Title Page

**Health Equity Evaluation for the Allegheny County Infant Mortality Collaborative**

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Submitted to the Graduate Faculty of

Behavioral and Community Health Sciences

Graduate School of Public Health in partial fulfillment

of the requirements for the degree of

Master of Public Health

University of Pittsburgh

2019

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UNIVERSITY OF PITTSBURGH

Graduate School of Public Health

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April 22, 2019

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2019

Abstract

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Cristina Laipple Codario, MPH

University of Pittsburgh, 2019

**Abstract**

Infant mortality remains a serious public health issue both here in the United States and around the world. Numerous environmental, social, and health risks are closely tied with the rate of infant mortality, and the measure is used globally as an indicator of maternal and child health status, as well as population health. In the United States, as well as locally, in Allegheny County, significant racial and ethnic disparities exist in adverse birth outcomes. Determining the root cause of these disparities is essential to plan public health initiatives aimed at reducing the gap in outcomes.

The Allegheny County Infant Mortality Collaborative (IMC) is an initiative with the goal of pledging a first birthday for every baby in Allegheny County through collaboration, action, and accountability. The goal of this research was to design an equity-focused evaluation for the IMC that explores the equity practices and perceptions of its members, and conduct a baseline assessment of the equity strategies, initiatives, and programs of the IMC. This is a mixed methods evaluation design that includes key informant interviews, a document review, and surveys. The evaluation was developed using a health and racial equity framework. Results of a document review and equity analysis provide a starting place for future evaluation and strategy planning within the IMC.

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# Introduction

The Allegheny County Infant Mortality Collaborative (IMC) is an initiative led by Allegheny County Health Department/Maternal and Child Health Division with a goal of reducing infant mortality and disparities in birth outcomes in Allegheny County through collaboration, action, and accountability. Specifically, the IMC aims to “reframe the narrative around infant and maternal mortality, and how it affects communities of color,” by addressing systems and organizations through influencing policy and program development.[1](#_ENREF_1) The more than 50 organizations represented on the collaborative are from a variety of fields, including advocacy, education, family services, and healthcare.

The goal of this research was to design an equity-focused evaluation for the IMC that explores the equity practices and perceptions of its members, and conduct a baseline assessment of the equity strategies, initiatives, and programs of the IMC. The goal of this research study is to design an equity evaluation for the IMC that explores the equity practices and perceptions of IMC members, as well as provide a baseline review of the equity strategies, initiatives, and programs of the IMC. As levels of engagement and experience of the IMC members vary, IMC leadership has identified a need to better understand its members’ equity practices and perspectives for future programming and strategies. The purpose of the evaluation is to assist the IMC in making informed decisions about equity strategies and activities as the work of the collaborative continues to evolve.

# Background

Clinically, preterm births, low birth weight[[1]](#footnote-1) (LBW), and congenital malformations are common causes of infant death.[2](#_ENREF_2) For example, the rate of infant death for very low birthweight (VLBW) is more than 1,000 times the rate for infants with normal birth weight.[2](#_ENREF_2) Compared to full-term infants, infants born only a few weeks early still have a much higher risk for death and disability. The most recent National Vital Statistics birth-death linked report found that *later* preterm infants (34-36 weeks gestation) had 4 times the Infant Mortality Rate (Death per 1,000 live births) compared to full-term infants.[2](#_ENREF_2) However, looking outside the clinical cause of adverse birth outcomes, and finding the root cause for prevention and planning initiatives, is complex. The United States is behind other developed nations in Infant Mortality Rate (IMR)[3](#_ENREF_3), and racial and socioeconomic disparities in infant death and low birth weight remain significant both nationally as well as locally in Allegheny County, Pennsylvania.[4](#_ENREF_4),[5](#_ENREF_5)

Although IMR has decreased in the United States over the past decade, there has been no change in the disparities for women of color (specifically African American, Puerto Rican, and American Indian/Hawaiian/Alaska Native women).[6](#_ENREF_6) The Healthy People 2020 goal was to reduce the IMR from 6.7 to the target of 6.0. Between 2006 and 2015 alone, there was an IMR decrease from 6.7 to 5.9.[7](#_ENREF_7) In 2007, 10.4% of live births were preterm, and by 2016 the total rate decreased to 9.8% of live births, nearly reaching the Healthy People 2020 goal of 9.4%.[7](#_ENREF_7) However, disparities in race and ethnicity tell a less hopeful story about the state of maternal and child health.

Table 1 United States IMR and Preterm Birth by race/ethnicity in 2016

|  |  |  |
| --- | --- | --- |
| **Race/Ethnicity** | **IMR**[**7**](#_ENREF_7) | **Percent of Preterm Births**[**7**](#_ENREF_7) |
| American Indian or Alaska Native | 8.6 (+) | 11.1% |
| Asian or Pacific Islander | 4.0 (-) | 8.9% |
| Hispanic or Latino | 5.0 | 9.4% |
| Non-Hispanic Black | 11.2 | 13.6% |
| Non-Hispanic White | 4.9 | 9.1% |

+ represents an increase over the previous year, and – represents a decrease from the previous year

As displayed in Table 1 above, non-Hispanic Black births had both the highest IMR and highest percent of preterm births. Aside from Asian or Pacific Islanders, these measures have not improved from the 2015 rates for any group. The absolute difference between the highest (non-Hispanic Black) and lowest (Asian/Pacific Islanders) IMR group was 7.2 infant deaths per 1,000 live births.Overall, non-Hispanic Black women are more likely than any other group to have adverse birth outcomes such as LBW, VLBW, and preterm birth.[8](#_ENREF_8)

Causes of infant death also vary by race and ethnicity. When looking at infant mortality in the whole population of the US, the leading cause of infant death is congenital malformations (20%), while disorders related to LBW and preterm birth account for 18% of all infant deaths.[2](#_ENREF_2) However, when looking at non-Hispanic Black and Puerto Rican women, LBW is the leading cause of infant death, and infants of non-Hispanic Black women have the highest IMR due to LBW.[2](#_ENREF_2) Infant death from maternal complications of pregnancy (such as preeclampsia, placental abruption, and gestational diabetes) occurs mainly among preterm infants. Infant death due to maternal complications is also the highest for non-Hispanic Black women; which is three-times the rate in non-Hispanic White women.[2](#_ENREF_2) SIDS rates are also higher for non-Hispanic Black women, and much higher for AIAN (American Indian and Alaska Native) women than for non-Hispanic White women.[2](#_ENREF_2)

Locally, in Allegheny County, disparities are similar to national patterns. According to *the 2008-2012 Infant Mortality Birth Cohort Study of Allegheny County*, the overall IMR was 6.65 (per 1,000 live births), while the rate of Black infant mortality was 13.73.[9](#_ENREF_9) As of 2016, the IMR for Black infants in Allegheny County increased to 14.9, which is 4.5 times higher than the rate for White infants (IMR of 3.3 per 1,000 live births) and higher than the state IMR for Black infants.[10](#_ENREF_10) In addition, in 2016, the IMR for post neonatal deaths in the Black population increased to 4.7 per 1,000 live births, while IMR for post neonatal deaths in the White population decreased to 0.8 per 1,000 live births. The Healthy People 2020 goal for post-neonatal deaths is 2.0 (per 1,000 live births); therefore, this has been met in Allegheny County for the White population but not for the Black population.[10](#_ENREF_10)

The Birth Cohort study also identified Allegheny County areas with high IMRs and disparities. From 2008 to 2012, the municipalities in Allegheny County with the highest IMRs were Braddock, McKees Rocks, and Mount Oliver, while the city of Pittsburgh neighborhoods with the highest IMRs were Homewood South, Northview Heights, and Marshall-Shadeland.[9](#_ENREF_9) Of those municipalities with high IMR, Penn Hills, Pittsburgh, McKees Rocks, and Wilkinsburg had the most significant disparities between Black and White infant death.[9](#_ENREF_9)

Again, similar to the national trends, LBW, and especially VLBW, are large contributors to infant death in Allegheny County. Regardless of cause, Black women have the highest IMR in Allegheny County. There is also further racial disparity within this measure. In 2017, 7% of White women had infants that were LBW, while 15.4% of Black women had LBW infants. In addition, although this represents an overall increase in LBW in the county, there was not an increase for White women.[11](#_ENREF_11) Furthermore, the Allegheny County Birth Cohort Study found that the LBW and VLBT IMRs for White women in Allegheny County were 11.5 and 235.9 respectively, while IMRs were 15.1 and 251.7 for Black women.[9](#_ENREF_9)

For the same five-year period, the Allegheny Birth Cohort study compared Allegheny County to “peer counties”, which are thirty-three US counties with similar demographics to Allegheny County (for example, similar population size, poverty, median age, and population density). The Birth Cohort Study found that Allegheny County was doing worse than 30 of the 33 peer counties in Black IMR, with the counties that include Detroit (Wayne County) and Cleveland (Cuyahoga County), respectively, having the highest Black IMR.[9](#_ENREF_9)

Nationally and locally, it is clear that we must understand how race is related to adverse birth outcomes to address this disparity. However, before exploring the origins of this issue, it is essential to have a basic understanding of the history of race in America, as well as some relevant frameworks for understanding this history.

