

# A Social Determinants of Health (SDOH) Framework for Addressing U.S.-Born African American Infant Mortality in Hennepin County, Minnesota

## Introduction

### The Project

In 2015, the Center for Health Equity (CHE) at the Minnesota Department of Health (MDH) received a five-year grant from the Office of Minority Health, U.S. Department of Health and Human Services, under the State Partnership Initiative to Address Health Disparities program. The project, entitled *Addressing Infant Mortality and Developing a Health Profile on African American Mothers and their Infants Living in Hennepin County Using a Health Equity Analysis*, addressed the wide spectrum of factors that contribute to the high infant mortality rate among U.S.-born African Americans living in Hennepin County. Hennepin County has the largest concentration of African Americans in Minnesota, and African American babies in the county are three times more likely to die before their first birthday compared to white babies. The project acknowledged that differences in infant mortality rates could be explained by not only variations in maternal characteristics, behaviors, and access to health care, but also by social, economic and environmental conditions in which people live, work, and age. It utilized a community engagement model that brought together the perspectives and understandings of the community about the factors that create and sustain disparities, and activated it to create sustainable policy and systems changes.

Leading the project was Community Voices and Solutions (CVAS). CVAS members are from the African American community, represent various sectors, and have a strong passion for maternal and child health. CVAS created a Team Charter that spelled out the purpose of the team and the shared leadership and decision-making responsibilities. It also reflected members' values and vision for reducing the African American infant mortality rate.

### The Need for a Guiding Framework

The project reached a critical juncture where concrete steps to address African American infant mortality had to be developed. A few questions lingered.

- A well-defined problem comes before solutions. How do we know we are addressing the root causes of the problem and not just treating the symptoms?
- Once we find these root causes, how do we address them? What policy levers can we use? What partnerships can we form?
- The community most impacted by the health inequities must be an active participant in the process of creating solutions and taking action. How do we ensure that everything we do reflects their beliefs, understandings, and lived experiences around the issue of African American infant mortality?

With CVAS and its charter firmly in place, the next steps were to develop a shared understanding of the infant mortality issue and its root causes, and to embody these in a framework that would guide future activities. The [World Health Organization \(WHO\) conceptual framework for action on the social determinants of health \(SDOH\)](#) served as basis for creating the guiding framework of the project. The project's rationale, that the conditions for health play a significant role in infant mortality, informed the choice of the WHO model. The conditions in which African American babies are born, live, work, play, worship and age, and the forces that shape their daily lives such as policies, systems, and cultural and societal norms, have more to do with their health and survival than people's behaviors or the medical care they receive.

## World Health Organization (WHO) Model

The WHO framework (Attachment 1) shows how social, economic and political mechanisms give rise to socioeconomic positions, which in turn shape specific determinants of people's health status that are reflective of their place within social hierarchies. Differences in social status leads to differences in exposure and vulnerability to health-compromising conditions.

In effect, it is saying that people are not randomly poor; rather, it is the institutions' policy decisions that create poverty for some groups and abundance for others.

The WHO framework categorizes health determinants into structural and intermediary. Bridging both areas are social cohesion and social capital.

- **Structural determinants** comprise the *socioeconomic and political contexts* in which a person is born and lives, which then dictate *socioeconomic position*.
- One's socioeconomic position sets the stage for the **intermediary determinants**. These are the *material circumstances* in which they find themselves (psychosocial, behavioral, or biological factors) and their interactions with the *health system*.
- Bridging the structural and intermediary determinants are **social cohesion and social capital**. Society can promote equity by developing systems that would facilitate cooperative relationships between the people and institutions that serve them.
- These three components influence one's **health and well-being**.

Illnesses can circle back to the structural determinants as shown by arrows going the opposite direction. For example, a person in a low wage job can only afford to live in a subpar housing that causes him to be ill, but a prolonged illness that led to loss of employment or income can also cause him to experience a lowering of his socioeconomic status.

