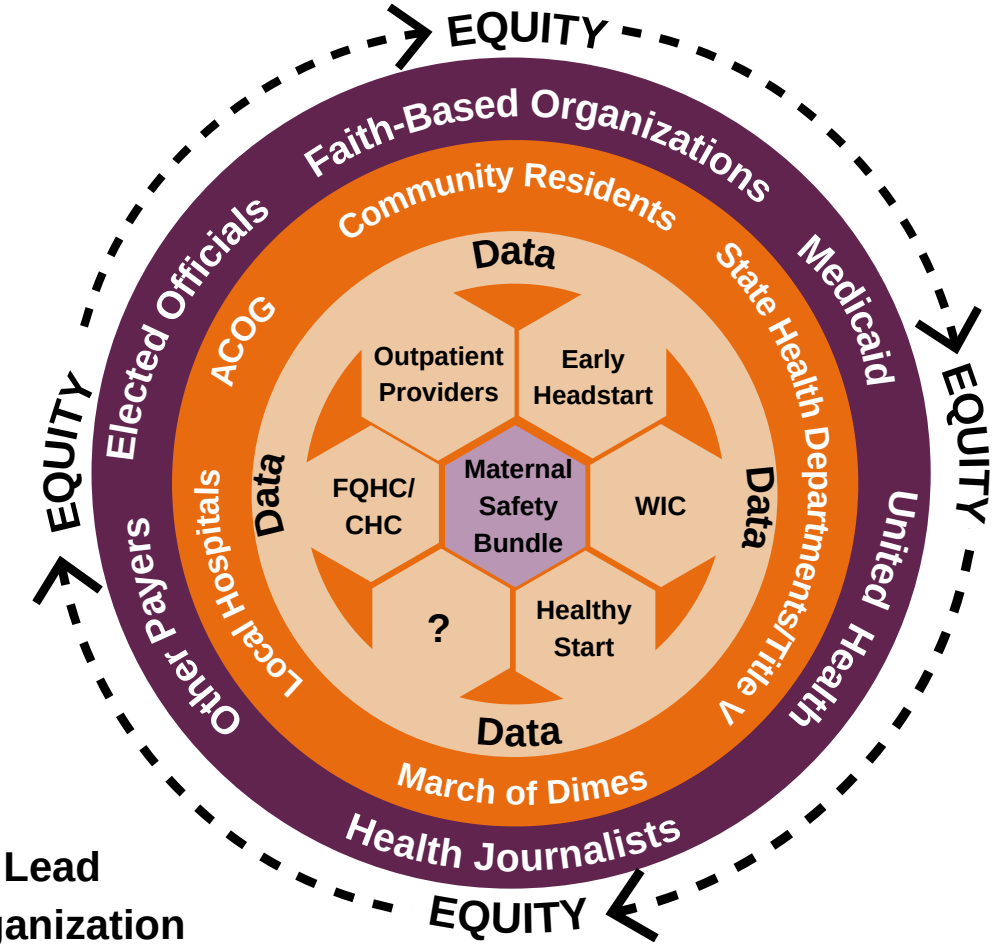
The Alliance For Innovation On Maternal Health Community Care Initiative (AIM CCI)

- Grantee: National Healthy Start Association (NHSA)
- 5-year cooperative agreement with HRSA
- Goal: To address **preventable** maternal mortality and severe maternal morbidity among pregnant and postpartum women outside of hospital and birthing facility settings

- Pilot site's role: Complete test of feasibility on community-oriented postpartum interventions; convene local maternal safety workgroup to guide program activities with an equity lens

https://www.aimcci.org/

AIM CCI Approach



Who are Local AIM CCI Stakeholders?

Local stakeholders include all community providers or representatives from provider organizations that treat, interact, advocate for, and serve pregnant and postpartum women. To implement AIM CCI at the local level, we recommend a structure that includes an overarching advisory council comprised of stakeholders from groups as noted below, a subset of which will form the implementation team or workgroup.

Implementation: The **IMPLEMENTATION GROUP** meets monthly. This group should be able to implement the bundle elements and collect and share aggregate data relative to AIM CCI performance measures. The model allows you to include local partners that may be exclusive to your community. Who might that be **?**

Advisory: The **LMSW** meets bi-annually. These are relationships that you may cultivate to garner high-level support, advise on best practices, or otherwise leverage their interest in guiding and supporting the initiative.

Awareness: The **AWARENESS GROUP** are those community stakeholders that you might consider MCH champions that should have AWARENESS of the AIM CCI activities in your community. This group may be invited to LMSW meetings or kept abreast via mailing lists and individual meetings as milestones are achieved.