## Key Historical and Theoretical Context

Race is not a scientific or biological concept, but a societal one. There is no genetic basis for race – not one trait or gene can be attributed to one race or another.[12](#_ENREF_12) Race is also a modern concept: Ancient societies did not separate people according to their physical characteristics, but instead according to language, social status and class, and religion. Although the concept of slavery existed in ancient times, the concept of race came much later. In fact, the transatlantic slave trade was the first time that an enslaved group shared similar physical characteristics.[12](#_ENREF_12)

The concept of race evolved alongside the concept of freedom in the United States, a country founded on the principal that “All men are created equal.” Defining race helped those in power explain why some individuals were enslaved while others had rights and freedoms. This intellectual justification also helped frame social inequalities – particularly the concept of white superiority – as a natural, common sense notion. This normalization of inequalities also allowed racism to be institutionalized into US government, laws, and systems, and gave disproportionate advantage to whites. This advantage was delivered in the form of wealth, power, and resources.[12](#_ENREF_12),[13](#_ENREF_13)

Despite strides in civil rights, equality, and freedom, the disproportionate advantage that White people have received from the creation of the United States government and culture has continued to be perpetuated through its systems. Key eras where racism was re-institutionalized despite recent improvements in equality include the Reconstruction era, Jim Crow era, and the Civil Rights era. Today, institutional racism lives on through insidious practices and policies such as mass incarceration, school policy, police violence, drug policy, and loan practices. For example, the practice of Redlining, which began in 1937, involved demarcating neighborhoods determined to be unfit for investment of financial services (banks, loans, etc.) by federal housing agencies. This was often determined based on the racial makeup of the communities.[14](#_ENREF_14) This was the case in Pittsburgh: Seventy percent of the Black population lived in either the Hill District, East Liberty, or Homewood, and all three neighborhoods were Redlined.[15](#_ENREF_15) This example also parallels the adverse birth outcomes in Pittsburgh: Redlined neighborhoods, such as Homewood South[15](#_ENREF_15), recently had a 27.93 IMR for Blacks and a 0.00 IMR for Whites.[9](#_ENREF_9) Other Redlined neighborhoods such as Northview Heights[15](#_ENREF_15) also have among the highest IMR disparities in Pittsburgh.[9](#_ENREF_9)

While Redlining was outlawed in the Civil Rights era, the impacts are still felt today.[14](#_ENREF_14) In the case of Pittsburgh, these communities have continued to experience neglect and destruction from public and private sectors.[15](#_ENREF_15) Through property inheritance and generational wealth, individuals experience privilege or the lack thereof. Redlined neighborhoods still face challenges including underdevelopment, lack of investment, and disrepair. These challenges contribute to limited access to major resources such as healthcare, food, and employment opportunities.[14](#_ENREF_14)

Another historical link between racism, unequal medical care, and disparities in maternal health today includes history of medical experimentation. Many African Americans mistrust the medical systems due repeated medical experimentation on African Americans through examples such as The Tuskegee Syphilis Study in Black men and origins of Gynecology. The experiments of the “Father of Gynecology”, Dr. John Sims is a specific historical trauma that directly relates to maternal health. Although Dr. Sims did have many scientific breakthroughs, the scientific gains were made through the dehumanization of and experimentation on enslaved women. These enslaved women qualified for experimentation because they had experienced a traumatic childbirth which resulted in an inability to have more children. Surgeries to perfect the technique were performed on the women without anesthesia, and Sims’ documented cases of 30 surgeries on one woman. This was justified by asserting that Black women don’t experience pain, that the women needed the surgery to work and therefore they desired to get the surgery.[16](#_ENREF_16) Today, pain management in hospitals still has a strong racial bias: Black children with appendicitis are given less pain medicine than their white counterparts, and Black patients get less pain medication for cancer and broken bones. Some studies have found that medical practitioners assume Black patients feel less pain than White patients.[17](#_ENREF_17) Another result of experiments such as Tuskegee and Sims’ is the Black experience of historical trauma, and community mistrust of institutions and systems. One study found that forty-four percent of African-American patients reported a low trust of the health care system. In contrast, only one-third of White patients reported the same.[18](#_ENREF_18) Many studies attempt to understand this mistrust and conclude that experiments such as Tuskegee, as well as general mistrust of systems, are large contributors.[19](#_ENREF_19)

As it is embedded in our systems, racism will not simply “go away” on its own.[12](#_ENREF_12) As James Baldwin said, "not everything that is faced can be changed, but nothing can be changed if it is not faced."[20](#_ENREF_20) In order to truly address the racial inequities in maternal and child health at a systems level, frameworks, interventions, and models must not shy away from intentionally stating and addressing the impacts of racism.[8](#_ENREF_8),[21](#_ENREF_21),[22](#_ENREF_22)

Critical Race Theory (CRT) is a framework for addressing racial inequality that examines the relationship between race, racism, and power.[23](#_ENREF_23),[24](#_ENREF_24) CRT urges us to see racism as central to and engrained in the systems of American society and culture. America is a social reality that was constructed by white people, in the self-interest of the white people. CRT also challenges the concept of the “American Dream” or Meritocracy – the concept that anyone can reach wealth, power, and privilege if they work hard enough. The system and society itself inherently supports Whites over minorities, and in turn, the interests of minorities are less important than maintaining the system itself. Therefore, the system as it is cannot easily address the interests and challenges of minorities. CRT states that we must address both explicit and implicit biases and practices because all contribute to our perceptions of race, racism, and power. Social and economic injustice is a key focus in CRT, and CRT scholars often emphasize social engagement and activism around exposing systems that inherently disadvantage people of color.

Intersectionality also provides key theoretical context for understanding racial disparities in maternal and child health. Black feminist theory began important conversations around experiences of Black women due to their race and sex, and the influences of both White supremacy and patriarchy. The Combahee River Collective, a Black feminist lesbian organization, wrote in their Collective Statement: “If Black women were free, it would mean that everyone else would have to be free since our freedom would necessitate the destruction of all the systems of oppression.”[25](#_ENREF_25)

Born from Black feminist theory, Intersectionality states that existing theory, politics, social movements and advocacy often ignores the layers of discrimination (sex, gender, culture, race, sexuality, class) that many individuals and groups can experience simultaneously. Kimberle Crenshaw stresses the importance of the multidimensionality of experiences in her key essay on Intersectionality: Black women often “experience double discrimination—the combined effects of practices which discriminate on the basis of race, and on the basis of sex. And sometimes, they experience discrimination as Black women—not the sum of race and sex discrimination, but as Black women.”[26](#_ENREF_26) The main issue with this is that oppressed people do not suffer oppression equally, as other factors may include: race, class, job availability, age, access to resources, and sexual orientation. One key point that Crenshaw makes is that we – individually and in systems – often focus on otherwise privileged individuals. When we think of “Blacks” and “women” we tend to picture a Black man and a White woman. Crenshaw states that failure to see a “Black women” contributes to the “erasure” of Black women in our systems.[26](#_ENREF_26)

For example, perspectives and experiences of Black women are often excluded from feminist movements, which are typically dominated by the experiences of White women. Black women may identify as feminists but also have “interlocking”[25](#_ENREF_25) layers of experiences essential to fully explain their perspective in society. In this sense, the intersectional perspective encourages us to question if we are really addressing all inequities, and to what degree.[6](#_ENREF_6) From this perspective, Intersectionality looks at how various systems intersect with an individual’s identity, difference, and disadvantage.[27](#_ENREF_27) Causes for disparities in birth outcomes are also rooted at the intersection of factors, including race, gender, and geography.

## Understanding Disparities in Birth Outcomes

Researchers have tested many hypotheses to explain the racial disparities in birth outcomes.[8](#_ENREF_8),[28](#_ENREF_28) One hypothesis is that maternal health behavior during pregnancy explains the disparities. Overall, women who smoke have about 1.5 times the risk of preterm birth compared with nonsmokers.[29](#_ENREF_29) However, some studies have found that more White women smoke during pregnancy.[28](#_ENREF_28) Furthermore, African American women who don’t smoke during pregnancy still have a higher IMR than White women who do smoke during pregnancy.[28](#_ENREF_28),[30](#_ENREF_30) Human risk behavior is complex and is motivated by many other interlocking factors. Something as complex as birth disparity is not easily or fully understood with a simple answer such as a singular maternal behavior.[29](#_ENREF_29) Many studies conclude that the maternal behavioral risk factors are not the primary explanation for racial disparities in adverse birth outcomes.[28](#_ENREF_28),[31](#_ENREF_31)

Another potential reason explored for birth outcome disparities is socioeconomic status. A large metanalysis found that mothers in the most economically disadvantaged neighborhoods did have a higher risk for preterm birth. However, the association with neighborhood-level disadvantage and preterm birth was strong for non-Hispanic White women, and much weaker for non-Hispanic Black women.[29](#_ENREF_29),[32](#_ENREF_32) Therefore, most studies on disparity in birth outcome and socioeconomic status have still concluded that though it may account for some risk, it does not account for all.[28](#_ENREF_28),[29](#_ENREF_29)

Studies exploring differences in maternal education level discovered that education is not necessarily a protective factor for some women. Although Black women are more highly educated than Latino women, the IMR is still higher for Black women compared to Latino women.[28](#_ENREF_28) In addition, Black women with greater than 16 years of education still have a higher IMR than White women with less than 12 years of education.[28](#_ENREF_28)

Others have posited that the main issue influencing birth disparities is access to and utilization of prenatal care. Although women of color are less likely to have access to and receive prenatal care, the IMR is still much higher for Black women than Hispanic women, and these populations have similar rates of access and utilization of prenatal care.[28](#_ENREF_28),[30](#_ENREF_30),[33](#_ENREF_33) In addition, Black women who do have first trimester access to prenatal care have a higher IMR than White women who have first trimester prenatal care. Black women with first trimester prenatal care also have a higher IMR compared to White women with later term or no prenatal care.[28](#_ENREF_28),[30](#_ENREF_30),[33](#_ENREF_33)

Other researchers have looked beyond behavior change and healthcare access to potential genetic differences. However, US-born Black IMR is 11.65, while foreign-born Black IMR is 7.04. In fact, birth weight distribution for African-born Blacks is more similar to US-born Whites than US-born Blacks.[28](#_ENREF_28),[30](#_ENREF_30),[33](#_ENREF_33)

Researchers have also explored multiple risk factors side-by-side. For example, in a study of 1,000 pregnant women, researchers controlled for 46 potential risk factors. They found that the 46 risk factors explained less than 10% of the difference in birthweight. Furthermore, even when controlling for these factors, the mean birthweight difference between Black and White remained the same.[34](#_ENREF_34)

Some researchers have tried to take a more wholistic approach to understanding disparities in health by exploring how experiences impact lifelong health. The Adverse Childhood Experiences (ACE) Study included 17,337 participants and asked questions about abuse (physical, emotional, social), household instability and violence, as well as neglect, from the time of birth through age 18. The study found that the more toxic stress in childhood (known as a higher “ACE score”), the higher the risk for poor outcomes such as heart disease, depression, poor work performance, addiction, and experience of sexual violence as an adult.[35](#_ENREF_35) A parallel neurobiological evidence and epidemiological case study of ACE provided further evidence of the original conclusions.[36](#_ENREF_36) This study revealed evidence that an ACE score of four or more is strongly associated with increased risks of certain negative health and wellness outcomes. For example, risk of alcoholism increased 7.2-fold, risk of using injected drugs increased 11.1-fold, risk of early intercourse increased 6.6-fold, and risk of perpetrating intimate partner violence increased 5.5-fold. In addition, comorbid outcomes continue to worsen as ACE scores rise.[36](#_ENREF_36) Neurobiological evidence exploring the impact of childhood stress on the brain and other systems has illustrated parallel outcomes. This convergence helped identify a common origin of some poor health outcomes – adverse experience in childhood.[36](#_ENREF_36)

Although key to the evidence regarding chronic stress and lifelong health, the original ACEs study population underrepresented racial and ethnic minorities. Underrepresentation occurred both in sample size, as well as in design of the ACEs questionnaire itself by focusing mainly on household – and not community or neighborhood – stress.[37](#_ENREF_37) Nevertheless, other studies since have reached even stronger conclusions about how adverse early experiences and toxic stress can impact lifelong health, when using a more nationally representative sample and accounting for community (schools, parks, and neighborhoods) related stress. One such study, including children ages 6 to 17 years of age (N = 65,680), discovered that experiencing community-level adverse events contribute more to overwhelming the allostatic (stress) systems through accumulating exposure over time. Specifically, experiencing racism had the strongest association [Odds Ratio = 0.80] with lower emotional regulation. In addition, the study found that non-White children were more like to experience community-level adverse events.[37](#_ENREF_37) These types of studies have begun to explore the impact of chronic stress on health.