To summarize, the WHO framework traces health inequities to these powerful forces that make up the socioeconomic and political contexts. It challenges public health to go into unfamiliar territory and to focus its efforts on policy changes that could have an impact on these factors.

Others have used the WHO model to create a conceptual framework for their infant mortality work, for example, [Kim and Saada \(2013\)](#).

## Evolution of the SDOH Framework

### Root Cause Mapping

CVAS members participated in a Root Cause Mapping (RCM) activity as a preliminary step to building the guiding framework. Often used in quality improvement, RCM (also called Root Cause Analysis), is a systematic process for identifying the “root causes” of a problem and finding an approach for responding to them as defined by stakeholders.



The question posed to the group for the RCM activity was: **Why do African Americans in Hennepin County experience high rates of infant mortality disparities?** CVAS conducted the RCM on two separate days to allow as many members as possible to participate. In the first part of the activity, each person wrote a root cause on a sticky note, then went to the white board to post all their notes while explaining why they identified these as root causes. In the second part, CVAS members moved the sticky notes around in order to group root causes that were similar to each other. In the third and final step, they categorized the root causes based on the components of the WHO model.

Prior to the activity, the distinction between root cause and contributing factor was made clear to participants. Root causes are underlying process or system issues that led to the problem, and a problem can have several root causes. Contributing factors are not root causes, though two or more contributing factors can lead to the same root cause. The search for the root cause of a problem must continue even when contributing factors are found.

It is important to note that at the end of two days of RCM activity, CVAS members came to the conclusion that the root cause governing all root causes was *racism*. It is a separate structural determinant, but everything else boils down to racism.

The RCM exercise uncovered CVAS members’ shared beliefs around the root causes of infant mortality in the community, and paved the way for the development of the SDOH Framework.

### Resulting Framework

Attachment 2 shows the SDOH framework that resulted from the RCM activity. CVAS members discussed early drafts of the framework before approving the final version.

Similar to the WHO model, the Systems/Policies and Socioeconomic Position comprise the structural determinants; Community Conditions, Individual Circumstances, and the Health System comprise the intermediary determinants; Social Cohesion and Social Capital bridge the two main determinants; finally, all these factors influence birth outcomes. The logical sequence can also continue in the opposite direction. For example, if babies fail to thrive then this impacts their circumstances later in life, and then their socioeconomic position.

- The **Systems and Policies** include economic, social, public, and healthcare policies.
  - Economic policy issues identified by CVAS included redlining, capitalism, unequal resource distribution, and lack of funding. The county is still feeling the effects of decades of redlining practices by city planners, landlords, banks, and other institutions that discriminated against residents on racial grounds. Residents have long suffered from the effects of capitalistic practices that valued private interests over the public good and channeled resources to the those holding the power. The community is caught in a vicious cycle in which discriminatory economic policies hinder development, which then acts as disincentive to invest resources that could improve the status of many.
  - The distribution of and access to resources also figure into the social policies that impact the well-being of African Americans in the county. CVAS specifically named labor policies that held back workforce development and fair wages, hiring policies that screen out black applicants, segregationist housing policies that have reduced access to safe and affordable housing, and gentrification that has led to neighborhood flight.
  - African American health has suffered from the effects of public policies that enable mass incarceration and the school-to-prison pipeline, and poor insurance coverage for care at African American-centered birth and wellness centers, including support from African American doulas and Community Health Workers.
  - The community has to lean more on cultural and societal norms and values that have served it well in the past. With urbanization comes cultural shifts and disconnect. No longer can one easily strike up a conversation with the neighborhood doctor, mailman, fireman, or policeman around the corner. The wisdom of elders and spiritual guidance from churches go untapped. These are the cultural assets that make the community healthier. (see also Social Cohesion and Social Capital)
  - Health-related policies named by CVAS include those that reduce access to care (insurance), the limited health education received by secondary and post-secondary students or education in medical schools that fail to acknowledge the role of structural racism and historical trauma in health inequities, and the lack of African Americans in the health care workforce.
- Experiences of racism, discrimination and community disempowerment dictate the **socioeconomic position** in society.