*** The agencies/organizations depcited on this image are EXAMPLES of stakeholders.**

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH Community Care Initiative (AIM CCI) NATIONAL HEALTHY START ASSOCIATION **March 2022**

Use case: Document Chronic Stress (Weathering) Assessment for Black Birthing People

GOAL: Predict and intervene in preterm birth risk factors for Black birthing people (50% more likely than women of other races to experience preterm births

★ Develop and implement a risk assessment strategy inclusive of stress and its connections to birthing persons' experiences of racism and sexism

- **Jackson-Hogue-Phillips (JHP) Contextualized Stress Measure**
  a race and gender-specific stress measure for Black women—
  for use in maternal healthcare as a screening tool and predictor of preterm births.
- **The Psychometric Validation of the Patient Reported Experience Measure of Obstetric Racism©** (also called The **PREM-OB Scale™** Suite)
- **ACEs**

Use Case: Document and Track SDH Related Interventions to Completion

- **GOAL: Ensure a closed loop referral process for non-clinical health-related social needs**
  - Implement systemic processes to assist women/birthing persons in completing timely referral and follow up *for all identified, medical, behavioral health, reproductive health, and social determinants* by working collaboratively with community partners.
  - Implement communication pathways between inpatient, outpatient, and community-based providers to facilitate/ensure continuity of care.
    - Enhance how essential health-related social needs are identified in the community
    - Ensure residents are connected to vital resources that meet basic need, with confidentiality, and safety protocols
    - Foster partnerships across the service spectrum to enhance access to services (cross-sector partnerships)

Use Case: Gather and Aggregate SDoH Data for Uses Beyond the Point of Care

- GOAL: Identify & reduce birth disparities by using SDoH data to detect inequities across systems

★ • Assess current systems for unequal treatment and its impact.

★ • Stratify maternal health outcomes data by race and ethnicity AND connect with SDoH data.
  - Promotes Community awareness
  - Builds population health accountability
  - Mitigate social and environmental risks; >up to 80%

Gravity Recommendations

Recommendations: Vocabulary/Code Sets

Current ISA

- Vocabulary/Code Set/Terminology
  - Social, Psychological, and Behavioral Data
    - Limited domains
    - Incomplete value sets
    - Restrictive scope statements

Recommendation

- Vocabulary/Code Set/Terminology
  - **Social, Psychological, and Behavioral Data:**
    - **Add/Update all Gravity domains**
    - **Add/Update with Gravity domain-level assessment tools and Gravity Project value-set authority center (VSAC) value sets for diagnoses, goals, and interventions**
    - **Amend Limitations, Dependencies, and Preconditions**

Recommendation: Services/Exchange

Current ISA

- Current design limited to standards and implementation guides

Recommendation

- **Services/Exchange**
  - **SDOH Clinical Care Implementation Guide**
    - **Add SDOH Clinical Care Implementation Guide v1.0.0 STU1**
    - **Add SDOH Clinical Care Implementation Guide v1.1.0 STU2**
  - **Add Reference Implementation to improve adoption**

Interoperability Standards Advisory: Race/Ethnicity Standards

Race and Ethnicity Standards: Current State

- 2015 Edition requires, and ISA lists, both CDC and OMB value sets for race and ethnicity.
- Federal standards prioritize self-reported values:
  - “Respect for individual dignity should guide the processes and methods for collecting data on race and ethnicity; ideally, respondent self-identification should be facilitated to the greatest extent possible, recognizing that in some data collection systems observer identification is more practical.”
- Current State:
  - Major EHRs do not exchange source or method of collection of race and ethnicity data.
  - The value may not be a patient’s self-reported race and ethnicity, as is best practice.
- Gravity Project is therefore testing exchange of **source** and **method** of collecting race and ethnicity values (and other data elements) as a **draft** specification in the SDOH Clinical Care IG STU2.

Recommendations: Race/Ethnicity Standards

Current ISA

- Vocabulary/Code Sets/Terminology
  - Race and Ethnicity
    - CDC & OMB value sets

Recommendation

- Vocabulary/Code Sets/Terminology
  - Race and Ethnicity
    - **Amend Limitations, Dependencies, and Preconditions to include recommendations for:**
      - **Source and method of collecting value for race**
      - **Source and method of collecting value for ethnicity**

- Note: this recommendation could have equal merit for other self-reported personal characteristics such as gender identity, sexual orientation, and personal pronouns

Questions?

Join the Gravity Project!

Learn More

https://confluence.hl7.org/display/GRAV/Join+the+Gravity+Project

- Public Collaborative meets bi-weekly on Thursdays 4:00 to 5:30pm ET
- SDOH FHIR IG Workgroup meets weekly Wednesdays 3:00 to 4:00pm ET

- **Submit SDOH domain data elements:** https://confluence.hl7.org/display/GRAV/Data+Element+Submission

Help us with Gravity Education & Outreach

Use Social Media handles to share or tag us to relevant information

@thegravityproj

https://www.linkedin.com/company/gravity-project

Help us find new sponsors and partners

Partner with us on development of blogs, manuscripts, dissemination materials