So far, none of the risk factors discussed above clearly explain the disparities in birth outcomes. One way to explore disparities in birth outcomes is through the life course perspective, which also considers the impacts of life experiences. This involves looking at both risk factors and protective factors, and viewing each stage of life as a continuum, where one experience may influence another, and so on.[28](#_ENREF_28) In the case of maternal health, the perinatal period – the 9 months of pregnancy – is often the focus. A life course model would seek to understand the experiences and exposures that occurred before pregnancy in an effort to explain how these experiences might influence maternal health.[28](#_ENREF_28) There are many different ways to apply a life course framework. One life course approach looks at the developmental origins of health and disease, and the ‘early programming’ that can occur in a mother’s womb. More specifically, one longitudinal model, the early programming model, suggests that early life exposures influence reproductive potential.[28](#_ENREF_28)

Another life course perspective, the cumulative pathways model, focuses on the “allostatic load,” which suggests that reproductive health declines as a result of “wear and tear” on the allostatic (stress) systems over time. This differentiates between the experience of acute stress, which is adaptive and can be healthy, and chronic stress, which is nonadaptive and is unhealthy.[8](#_ENREF_8) Together, the longitudinal and cumulative pathways models make up a broader life course perspective. This life course perspective can be applied to other issues related to birth outcome disparities, such as exploring why individuals with low birth weight have an increased risk for heart disease, hypertension, kidney disease and type 2 diabetes.[38](#_ENREF_38),[39](#_ENREF_39)

Some studies have found that being both Black and female is associated with having a higher allostatic load.[40](#_ENREF_40) The risk of having a worse allostatic score is greater by age 30 for Black women compared to both Black men and White women.[25](#_ENREF_25),[26](#_ENREF_26) This risk accumulates and increases for Black women through middle-age and also with poverty.[41](#_ENREF_41),[42](#_ENREF_42) One study (N=215) found that Black women ages 49-55 were 7.5 years “older” than white women. Aging was measured through telomere length – a biomeasure of aging thought to be shortened by chronic stress. Perceived stress and poverty were key indicators of the difference between Black women and White women.[41](#_ENREF_41)

One life course explanation for adverse birth outcomes is that maternal stress plays a major role. For example, neuro-endocrine studies on rats have found that if a mother experiences stress during pregnancy, the stress hormone crosses the placenta into the womb, where the developing brain is then impacted. This type of developmental impact can create an overactive fight or flight response, which can lead to cognitive, behavioral, and physical changes that lead to disease later in life, such as obesity and diabetes.[38](#_ENREF_38),[43](#_ENREF_43) Being chronically stressed can also make an individual more susceptible to infection and more forgetful.[28](#_ENREF_28)

The life course study previously discussed found that maternal experience of chronic stress impacts the child’s brain even before birth. Taking this one step further to understand the racial disparities in adverse birth outcomes, other researchers have investigated a specific kind of maternal chronic stress, which is repeated experiences of racism. Specifically, many studies have concluded that this chronic stress puts the mother at increased risk for VLBW births.[8](#_ENREF_8),[28](#_ENREF_28),[44](#_ENREF_44)  These studies have explored the relationship between experiences of racial discrimination – a psychological stressor – and adverse birth outcomes through a variety of measures. For example, some studies have examined preterm birth as the outcome measure and others examined gestational age at birth.[8](#_ENREF_8) Furthermore, some studies explore experiences of racism during pregnancy, while others have measured the experiences throughout the lifetime.

Some studies have found a significant positive relationship between racial discrimination and preterm birth. For example, in a longitudinal cohort study of 352 women, including 152 Black women, Mustillo et al. found that Black women who reported experiencing race-based discrimination in 3 or more scenarios had a 3-fold increased risk of preterm birth. In a secondary analysis of the Black Women’s Health Study, which included 64,500 Black women, Rosenberg et al. found a 1.3-fold increased risk for preterm birth for Black women who reported discrimination in the workplace. Also, in a prospective cohort study of 1,898 women, including 724 Black women, Dole et al. found a 1.8-fold increased risk for preterm birth for Black women who reported racial discrimination.[8](#_ENREF_8)

In addition, Collins et al. conducted a case-control study of 312 women. They concluded that the very low birthweight was most associated with these statements: *“*Because you are African American, you feel as if you have to work twice as hard” and “Whites often assume that you work in a lower status job than you do and treat you as such.” [44](#_ENREF_44) Collins et al. concluded that African American women have an independent risk factor for preterm delivery: The accumulated experiences of racial discrimination throughout their lives.[44](#_ENREF_44)

Looking beyond factors that contribute to health within an individual’s lifetime, some research has explored how experiences of our ancestors can contribute to our health today. Specifically, the term intergenerational trauma describes present-day impact of our ancestors’ ability status, wellness, social circumstances, socioeconomic status, neighborhood environments. These experiences and circumstances are all important factors that help influence the health of the next generation. For example, social advantage (or disadvantage) of one generation can shape the lives and health of many in the family across many generations of a family. In addition, members of a family are often the same race and social class, and some races and classes are more likely to develop a negative outcome if they are exposed to a specific hazard. These groups are also more likely to suffer negative social consequences from developing the disease. Through this cycle, over lifetimes and generations, the gap of inequality grows and poor health consequences are perpetuated.[45](#_ENREF_45) The prenatal period is a key time for health in generations of families. Stress can be passed from mother to child in the womb, which can then be carried on to the next generation by the offspring through the same pathway.[46](#_ENREF_46)

Although additional research can be done to better understand the link between maternal stress and birth outcomes, findings are still significant enough to produce research-informed – and equity-focused – initiatives and interventions. A visual model for understanding these concepts, and areas for intervention, can be found in Appendix G.

## Theoretical Framework for IMC Evaluation

Broadly, this evaluation was developed using a life course and health equity framework. More specifically, evaluation was designed using Dimensionality. Dimensionality is an equity theory and life course construct developed by Hogan et al., specifically to address complex, multi-dimensional, and non-linear nature of existing systems and inequities.[47](#_ENREF_47) Dimensionality incorporates elements of time — past, present and future — which allows it to consider social and political histories when addressing inequity.[47](#_ENREF_47)

Dimensionality is rooted in Intersectionality and Critical Race Theory (CRT).[47](#_ENREF_47) Hogan et al. provide a useful metaphor for understanding the concept of Dimensionality, which is to think about the Algebraic components of a line – intercept, slope, and trajectory – as a way to consider an individual woman’s path in maternal and child health. Black women consistently have “higher intercepts,” that is, they start out at “worse, more-disadvantaged positions related to risk and outcome,” for example, reproductive history and socioeconomic status. On the other hand, the slope (trajectory) can be applied to the effectiveness of interventions to which an individual woman is exposed. If the intervention does not address the disparities, life course experience, and historical factors, then the starting place (intercept) will continue to have a major impact on the overall trajectory of a woman’s health and wellbeing.[47](#_ENREF_47)

In order to help practitioners operationalize Dimensionality into programs, policies, initiatives, and interventions, Hogan et al. also developed the R4P Framework[6](#_ENREF_6). R4P includes the following components: a) Repair b) Restructure c) Remediate d) Remove and e) Provide. R4P can be used to assess and plan for equity by developing an equity action plan for an organization alongside its leaders and stakeholders.

Specifically, the Repair aspect of the domain discusses “identifying and addressing exposures that occurred in the past, but which continue to have impact in the present.”[6](#_ENREF_6) Repair helps the practitioner think about the implications of past exposures and historical mistreatment, and how these elements of the past can still impact health and wellbeing today. Although in “the past,” historical inequities impact, and are often embedded in, our societal structures. Specifically, Repair could involve an organization working with the community to better understand their mistrust of the medical system. This approach of active recognition and understanding, if done effectively, could increase the individual’s actions to maintain health, or practice healthy behaviors. [6](#_ENREF_6),[48](#_ENREF_48)

Remediate involves addressing exposures that are occurring in this moment and is essentially what public health professionals call “risk reduction”.[6](#_ENREF_6) This typically focuses on the individual, but should be done alongside Restructuring. For example, hospitals with strict late policies or “no show” fees produce barriers to care for individuals with limited resources such as transportation, no work sick leave, and lack of childcare. This type of policy will disproportionately impact the poor, people of color, and those living in low-resource neighborhoods. In this case, we may Remediate by giving the patient case management support to find temporary solutions to potential barriers while we work on changing the policy.

Restructure describes “identifying and addressing exposures that will continue to affect populations” through process, structure, or policy.”[6](#_ENREF_6) It involves a critical exploration of how rules, regulations, procedures, and so on, act to “perpetuate exclusion.”[6](#_ENREF_6) This typically includes assessing, identifying and addressing exposures that continue because of system, structure, and policy.[6](#_ENREF_6) Getting rid of no-show or late fees, or relaxing these types of policies can help individuals access their needed medical care.

Remove asks interventionists and practitioners to undo racism and other “-isms” as they exist in structures and actions. This would typically include first identifying, and then finding a way, to remove specific attitudes, beliefs, practices or experiences that contribute to disadvantage and disparities.[6](#_ENREF_6) Specifically, “Remove” can apply to classism, racism, or sexism, and involves exploring where the “-ism” is operating in the system, program, initiative, organization, etc., and to determine how that can be changed. Although “Remove” may overlap with other domains, the intentional identification of the “-ism” at work is essential to the R4P framework; therefore, it is its own domain so that it cannot be skipped over or missed if implementing this approach. R4P provides a path for addressing inequities through action and evaluation of methods of future, past, and present actions. Through looking at all elements of the framework, systemic and complex issues, such as institutional racism, can be more readily addressed.[6](#_ENREF_6) An example of Remove would be conducting regular Anti-Racism and Implicit Bias training for all healthcare providers.

Provide includes implementation from an equitable framework. Specifically, Provide involves creating actions, policies, programs, and initiatives that take a dimensional approach to addressing disadvantage and considers the environmental components of life, work, and play within communities served.[6](#_ENREF_6) An example of Provide might include an organizations providing courses around child birthing and peer support groups for new mothers.