- The intermediary determinants include living and working conditions in the community, individual circumstances, and the health system.
  - **Community conditions** that African Americans are faced with include: crime, police brutality, lack of access to exercise, lack of neighborhood amenities, food insecurity, poverty, and short-term unsustainable programs.
  - **Individual circumstances** that impact birth outcomes include behaviors such as substance use or unhealthy eating, genetics, stress that leads to poor mental and emotional health, effects of adverse childhood experiences that carry well into adulthood, and low health literacy (capacity to obtain, process, and understand health information).
  - The **health system** as a social determinant encompasses:
    - Lack of or no access to health care
    - Lack of health education or complexities in the system that make it difficult to learn (e.g., health insurance materials that are inches thick can be very daunting to go through)
    - Sordid racist history with the health care system including medical experiments
    - Lack of culturally congruent care, with African American women not always given or having the choice of an African American health care provider
- Due to the lack of trust in the health care system, the values, beliefs, and attitudes that govern interactions between the system and the community are miles apart for these two entities. Additionally, because the supposed benefits from existing policies evade African Americans, these lead to segregation, social isolation, a diminished faith community, lack of adult mentors, unhealthy relationships, and no or lack of family support. As a result, **social cohesion and social capital** are low, minimizing their potential to improve community conditions and individual circumstances.

African American women's exposure to common protective and risk factors during their pregnancy are well-documented. But even when these are accounted for, there is still a racial gap in infant mortality that could not be explained. In the early 2000s the **life course perspective** began to offer an alternative explanation to the racial and ethnic disparities in birth outcomes.<sup>1</sup> It suggests that birth outcomes are the product of not only the mother's nine months of pregnancy, but also of her entire life course before the pregnancy. Events or factors experienced throughout the lifespan can shape the health trajectory of both mother and child. Differences in those experiences, therefore, lead to disparities in birth outcomes. The life

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<sup>1</sup> Lu MC, Halfon N. Racial and ethnic disparities in birth outcomes: a life-course perspective. *Maternal and Child Health Journal*. 2003 Mar;7(1):13-30.

course model as it relates to African American birth outcomes is depicted in the SDOH framework in Attachment 2 by the images showing progression from baby to adult.

Finally, as mentioned earlier, CVAS members firmly believed that one factor underlying all other factors is **racism**, both historical and present-day racism. Racism as the root cause is depicted in Attachment 2 at the bottom with an earthen ground backdrop.

## Final Framework

The early version of the SDOH Framework was widely used in planning project activities. As use increased, CVAS members saw the need to simplify the graphic to increase its applicability with a more general audience. Attachment 3 shows the simplified SDOH Framework.

A fruit tree model was chosen because it was important to show that racism was at the very root of all the systemic factors influencing African American infant mortality.

- Racism is at the tree roots in the ground.
- Nestled in the four main branches are the four components Systems and Policies, Socioeconomic Position, Living and Working Conditions, and Health System.
- The Structural and Intermediary Determinants are not as distinctly represented. However, in a similar way that the earlier version in Attachment 2 showed arrows going to the right and then circling back, the same effect can be represented by the flow of water and nutrients throughout the tree. While the movement of water is unidirectional (roots to trunks to stems to leaves to air), nutrients move up and down so they can be where they are needed. For example, down below if the tree needs to grow new roots, or up above when a fruit is developing on one of the branches.
- Social Capital as a bridging factor straddles the main branches.
- The fruit represents infant mortality as the outcome of the biological process.
- The different stages of growth, from seed to sapling to young tree to mature tree, represent the life course perspective.

## Use of the Framework

The SDOH framework embodies CVAS's beliefs around how structural and intermediary factors give rise to African American infant mortality. It served as the foundation of work in the project, guiding the design of activities and content of documents. Activities included the design of the community co-learning curriculum, development of the African American Infant Mortality Narrative, planning of the Black Birth Summit and follow-up event Restorative Talking Circle, development of proposed strategies to address African American infant mortality, and creation of a sustainability plan. CVAS is proud to say they are all consistent with the guiding framework.