Another measure linked with R4P, the Hogan/Rowley Institutional Measure of Equity (HRIME) is a customizable, bi-directional (-6 to 6) Likert scale which indicates the extent to which an institution is in the process of racial equity changes. This is useful in determining the starting point of an organization or program, as well as improvement or regression over time. A higher score in the HRIME indicates higher levels of capacity to promote equity.[*6*](#_ENREF_6)For example, the lowest score, -6 indicates that “Organizational efforts influence other entities in community to embrace regressive actions, creating momentum away from equity”.[6](#_ENREF_6) Hogan et. al describe an evaluation project where students rated an existing program using R4P and HRIME. In one initiative, an anti-racism training was eliminated after one year. This was given a “-1” score on the HRIME Scale and was considered in the R4P domain “Remove”.[6](#_ENREF_6) This score was given because the removal of this training represents “inaction in the face of need” in repairing past harm, and the organization regressed to its prior practice of not providing training.[49](#_ENREF_49) As done in this example, HRIME and R4P can be used side-by-side to help practitioners think about the multiple dimensions of evaluating equity.[47](#_ENREF_47)

The R4P framework aids in identifying appropriate change to the systems and institutions where racism (or classism, sexism) has taken root. It allows the evaluator or practitioner to see racism or oppression not just one person’s individual prejudice toward another, but an issue of power and systems. The context can help us address racism at its core.

## History of the IMC

The IMC is an initiative administered by the Allegheny County Health Department/Maternal and Child Health Division (ACHD/MCH). The IMC was formed in the fall of 2012 when Allegheny County Health Department received a grant for strategic planning sessions about reducing infant mortality and racial disparities in birth outcomes. Today, the mission and charge of the IMC is “To pledge a first birthday for every baby in Allegheny County through collaboration, action, and accountability.”[1](#_ENREF_1)

The IMC is a multi-sector, collective impact collaboration with an active problem-solving mindset. In order to address these complex issues, adaptation of the public health systems themselves to incorporate a complex systems approach – in public health research, policy, evaluation, and practice – is essential.[50](#_ENREF_50) Infant mortality, as well as overall maternal and child health, are a primary lens for the IMC; however, social justice and advocacy is also an important component due to the disparities in maternal and child health. These perspectives of maternal and child health, as well as social justice, are reflected in the IMC membership. All 50 member organizations, are dedicated to exploring ways to improve health outcomes for all Allegheny County residents, especially vulnerable populations and communities.[1](#_ENREF_1) This includes many nonprofit and community-facing organizations in areas of advocacy, education, family services, and healthcare For example, organizations that serve on the IMC Executive Committee include the Allegheny Intermediate Unit, New Voices Pittsburgh, Cribs for Kids, Inc., UPMC Family Health Centers, Allegheny County Medical Society, Housing Authority of the City of Pittsburgh, Magee-Women’s Hospital of UPMC, University of Pittsburgh, YogaRoots On Location, LLC, and Healthy Start, Inc.

# Methodology

The main purpose of this project is to design an equity evaluation for the IMC. This evaluation will explore the activities of the IMC, along with equity practices and perceptions of its members, to inform future decision-making and planning. This evaluation will allow the IMC to reflect on the work over the past 5 years, as well as to determine ways to move forward. The evaluation seeks to better understand where the IMC is with its efforts to create shared understanding about health and racial equity.

The aims of this evaluation are: (1) Review the current practices, initiatives, and programs developed by the IMC (2) Understand how these practices, initiatives, and programs address health and racial equity (3) Develop recommendations for next steps.

This is a mixed methods evaluation that include key informant interviews, document review, and surveys. However, the only tool implemented thus far is the document review. Therefore, only the results of the document review will be shared in this paper. There has not been a previous evaluation of the IMC, so this will allow for a baseline understanding of the process and impact. Therefore, the data analysis will include primarily descriptive statistics, summary reports, and comparison of response types. This data will allow for clear recommendations for the future work of the IMC upon completion of the evaluation.

Recruitment for committee member participation in the surveys and interviews will begin in late Spring 2019. Interviews are estimated to take place over 4 months and surveys will take place over another 5 months for an end date of approximately December 2019. The Executive Committee members will be engaged at monthly meetings where we provide updates on the project. Other regular communication will occur over email. In addition, the larger IMC committee will learn about the evaluation process and results through the quarterly meetings as well as via email. A logic model for this evaluation can be found in Appendix H.

## Document Review Methodology

Another measurement tool is the IMC strategy analysis through a document review, which involves reviewing existing documents in order to collect data. Documents may include meeting minutes, logs, grant proposals and reports. Generally, document reviews allow an evaluator to gather background information on the program such as history, goals, as well as operation and philosophy of program. It can also be useful for assessing if program goals and plans are reflected in implementation. In addition, document review can help inform the development of other evaluation tools. All of these approaches were used in the document review for the IMC.[51](#_ENREF_51)

Specifically, the purpose of the document review is to explore the equity strategies of the IMC over the past two years (2017-2018). The document review involves naming key strategies and collecting basic information around how the strategy was implemented, as well as comparing these strategies to IMC goals and objectives. This includes strategies/initiatives, events, professional development, and programs over the past 2 years. The approach for document review utilizes the R4P and HRIME, as well as the CDC evaluation brief on document review.[51](#_ENREF_51)

This process began by gathering documents from the MCH/IMC Public Health Administrator. Data sources included: meeting agendas, PowerPoints from meetings, grant reports, logic models for grant applications, and attendance records. A list of major IMC strategies was also provided by the MCH/IMC Public Health Administrator and documents were also reviewed to determine any missing parts.

A data collection form was created to ensure a systematic approach was taken in the review. Fields in the form included dates, stakeholders involved, description of IMC Strategy, document sources, outcomes, as well as complex concepts, such as R4P domains. Categories included on the form were developed after initial brainstorming as well as a process of reduction of key ideas and themes around the research questions. In addition, throughout the document review process, the following questions were asked: (1) Since 2017, what types of strategies has the IMC employed? (2) Since 2017, what types of equity strategies has the IMC employed? (3) How do the 2017 to present strategies of the IMC relate to equity objectives per their grant and executive charter? (4) Who was involved (levels of engagement) in the strategy? (5) Which R4P equity domain is the closest fit for the strategy?

As previously discussed, the HRIME scale is a bidirectional Likert scale which indicates the extent to which an institution is in the process of racial equity changes. It can be used along with R4P or on its own.[6](#_ENREF_6) In this evaluation, the HRIME scale was primarily used to assess the IMC strategies overall, alongside the document review and strategy analysis. For future use, it may be utilized in a brief survey asking respondents to choose an overall HRIME rating for the IMC, as well as their own organizations. The complete HRIME scale and survey can be found in Appendix B.

In this evaluation, “IMC Strategy” is being used as umbrella term for IMC community events, initiatives/strategies, programs, and professional development/training. In the document review, these terms are specifically defined, and items/types are labeled using the following definitions:

Table 2 IMC Strategy Type Definitions

|  |  |
| --- | --- |
| Community Engaged Event | At no cost to participants/Open to Public and intended to engage the local community members |
| Initiative/Strategy | Internal IMC or Executive Committee work to produce a deliverable or strategy to improve committee function |
| Program | Application/requirements to participate – focus on external audience/community |
| Professional Development/Training | Cost associated with participating and primarily intended to engage maternal and child health providers and stakeholders |

In order to assess the equity component, the document review form also included space to connect strategies to related equity measures from R4P domains. The R4P Framework was a key part of understanding equity practices for the document review. Specifically, recommendations and lines of inquiry for assessment outlined by Hogan et al.[6](#_ENREF_6) were employed. Adapted lines of inquiry and domains[6](#_ENREF_6) were:

Table 3 Lines of Inquiry: R4P

|  |  |
| --- | --- |
| Repair | – Does the strategy explore the community perspective to understand existing beliefs, attitudes, or practices about relevant institutions? - Does the strategy address historical damage or existing beliefs to provide improved community engagement? |
| Restructure | – Does the strategy address policy, procedures, rules, regulations, traditions, physical environment, resources, etc. that exclude, hold back or privilege some over others? |
| Remove | – Does the strategy focus on internal organizational change and/or personal assessment of where individuals confer implicit privilege or bias based on ethnicity/race, SES or gender? |
| Remediate | – Does the strategy buffer/protect disparity populations from inequitable conditions? |
| Provide | – Does the strategy directly consider ethnicity/racism, classism, and/or gender discrimination in the programming/services? |

In addition, the questions from the Brooks Equity/Inequity Typology (BET)[52](#_ENREF_52) developed for Michigan’s PRIME (Practices to Reduce Infant Mortality Through Equity) program were also utilized to help bring clarity to decision making. In that equity and inequity are two sides of the same coin, both the BET and R4P explore the “good” and the “bad”. The full list of questions is provided in Appendix H.

## Methods Explored for Future Use

Tools explored for future use include the Key Informant Interview Guide, the Race and Health Equity Self-Assessment Survey, and a Demographic Survey. The Race and Health Equity Self-Assessment Survey would engage the full IMC which includes approximately 75 members. The full IMC membership meets quarterly. Specifically, the following would be assessed by committee members: their understanding about racial/health equity, their knowledge of policies and practices to advance racial/health equity, and their awareness of both their organization’s and the IMC’s plans to advance racial/health equity. The response options on most questions are ordinal and on a Likert scale. Overall, the measurement objectives captured through the self-reported responses include:

1. Individual’s perspective on the importance of racial and health equity
2. Individual’s view of IMC effectiveness in addressing racial and health equity
3. Level of individual experience in equity work
4. Individual’s opinions on their organization’s equity practices in the areas of (a) leadership, infrastructure and tools; (b) equity within the organization’s workforce; (c) contracting and procurement equity; (d) advancing racial equity in/with the community

The questions used in this survey were developed by reviewing other equity self-assessment surveys and were then adapted for the IMC. For example, one question from GARE on the IMC survey asks individuals to consider this statement: “In general, I think it is valuable to examine and discuss the impacts of race,”[53](#_ENREF_53) and then rate themselves on the Likert scale from “strongly agree” to “strongly disagree.” This question can help the IMC better understand to what extent the current members value discussions about racism. As a result, the recommendations might include a need for more or less training regarding undoing racism.

The Race and Health Equity Self-Assessment Survey also utilized questions from the Brooks Equity/Inequity Typology (BET).[52](#_ENREF_52) For example, one BET question adapted for this survey asks “What statement BEST describes your organization’s commitment to promoting equity as a core value?” Possible responses include: (1) “There is no expression of equity as a core (organizational or initiative) value.” (2) “Equity and justice are not regularly raised as concerns.” (3) “Equity is not explicitly stated in mission/vision/values, although is occasionally raised as concerns.” (4) “Equity is explicitly expressed as a value, and some parts of the organization or partners act on a commitment to equity by addressing the root causes of health inequity.” (5) “Equity is explicitly expressed as a value, and the entire organization and all partners strive to meet goals related to eliminating the root causes of health equity.” (6) “Don’t know.” The complete equity self-assessment survey can be found in Appendix A.

In addition, the IMC committee members would be asked to complete a demographic survey. This survey focuses on workplace-related demographic questions as well as characteristics such as education, age, gender, and ethnicity. It takes approximately 5 minutes to complete. The demographic survey was adapted from the GARE Employee tool previously mentioned, with a few additional questions focusing on organizational roles. The complete demographic survey can be found in Appendix D.

The Key Informant Interview Guide was developed through a collaborative process during the evaluation design. This team primarily included the Executive Committee’s Lead Researcher, the ACHD/IMC Public Health Administrator, and myself. The purpose of the Key Informant Interview Guide is to help gather qualitative data on equity practices. The goal of the interview process is to interview members who are currently engaged in the work of the IMC through the executive committee. The 12 executive committee members attend monthly meetings, and often participate in subcommittees and collaborate on various projects. The interviews are designed to take approximately 60 minutes, although the interviews with the MCH/ACHD leadership (backbone organization) will likely take longer.

Questions asked in the interview explore perceptions of active IMC members, as well as capture details that may not be clear in the document review. Concepts to be explored in this interview are:

1. IMC member’s experiences implementing equity
2. IMC member’s perceptions of the IMC equity work
3. IMC member’s experiences with specific IMC strategies

For example, one question asks “Does the IMC have a working definition of health equity?” with two possible follow-ups “If so, what was it?” or “If not, in what ways has the IMC indirectly defined or articulated health equity?” IMC discussions around implementation of equity initiatives often include the importance of specific, meaningful, and audience-appropriate language. Therefore, this question is designed to help the IMC determine where it is with efforts to create a shared understanding about health and racial equity.

Other interview questions seek to understand how IMC members are implementing health and racial equity practices throughout Allegheny County. One question asks: “What are some past or present successes you have had in addressing racial inequities and advancing racial equity?” with a follow up question of “What were some of the past or present challenges?” This allows IMC members to share specific stories about how they have successfully or unsuccessfully implemented equity practices.

Another objective of the interview is to help fill in gaps identified in the document review. One question is designed to help them reflect on equity practices through specific initiatives and projects they have participated in. This question includes showing the IMC member a list of strategies and asking them to discuss the strategies they were actively involved in. Once a strategy is identified for discussion, the follow-up questions ask: “What was your role?”, “Was equity integrated? How?” and “What are the next steps?” These questions can be asked multiple times as needed. Interviews will be audio recorded and transcribed verbatim. The complete Key Informant Interview Guide can be found in Appendix C.

# Findings and Results – Document Review and Equity Strategy Analysis

The first phase of this evaluation, the document review and equity strategy analysis, has been completed. A key document for review was the IMC Executive Charter 2018-2020, which was written around the time the Executive Committee began. Current objectives for the IMC, as per their Executive Charter[1](#_ENREF_1) for 2018-2020, are (1) Implement a sustainable collaborative to improve infant mortality rates across Allegheny County (2) Develop Allegheny County Infant Mortality Report Card (3) Align successful activities around infant mortality in Allegheny County strategically (4) To recognize, facilitate, and promote improvements with communities and public (5) To offer information, training and education on health and race disparities to both Collaborative Members and Community Members.

Also key to the executive charter are the IMC “measures of success” which include (1) Reduce infant mortality in Allegheny County through increased education, awareness, and home visiting (2) Reduce the disparity amongst infant deaths in Allegheny County (3) Engage community members with increased awareness of public health and social justice (4) Develop a report card to show neighborhood focused projects and outcomes around infant mortality.[1](#_ENREF_1) A review of this charter determined that from the eleven Objectives, Deliverables, and Measures of Success, all but one could be documented as started or completed.

Thirteen strategies were reviewed in total (see Table 5 for a full list of strategies). The types of IMC strategy definitions were listed in Table 2. The document review findings for type of IMC Strategies are in Table 4 below:

Table 4 IMC Strategies 2017-2018: Type Summary

|  |  |
| --- | --- |
| **Type** | **Total** |
| Initiative/strategy | 5 |
| Program | 3 |
| Training/Professional Development | 3 |
| Community Engaged Event | 2 |

Overall, the review found that three of the IMC strategies were devised or implemented in 2017, while ten were in 2018. Of those strategies from 2017 to 2018, four strategies are already underway or continuing into 2019. As we can see, there has been an increase in the number of equity strategies since the start of the Executive Committee 2018.

One Community Engaged event was the Unnatural Causes Film Viewing. This Wilkinsburg event included dinner, film viewing, and a community conversation based around the segment. The segments viewed at the three sessions include, "In Sickness and in Wealth" "Place Matters" and "When the Bough Breaks". Generally, these explored how health disparities impact pregnancy outcomes and how chronic stress has a long term, negative impact on health, and the event included group discussion afterwards. The event involved Civically, the Wilkinsburg Mayor Marita Garrett, the Allegheny County Health Department, and Community Forge. Childcare was provided at no cost for children ages two and up. In addition, organizations came to provide resources. The event was free and open to the public. The three remaining chapters of the film will be viewed in a similar manner in 2019.

## R4P Results

During the document review, it became evident that “Provide” was a part of all thirteen strategies reviewed (All strategies are listed in Table 5 below). Therefore, thirteen IMC strategies fell under the Provide domain. However, it’s important to note that the strength of the domain association with the IMC strategy has not been accounted for. Therefore, although the Provide domain is a piece of each strategy, some strategies have a stronger relationship with the domain Provide. For example, some strategies could answer the R4P and BET questions listed in Appendix H more clearly. In order to better understand the variety, we will review some examples of Provide domains in the example summaries below.

In order to more clearly understand the work of the IMC, the document review and equity analysis then explored which one of the four R’s: Remove, Remediate, Restructure, or Repair was most at work in the IMC strategy. Therefore, another question became: In addition to “Provide,” which other R4P equity domain is the best fit for the strategy?

Using the questions listed above for the 4 R’s: Remove, Remediate, Restructure, and Repair, each strategy was assessed using the lines of inquiry for assessment. Table 5 (below) shows each of the strategies listed by the remaining domains (R4): Remediate, Remove, Repair, and Restructure alongside the IMC strategy names.

Table 5 IMC Strategies by R4 Domain

|  |  |  |
| --- | --- | --- |
| **R4 Domain** | **IMC Strategy Name** | **Total** |
| Repair | *Unnatural Causes Film Viewing and discussion* | 3 |
| *Allegheny County Infant Mortality Report Card* |
| *Wilkinsburg "Healthy Baby Zone"* |
| Restructure | *IMC Executive Charter 2018-2020* | 2 |
| *Formed Executive Committee and Sub-committees* |
| Remediate | *Restorative Yoga (Antiracist framework)* | 4 |
| *Open Doors to Home Visiting Campaign* |
| *Community Health Advocate Program* |
| *Community birth workers* |
| Remove | *Joined GARE* | 4 |
| *Undoing Racism Training* |
| *Joyce James Racial Equity Training* |
| *All for One Summit* |

R4P Results Example: Repair and Provide

One goal for the IMC listed in the Executive Charter was to “Support an organization submitting a Best Baby Zone application.”[1](#_ENREF_1) The Best Babies Zone (BBZ) approach utilizes services, community members, and other stakeholders in a neighborhood or region and mobilizes them all around the goal of improving birth outcomes and creating environments where children can thrive based on resident-driven priorities. Although the national BBZ was not accepting applications for 2018-2019, IMC Executive Committee organization, Pittsburgh’s Healthy Start, Inc., wanted to move forward using the BBZ model. After securing funding for overall implementation in Wilkinsburg, PA, Healthy Start reached out to BBZ. BBZ agreed to their model being adapted in Wilkinsburg, as well as providing minimal technical support.

In addition, a Healthy Babies Zone – Community Champion will improve the conditions of their community, with a focus on those that improve health, through their support of the Healthy Babies Zone development and implementation. The community champion will rally fellow community members to engage in support and training that build their confidence and skills to challenge systems that create poor health outcomes within their own communities.

The document review and equity strategy analysis determined the Wilkinsburg Health Baby Zone was under the R4P Domains Provide and Repair. For Repair: (1) Wilkinsburg Health Baby Zone explores the community perspective to understand existing beliefs, attitudes, or practices about their community through the Community Stakeholder Group. (2) According to the BET checklist (Appendix H) this also overlaps with Repair through the following: “Improve participation by improving quality of service delivery, by increasing outreach and by repairing damaged reputation in community from prior history of poor treatment”, because the BBZ will also enhance the coordination between existing community groups in Wilkinsburg. For Provide: (1) The Baby Zone will provide a venue for the community to develop ideas about creating a healthier Wilkinsburg, and help individuals have a direct line to services to help their families utilize, and suggest improvement of, existing maternal and child health services. Importantly, community perspectives will be engaged. (2) Provide also considers conditions in the social environment when determining policies and procedures, which is essential in the BBZ model.

R4P Analysis Overview: *Restructure*

In 2018, the IMC decided to establish the IMC executive committee and sub-committees. This allowed for focused, action-based groups who wanted to work more intensively around a specific area. For example, a subcommittee was created to develop the infant mortality report card for Allegheny county. Specifically, for the Restructure domain: (1) Executive Committee is dedicated to learning about the root causes of racial disparities in maternal and child health, and uses this knowledge to develope initiatives/strategies for the larger IMC. This developing of culturally appropriate initiatives is a large part of the domain Restructure.

R4P Analysis Overview: *Remediate and Provide*

The Community Health Advocate (CHA) program leverages the talent, knowledge, and lived-experience of community members. This initiative is an example of several organizations working together to achieve the greatest impact. The initial framework for the CHA was developed by MCH and piloted at Healthy Start, and in addition, the IMC collaborates with and supports CHAs. The CHA is a liaison who provides cultural mediation between health care and social services, and the community. An advocate is a trusted community member that has a close understanding of the ethnicity, language, socioeconomic status, and life experiences of the community served. Specifically, an advocate assists people to gain access to needed services. In addition, a CHA builds individual, community, and system capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, patient navigation and follow-up, community health education and information, informal counseling, social support, and advocacy.