SDOH FRAMEWORK: AFRICAN AMERICAN INFANT MORTALITY PROJECT

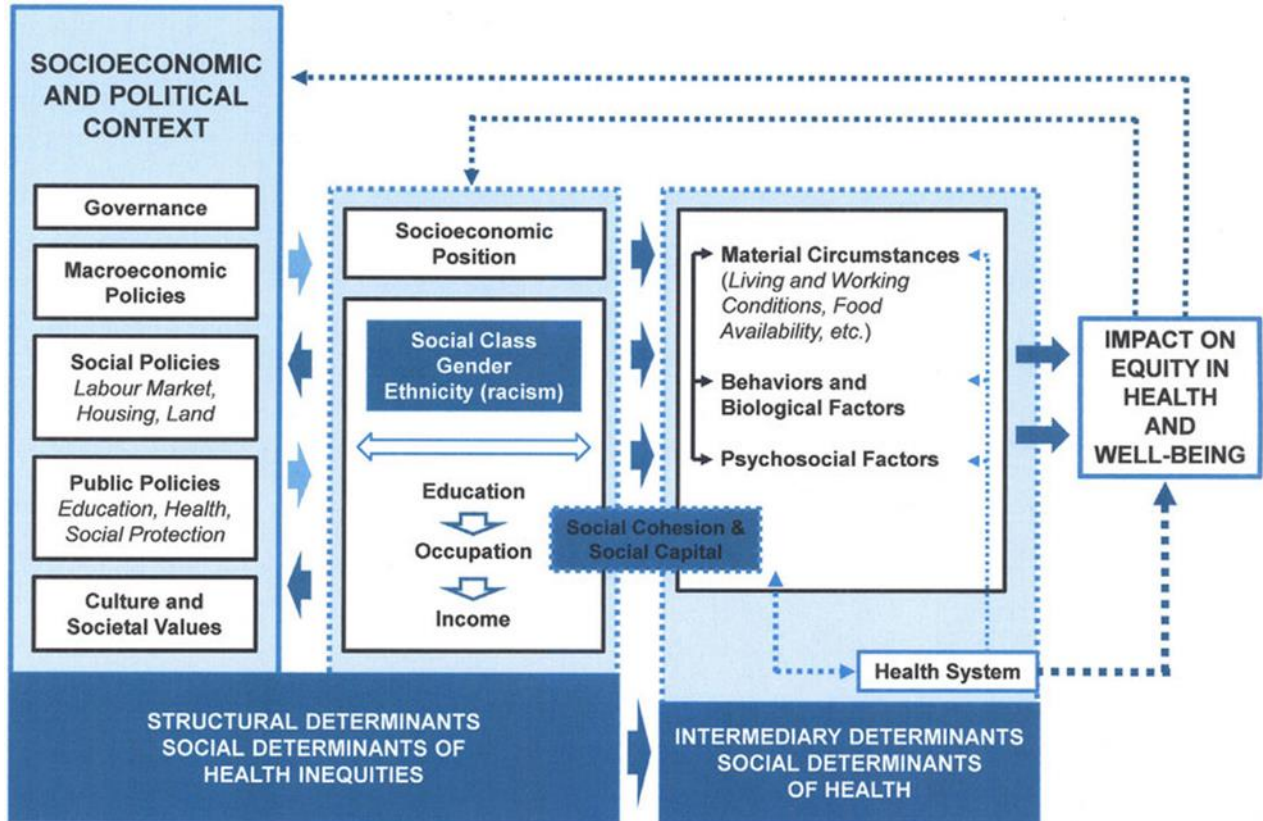
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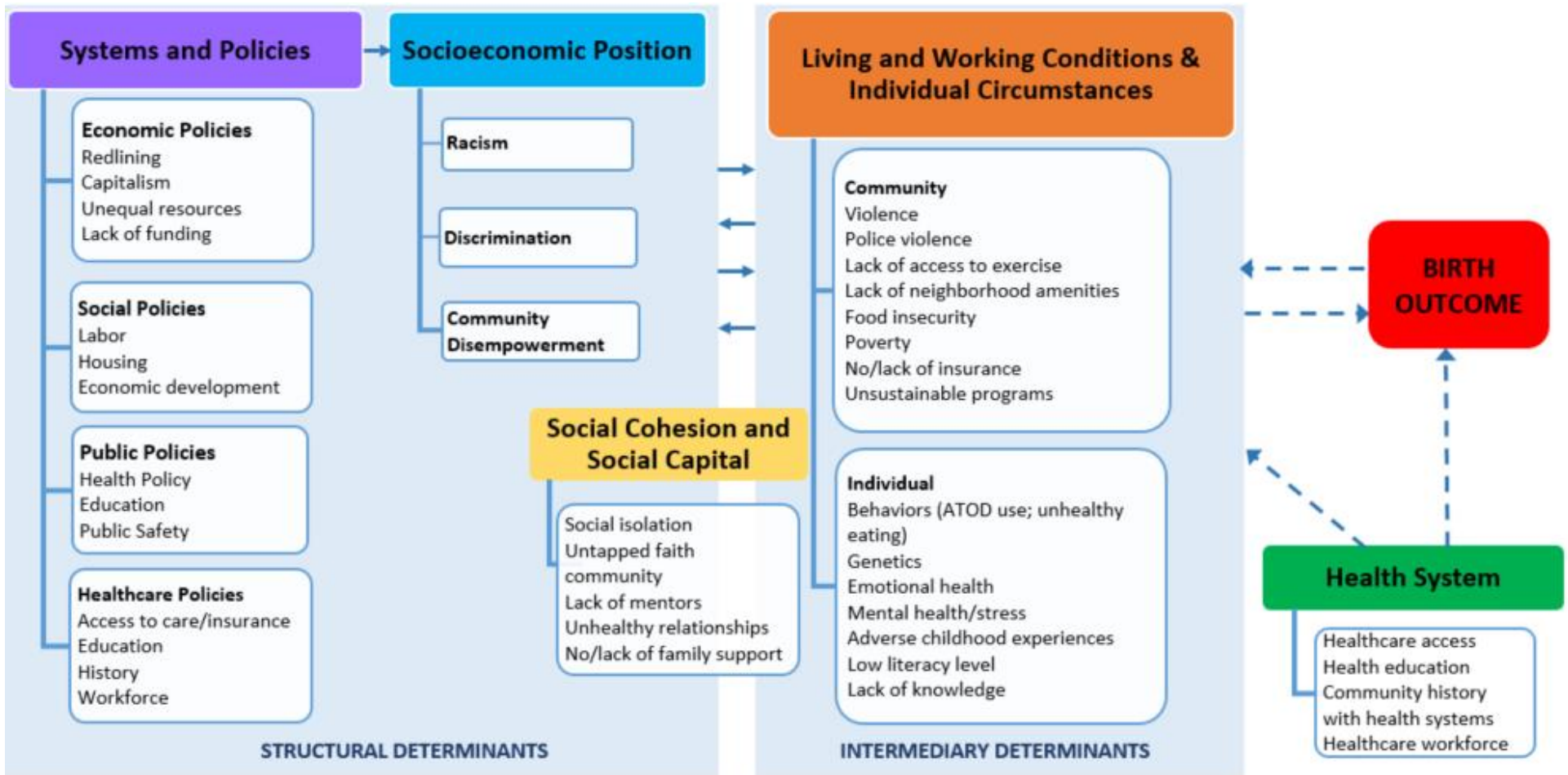
## Attachment 1: WHO Framework for Action on the SDOH



Source: Solar O, Irwin A. (2010). A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2 (Policy and Practice). Geneva; World Health Organization.



## Attachment 2: Project's SDOH Framework Based on WHO Model



# Attachment 3: U.S.-Born African American Infant Mortality Project SDOH Framework