Community members who applied and accepted to the CHA program were matched with mentors. They were also paid for training, given tablet/Chromebook, meals and childcare. The trainings are 70 hours total, which includes 8 in-person training sessions over a 12-week period. Healthy Start manages the logistics of the trainings, which include childcare, transportation, venue, food, and application process and selection. ACHD/MCH provided technical assistance in developing the training manual and facilitating the trainings. From winter 2017 to winter 2018, 25 women trained to become CHAs. In addition, three of the participants went on to become leaders facilitating Healthy Start’s Parent Café’s, one of the participants joined the IMC, and two participants were hired at Healthy Start.

The CHA program is a clear example of how Provide and another domain overlapped in this equity evaluation. For the Provide domain: (1) This program/IMC strategy directly considers socioeconomic and social conditions through engaging and understanding the importance of the lived experiences of the CHAs from the application process to the implementation of the training. This was clearly displayed in the documents reviewed for the CHAs. For the Remediate domain:(1) The community members chosen to be CHAs were not only given compensation for their time, but they were offered childcare, transportation, and food at the trainings. This allowed for socioeconomically disadvantaged individuals to participate in this professional development, where a traditional model would be less accessible. In addition, this program was intentionally created to have advocates who understand the experiences of women of color and their communities. This allows the program to buffer against inequitable conditions that the traditional healthcare system often perpetuates.

R4P Analysis Overview: Remove

One of the major goals of the IMC was to plan an infant mortality summit. The inaugural All-for-One Summit was on December 4, 2018 and was organized by The Allegheny County Health Department’s Maternal and Child Health Division along with the IMC Executive Committee. The Summit was a one-day Infant Mortality think-tank. It engaged citizens and providers in transforming the response to reducing racial disparities with a focus on the social determinants of health, health inequities, and the impact of racism on pregnancy and infant outcomes. The keynote speakers were Dr. Camara Phyllis Jones, former president of the American Public Health Association, and Miriam Zoila Perez, queer Cuban-American activist and author of “The Radical Doula.” Overall, participants were encouraged to use what they learned at the Summit to advocate for change in racial disparities in birth outcomes. The document review and lines of inquiry for assessment determined that the Summit was an example of Remove because it focused on concepts for organizational change or personal assessment of where individuals confer implicit privilege or bias based on ethnicity/race. The documents provided on the Summit showed that many speakers on the roster were dedicated to addressing implicit privilege or bias in their lectures or panels.

## HRIME Results

As previously discussed, the HRIME scale is a 12-point, bidirectional scale designed alongside R4P, which measures the extent to which an institution is in the process of racial equity changes. Given the document review and R4P equity analysis described above, all the IMC strategies were assigned a total HRIME score of *three*.

According to the HRIME scale, a score of *three* means actions to address equity are *considered an integral aspect of institutional or programmatic goals and objectives; institution provides active and continuing support toward increased efforts*.[6](#_ENREF_6) Specifically, a score of *three* was determined from the following: (1) Clear evidence of actions to address equity through goals and objectives were listed in both the Executive Charter and Grant Reports, as well as throughout the meeting agendas. (2) The IMC strategies show evidence of active and continuing support through ongoing initiatives, programs, and trainings.

This strategy analysis revealed that the work of the IMC is clearly further along than a *two* HRIME score. A *two* score indicates the following*: Institutionally accepted actions are defined, actions sporadically occur via individual effort; individual efforts hailed by institution but not actively supported.*[6](#_ENREF_6) The strategy analysis revealed the IMC’s attention to addressing institutional, programmatic, and organizational-level equity, rather than the individual level or sporadically.

However, when it comes to an HRIME score of *four*, there is less evidence in the document review to support this level of racial equity change in existing documentation of the IMC. An HRIME *four* rating involves actions to address equity factors have been *fully developed in collaboration with community and are fully integrated into permanent institutional structure and activity*.[6](#_ENREF_6) The IMC is nearly at a level four. However, because the equity analysis revealed a need to further engage community members – those with lived experience in IMC maternal and child health programs in Allegheny County – in strategy development, there is still more work to be done. The full HRIME scale can be found in Appendix B.

# Discussion

The document review and equity analysis found a potential need for more community-engaged events and practices. Overall, from 2017 to 2018, the document review found that all thirteen strategies contained an element of the Provide domain. In addition, among those thirteen strategies, there were two Restructure strategies, three Repair strategies, four Remediate, and four Remove strategies. More evaluation will need to be completed to make clear recommendations to the committee.

Although the assessments and evaluations addressing maternal and child health through a lens of health and racial equity are numerous and diverse, a few key examples take a similar approach as the IMC. For example, PRIME (Practices to Reduce Infant Mortality Through Equity), a project from the Michigan Department of Health and Human Services’ Bureau of Family, Maternal and Child Health has developed a *Guide for Public Health Professionals.*[49](#_ENREF_49) PRIME shares an ongoing, multi-year, multi-sector, and multi-systems process of creating and implementing education and actions designed to increase equity.[49](#_ENREF_49) Specifically, PRIME seeks to improve birth outcomes through systemic organizational change, forming key partnerships with government and community agencies, and educating stakeholders on the social determinants of health and equity. PRIME “education” includes racial equity sessions for staff, community members, and other stakeholders with pre- and post-testing.[49](#_ENREF_49) Similarly, using an equity and life course framework, the Alameda County Public Health Department, in Oakland California, formed the “Building Blocks Collaborative.” This collaborative is a multi-sector collaboration between community partners engaged in work with health, children, and communities through the lens of racial and economic inequities. Specific actions of this collaborative include developing ideas and strategies, beginning new projects, and developing a Bill of Rights for children’s health.[54](#_ENREF_54) This program was assessed through both the R4P and BET framework.[48](#_ENREF_48)

In addition, GARE looks to the local and regional government to advance equity through a racial equity framework.[53](#_ENREF_53) The original GARE Survey tool is primarily used within jurisdictions to understand the equity perceptions and practices of employees. GARE collects the data and strives to have a national sample of local and regional governments for equity analysis. These initiatives with equity assessments will allow the IMC to continue to review tools and determine the next steps forward in evaluation.

## Next Steps

At the initial Executive Committee meeting regarding this evaluation, the group had an important discussion about community-engaged research and how truly addressing inequities and racism will require getting direct responses from the community*.* Specifically, a need for a sub-committee to develop and implement a community engaged evaluation was identified, and a sub-committee was tentatively formed. Going forward, this group may meet to discuss how to recruit program participants and other key leaders to participate in a community member committee or focus group. This group could include parents and local community leaders who have participated in one of the IMC member organizations.

Alongside this information and future evaluation results from the other tools developed, recommendations for next steps include possible frameworks and approaches to engaging community members. Seeking to better understand the intersectional experiences of stakeholders through a framework like Dimensionality could more effectively and increase buy-in on the evaluation as well as future and ongoing IMC strategies. In addition, an Anti-Racist framework, alongside Dimensionality, could be useful in developing this community evaluation. The Anti-Racist framework would centralize the issue of race (instead of culture, for example) and the racism families in Allegheny County experience. This framework would help facilitate evaluation development and implementation that addresses the root problem of disparities in adverse birth outcomes.

Through an Anti-Racist lens, a smaller community stakeholder group could help to determine a path forward for the community evaluation. The Executive sub-committee could help this IMC program participants to help choose, develop, and modify evaluation assessment tools, as well as provide suggestions for process improvement. However, adaptation to community needs will be at the forefront, and relationships will need to be built thoughtfully.

With the Anti-racist framework, a Community Based Participatory Research (CBPR) Concept Map project could be conducted. This will also provide some context for planning the community-engaged evaluation effectively. CBPR is a collaborative research approach ask that community members are engaged equitably alongside researchers and other professionals involved. The community evaluation development and implementation process will allow for future recommendations that more specifically hone in on the community’s needs. This will allow the Executive Committee (maternal and child health/public health/social justice professionals) understand perspectives of the community on maternal and child health services received across the county.[55](#_ENREF_55)

CPBR can be social justice driven and action oriented. Therefore, this approach is well suited to the group and may yield helpful results for addressing the complexity of adverse birth outcomes in Allegheny County. Groups engaging all stakeholders could help improve long-term outcomes around community engaged work for the IMC.[55](#_ENREF_55) A Concept Mapping project would fit this stakeholder group. Concept mapping is a participatory approach that is useful for understanding community opinion and understanding of health. Although it is highly flexible, there are clear steps to help keep structure for the group. In Concept Mapping, the community participants help form the research question(s) and help analyze and organize data. Through this form of research, community voice, perspective, and potential solutions are more easily and clearly communicated.[55](#_ENREF_55) A community concept mapping evaluation process with community stakeholders with lived-experience could help improve long-term outcomes around community engaged work for the IMC. Ideally, the concept map would help individuals most impacted by disparities in maternal and child health picture a healthy and happy Allegheny County for their families.

# Limitations

Limitations to the document review and equity strategy analysis include potential bias of “selective surviving documents,” and inaccurate or complete information.[51](#_ENREF_51) For example, many of the surviving documents could primarily include the best and clearest examples of strategies, and not the challenges. The details represented could be out dated or inaccurate. However, the timeframe of the documents reviewed was only the past two years. Also, in order to double check these elements, we also reviewed documents such as emails and meeting minutes. This allowed for comparison of details and dates in order to look for discrepancies. In addition, following up with MCH staff assisted in shedding light on missing or unclear items.

Methods for document review analysis are intentionally flexible and there are no simple guidelines. This limits the generalizability of the results. However, for the purpose of determining a broad baseline for a larger evaluation and strategic problem solving, document review was an appropriate first step.

Moving forward, the tools explored for the evaluation have potential limitations. For example, limitations of the Racial and Health Equity Self-Assessment Survey and the Key Informant Interviews are inherent to the nature of the measurement. One common criticism of self-assessment involves measurement error focused on social desirability.[56](#_ENREF_56) The key informant interviews are potentially subject to this, as these interviews will be conducted face-to-face. For this reason, many of the key informant interview questions focus on discussing actions rather than just opinions. In addition, the storytelling and personal nature of a one-on-one interview, and the need for asking follow up questions to probe deeper into the subject matter, will help foster a “safe space” to encourage honest answers to the questions.

The Racial and Health Equity Self-Assessment Survey will be prone to measurement bias. One way the survey could introduce bias is through committee members’ genuine buy-in to the message of the IMC. An IMC member may desire to achieve equity, and have a personal and/or professionally identity as someone who is seeking equity, or is working for an organization that is striving for equity. This may result in someone overstating successes. On the other hand, for those who buy-in to the racial and health equity strategies less, there may be another type of desire to be “done” with discussing equity and move on to a different topic in maternal and child health. Level of buy-in may cause conflict between what the individual experiences in terms of equity practices and what they report (or over-report).[56](#_ENREF_56)

The initial Executive Committee meeting about this evaluation also included a conversation regarding potential issues with self-reporting. For example, would IMC members be likely to self-congratulate or focus more on progress than challenges? Due to this concern, the document review and key informant interviews were designed to be implemented earlier in the evaluation. However, this does not take away from the fact that a survey is a quick way to get a broad sense of where IMC members think they are on the path to achieve a more equitable community. Therefore, the research team decided that the survey may be more useful later on, in the context of the document review, key informant interview results, and community engaged-evaluation.

# Conclusion

This equity evaluation was developed to engage IMC members in reporting and reflecting on their equity practices and views. Exploring these perceptions and providing a baseline review of the strategies, initiatives, and programs of the IMC will inform the groups’ decision-making and help inform best practices.

Overall, in the R4P analysis, the strategies employed by the IMC primarily fall within the Provide and Remediate domains. It should be useful for the Executive Committee and ACHD/MCH leaders to utilize the R4P results to determine if they are focusing on the types of strategies and activities that they think are most imperative and which would most likely improve health equity outcomes.

The pledge of the IMC, a first birthday for every baby in Allegheny County, is a challenge that is more likely to be achieved through the accountable collaboration of its members. In order to continue this work for many years to come, the IMC will need to be flexible, adaptable, and listen to the community their programs, organizations, and initiatives serve. One of the ways the IMC can do this is through continuous evaluation, reflection, and improvement of its strategies. Through a constant re-focusing on the importance of community engagement, as well as looking “downstream”, this type of equity evaluation can help the IMC implement equity interventions and strategies that are more thoughtful and focused.

There is a great need for development of research-informed measurements and interventions around equity practices. Collective impact collaboratives like the IMC are well-positioned to lead the way. Collective impact groups have powerful, informed, and diverse voices that are needed to influence and develop effective future research for complex problems. The IMC is in a place to represent the underrepresented and make important strides toward the ultimate goal of reducing or eliminating disparities in birth outcomes.

* + - * 1. Equity Self-Assessment Survey

Introduction:

As a member of the Allegheny County Infant Mortality Collaborative (IMC), you are being invited to participate in a survey. The survey includes questions about your knowledge, skills, and experiences related to race and health equity. Specifically, the survey will ask you self-assess your understanding about racial equity, your knowledge of policies and practices to advance racial equity and your awareness of your organization/IMC’s plans to advance racial equity. It will take approximately 10 minutes to complete.

There are no foreseeable risks associated with this research, nor are there any direct benefits to you. There is no compensation provided to you for taking part in this research study. This survey is anonymous, and so your responses will not be identifiable in any way. All survey responses are confidential and will be kept in password-protected files. Your participation is voluntary, and you may stop completing the survey at any time.

This research is being conducted by Dara Mendez, PhD, MPH, Assistant Professor at the University of Pittsburgh, who can be reached at ddm11@pitt.edu if you have any questions.

Please indicate below

□ Yes, I would like to participate in this research

□ No, I decline to participate in this research

***(Note: An electronic platform will be used for respondents to complete the survey online)***

**YOUR EXPERIENCES AND PERSPECTIVES**

1. In general, I think it is valuable to examine and discuss the impacts of race. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
   1. If you agreed (strongly agreed or somewhat agreed) to the above, how much do you feel participating in the IMC has contributed to this perception?

* A Great Deal
* Quite a Bit
* Somewhat
* Very Little
* Not at All

1. I have a basic understanding of concepts related to racial equity. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
2. I know how to identify examples of institutional racism (i.e., when organizational programs or policies work better for white people than for people of color, usually unintentionally or inadvertently). [53](#_ENREF_53)
   * Strongly agree (go to question a)
   * Somewhat agree (go to question a)
   * Somewhat disagree (skip to question 4)
   * Strongly disagree (skip to question 4)
   * Don't know (skip to question 4)
   1. (if employee can identify examples of institutional racism, as indicated in Q3) I have the tools to address institutional racism in my workplace. [53](#_ENREF_53)
      * + Strongly agree
        + Somewhat agree
        + Somewhat disagree
        + Strongly disagree
        + Don't know

**In Your Organization**

1. In my organization, I feel comfortable talking about race. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
2. I am actively involved in advancing racial equity in my work. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
3. I would become more active in advancing racial equity if… (Mark all that apply) [53](#_ENREF_53)

* I had more information so I knew what to do
* I received training
* I had more time
* I had the support of my supervisor or manager
* Racial equity strategies received more funding
* I am happy with my current level of engagement

**Racial Equity Work:** Leadership, Infrastructure and Tools

8. What statement BEST describes your organization’s commitment to promoting equity as a core value?

* There is no expression of equity as a core (organizational or initiative) value. Equity and justice are not regularly raised as concerns.
* Equity is not explicitly stated in mission/vision/values, although is occasionally raised as concerns.
* Equity is explicitly expressed as a value, and some parts of the organization or partners act on a commitment to equity by addressing the root causes of health inequity.
* Equity is explicitly expressed as a value, and the entire organization and all partners strive to meet goals related to eliminating the root causes of health equity
* Don’t know

1. Which statement BEST describes your organization’s strategies for achieving health equity?

* Efforts focus exclusively on individual behaviors.
* Efforts focus on individual behaviors, but acknowledges the role that social context plays in influencing these choices
* Intentionally advances (health) equity by raising public awareness of social and environmental factors that shape individual behaviors.
* Advances (health) equity by encouraging removal of health-damaging conditions created by inequitable social and environmental factors
* Don’t know

1. What statement BEST describes your organization’s leadership?

* Leaders intentionally avoid considering equity in official decision-making
* Leaders do not consider health in determining policy positions, allocation of work force, budget decisions, etc.
* There is recent evidence of leaders beginning to use equity as criteria in determining policy positions, allocation of work force, budget decisions, etc.
* Leaders explicitly use equity as criteria in determining policy positions, allocation of work, budget decisions, etc.
* Don't know

1. Leadership in my organization communicates the importance of addressing racial inequities and achieving racial equity. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
2. My organization provides the resources necessary for addressing racial disparities and achieving racial equity. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know

14. What statement BEST describes your organization’s training opportunities? [53](#_ENREF_53)

* There is no training related to equity and addressing racism, classism, or other “isms.”
* There is only cursory training related to equity and addressing racism, classism, or other “isms.”
* Training related to equity and addressing racism, classism, or other “isms” is provided but is not ongoing or mandatory
* Training related to equity and addressing racism, classism, or other “isms” is ongoing and mandatory for all staff, including leadership.
* Don’t know

1. Does your organization have a racial equity work group? (foundational)
   * Yes (go to question 17a)
   * No (skip to Question 18)
   * I don’t know (skip to question 18)
2. Does your organization have a racial equity action plan? [53](#_ENREF_53)
   * Yes (go to question a)
   * No (skip to Question 16)
   * I don’t know (skip to question 16)
   1. Does your organization collaborate with other organizations on their Racial Equity Action Plan?
   * Yes
   * No
   * I don’t know
3. My organization considers race, class, gender, and historically imposed vulnerabilities in the development of policies and procedures. [52](#_ENREF_52)

* Always
* Sometimes
* Most of the time
* Rarely
* Never

1. As a whole, my organization is making progress towards achieving racial equity.[53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know

**Your Organization’s Racial Equity Work:** Workforce Equity

1. What statement BEST describes your organization’s culture related to human resources?

* An understanding of equity is not considered in recruitment and hiring.
* An understanding of equity may be considered in recruitment and hiring
* An understanding of equity is an important criteria in recruitment and hiring, but this is not an explicit policy.
* An understanding of equity is an explicit criteria in recruitment and hiring.
* *N/A or cannot answer\**

***\*Please indicate why you selected N/A here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

1. The racial demographics of employees within my organization reflect the diversity of our city.[53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
2. My organization is taking concrete actions to improve workforce equity. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know

**Your Organization’s Racial Equity Work:** Contracting and Procurement Equity

1. The results of my organization’s contracting and procurement equitably benefit the racial diversity of our city. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know
2. My organization is taking concrete actions to increase equity in its contracting and procurement practices. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know

**Your Organization’s Racial Equity Work:** Advancing Racial Equity in/with the Community

1. What statement BEST describes your organization’s ability to collaborate with other communities?

* Rarely or does not consider ways to involve marginalized groups in setting priorities or conducting the initiative
* Sometimes considers ways to involve marginalized group members in setting priorities or conducting the initiative
* Often succeeds in involving marginalized groups members in setting priorities or conducting the initiative
* Acts on an explicit commitment to involving the community’s most marginalized members whenever it sets priorities or in conducting the initiative
* Don’t know

26. Which statement BEST describes your organization’s ability to mobilize the community?

* We do not seek to mobilize the community
* We work with community groups but do not assist them in mobilizing for action.
* We are active in mobilizing the community members to take action to improve conditions for people we serve.
* We act on an explicit commitment to supporting community mobilization.
* Don’t know

27. My organization invites and includes populations most affected by health inequity (by virtue of race, class, gender, history, etc.) to participate in identifying and determining the best approaches and solutions to achieve health equity. [52](#_ENREF_52)

* Always
* Sometimes
* Most of the time
* Rarely
* Never

28. My organization invites and includes populations most affected by health inequity (by virtue of race, class, gender, history, etc.) to participate in choosing priorities or naming issues to be addressed.[52](#_ENREF_52)

* Always
* Sometimes
* Most of the time
* Rarely
* Never

1. My organization partners with other institutions and community to advance racial equity for our communities of color. [53](#_ENREF_53)
   * Strongly agree
   * Somewhat agree
   * Somewhat disagree
   * Strongly disagree
   * Don't know

30. My organization is making progress on improving access to services for refugees and immigrants. [53](#_ENREF_53)

* + Strongly agree
  + Somewhat agree
  + Somewhat disagree
  + Strongly disagree
  + Don't know

31. My organization is making progress at providing interpretation and translation services for people with limited English. [53](#_ENREF_53)

* + Strongly agree
  + Somewhat agree
  + Somewhat disagree
  + Strongly disagree
  + Don't know

**IMC: Having an Impact in the Community**

32. The IMC is committed to racial equity. [53](#_ENREF_53)

* + Strongly agree
  + Somewhat agree
  + Somewhat disagree
  + Strongly disagree
  + Don't know

33. IMC meetings help illustrate the importance of addressing racial inequities and achieving racial equity. [53](#_ENREF_53)

* + Strongly agree
  + Somewhat agree
  + Somewhat disagree
  + Strongly disagree
  + Don't know

34. IMC has taken steps to reduce racial inequities. [53](#_ENREF_53)

* Strongly agree
* Somewhat agree
* Somewhat disagree
* Strongly disagree
* Don't know

35. As a whole, the IMC is making progress advancing racial equity in the community. [53](#_ENREF_53)

* + Strongly agree
  + Somewhat agree
  + Somewhat disagree
  + Strongly disagree
  + Don't know

36. As a whole, the IMC is making progress towards achieving racial equity. [53](#_ENREF_53)

* + Strongly agree
  + Somewhat agree
  + Somewhat disagree
  + Strongly disagree
  + Don't know

**About You**

37. What type of organization do you work for?[53](#_ENREF_53)

|  |
| --- |
| * Hospital/Healthcare Center/System * Health Department * Community-based Organization * Other: (please specify- open ended) |

38. How long have you been a part of the IMC?

* + 1 year or less
  + 2 to 3 years
  + 4 to 5 years
  + Since the beginning (2012)

39. Are you an executive committee member?

* + Yes
  + No
  1. If yes, how long have you been a part of the Executive Committee?
* 1 year or less
* Around 2 years
* Around 3 years

40. In general, how many trainings / workshops about racial equity have you attended?

* + None (Skip to question 40)
  + One or two (go to question a)
  + Three or more (go to question a)
  1. (if Member has attended at least one training, as indicated in Q40) In general, I have found IMC hosted trainings / workshops about racial equity to be useful.
     + - Strongly agree
       - Somewhat agree
       - Somewhat disagree
       - Strongly disagree
       - Don’t know
       - N/A, I have not attended any IMC hosted trainings/workshops about racial equity
         1. HRIME Scoring Guide

**Hogan/Rowley Institutional Measure of Equity**[**6**](#_ENREF_6)

*Please consider the scale in regards to the organization in which you represent (1) AND within the context of your participation in the IMC (2)*

-6 *Organizational efforts influence other entities in community to embrace regressive actions, creating momentum away from equity*

-5 Actions consist of manipulation, victim reversal (e.g. “reverse discrimination”), removal of protective supports, and/or development of adverse narratives about the population receiving services

-4 The way the EBP or intervention is implemented results in, or shows evidence that it will increase burdens on participants and /or diminish resources (material, psychic, etc…) needed for basic survival

-3 Populations of color are **targeted** with interventions that are demonstrated to address need in other ethnic (or SES, Disability, LGBT) groups, but no evidence to support its relevance to issues and needs specific to populations of color (e.g. do not address racism)

-2 Populations of color are **targeted,** but implementation process does not authentically address community needs, protect community assets, or exhibit respect for individuals

-1 There is active denial of existence of special needs of populations of color, justifying institutional inaction in addressing.

0 No evidence of meaningful action to address special needs of populations of color

1 Evidence of at least rhetorical reference and acknowledgement of need in this domain; no evidence of action; may state “do not know what to do”

2 Institutionally accepted actions are defined, actions *sporadically* occur via individual effort; individual efforts hailed by institution but not actively supported

3 Action to address factor is considered an integral aspect of institutional or programmatic goals and objectives; institution provides active and continuing support toward increased efforts

4 Actions to address factors have been fully developed in collaboration with community and are fully integrated into permanent institutional structure and activity

5 Actions to address factors have been fully developed in collaboration with community and have been fully integrated into permanent institutional structure and activity **f*or greater than 3 consecutive years***

***6*** *Organizational efforts are firmly institutionalized and influence or work with other entities in community towards equity, creating synergy across levels of Socio-Ecological Model resulting in a larger impact on community equity*

1. Overall rating within my organization and examples, if applicable:
2. Overall rating in the IMC and examples, if applicable:
   * + - 1. Key Informant Interview Guide

TOTAL TIME: 1 hour

**BACKGROUND AND INTRODUCTION**

**Objective:** Put participants at ease by explaining the purpose and procedures for the interview and moderator/interviewer will introduce self.

*Interviewer will*:

*Introduce self and thank participants for agreeing to be interviewed.*

*Identify topic in broad terms and explain the purpose of the discussion.*

*Explain the presence and purpose of recording and observers.*

*Encourage interviewees to speak candidly.*

GREETINGS AND VERBAL CONSENT: (3 min)

**“Hello. My name is XX and I am conducting a health equity assessment for the IMC. (Can mention if represent a specific organization). *(IF APPLICABLE:)* In addition, my name is (name) from (organization; i.e., University of Pittsburgh).**

**Thank you for taking the time to speak with me/us today.**

**Today, our conversation will focus on the ways in which the IMC and its members address Equity in Maternal and Child Health. Although our questions are often related to racial and health equity, please feel free to share at any time how you draw these connections in your own work as we ask questions.**

**Your ideas and experiences are very important to us. Please keep in mind that there are no right or wrong answers. We really want to know about your experiences.**

**This interview will take approximately 1 hour*.***  *(note to interviewer: State longer time for MCH/IMC backbone organization (i.e., ACHD))*

**(PROVIDE CONSENT FORM AND WALK THROUGH THE CONSENT) Your name will not be attached to a particular quote or statements that you make during the interview.**

**We would like to record the interview so that I can concentrate on talking with you. I will also take some notes. If you agree to be recorded, it will be very important for you to speak loudly**

**\*Do you have any questions at this point?**

**Do you agree that we can record this interview?”**

(Interviewer: they need to give verbal consent of YES or NO)

(if they say yes to recording) **“After I turn on the recording, I will make a few introductory statements for record keeping purposes.”**

TURN ON RECORDING (IF YES); TAKE DETAILED NOTES (IF NO)

**“Thank you for consenting to record this conversation. This is an interview on [date] and [time]. [Name of interviewer] is conducting this interview. The unique Interview ID is [enter ID].”**

**“First we want to start with a few general questions about you and your work with the IMC” (approx. 20 min)**

1. Can you describe your role in your current organization? (probes/follow-up: position; how long have you been there)
2. Can you please describe how you became involved with the IMC? (probes/follow-up: role, subcommittees, how long involved)
3. Does the IMC have a working definition of health equity?
   1. If so, what was it?
   2. If not, in what ways has the IMC indirectly defined or articulated health equity?
4. Does your specific organization have a working definition of health equity?
   1. If so, what was it?
   2. If not, in what ways has your organization indirectly defined or articulated health equity?
5. Does the IMC have a working definition of racial equity?
   1. If so, what was it?
   2. If not, in what ways has the IMC indirectly defined or articulated racial equity?
6. Does your specific organization have a working definition of racial equity?
   1. If so, what was it?
   2. If not, in what ways has your organization indirectly defined or articulated racial equity?
7. What are some past or present successes you have had in addressing racial inequities and advancing racial equity?
   1. Follow up: What were some of the past or present challenges
8. Please share thoughts on the primary reasons why racial and health inequities exist in maternal and child health?
   1. Follow up question about racism (if they name racism, probe; if they don’t name racism) One way in which the IMC has moved forward in this work has been to identify, name and consider ways to address racism? What do you think about this approach? (probes/follow-up: Why is it important to address racism to achieve health equity?)
9. How have your perceptions of racial inequities evolved as a result of participating in the IMC?
10. Describe how you would envision an equitable community for families in Allegheny County, particularly black and brown families who are disproportionately affected by worse health outcomes?

**(suggested language) “Next we’d like to discuss IMC strategies and goals” (approx. 25 min; 45 min for backbone members)**

1. Over the past 5 years, the IMC has instituted numerous tools, trainings, initiatives, strategies, and events. In a few minutes, I would like to go through several of them. You mentioned that you have been involved in the IMC for about \_\_\_ years. Over that time period, can you tell me what has stood out the most in terms of tools, trainings and strategies? What have you found to be most effective? *[Note: Interviewer will have an extensive list\*]*
2. Here is a list of key strategies over the past five years. Were you involved in **the [strategies, goals, initiatives]** ?**\***. Can you tell me more about this? *[Note: this particular question will allow for a more detailed review among the backbone organization; for all others, you should show them the list of the key strategies/tools and ask first which ones they know of and which ones they were/are involved in]*
   1. What was your role?
   2. Was equity integrated? How?
   3. What are the next steps?

(\**For example:* Allegheny County Infant Mortality Report Card, Infant mortality summit, To support the creation of a Best Baby Zone, Specific Sub-committees, Open Doors to Home Visiting Campaign, Restorative Yoga, Undoing Racism Training, Joyce James Racial Equity Training, Created the IMC Charter 2017, Renamed group to IMC, Community Health Advocate Program, Community birth workers, Racial Equity toolkits, Health Equity publications, Wilkinsburg Unnatural Causes Film Viewing and discussion, Joined GARE)

*[Note: Interviewer will repeat the above question with multiple goals, strategies, initiatives as needed]*

**“We have two final questions.”**

1. What would you like to see the IMC do next?
   1. Follow up: What would you like more of or what has the IMC not done?
2. Anything else you would like to add that we haven’t discussed?

**“Those are my final questions...”**

**\*\*\*TURN OFF RECORDING\*\*\***

**Conclusion: “Thank you for sharing with us how you and your partners in the IMC work to achieve health equity.” *(share next steps of process if applicable)***

* + - * 1. Demographic Survey

***(Note: An electronic platform will be used for respondents to complete the survey online)***

1. What is your current employment status? (Select all that apply)

* Employed, working 35 or more hours per week
* Employed, working 1-34 hours per week
* Not employed, looking for work
* Not employed, NOT looking for work
* Retired
* Student
* Not able to work
  + 1. How many years have been at your current organization/employer? (If employed)

Please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What type of organization do you work for?

* Hospital/Healthcare Center/System
* Health Department
* Community-based Organization
* Other: (please specify- open ended)

1. Do you manage or supervise people at your organization?
   * Yes
   * No
2. Do you provide services directly to the public at your current job? (examples: Doula, Case Manager, Nurse, Teacher)

* Yes
* No
* Sometimes (50% or less of your work time is spent providing direct services)

1. Which is the highest degree or level of education you have completed?

* Some high school
* High school diploma or equivalent
* Vocational training
* Some college or Associate’s degree
* Bachelor’s degree
* Some post undergraduate work
* Master’s degree
* Specialist degree (e.g., EdS)
* Applied or professional doctorate degree or Doctorate degree (e.g., EdD, PhD)
* Other, please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Which categories describe you? Select all that apply to you:

* American Indian or Alaska Native
* Asian
* Hispanic, Latino or Spanish Origin
* Middle Eastern or North African
* Native Hawaiian or Other Pacific Islander
* White
* Some other race, ethnicity, or origin, please specify: \_\_\_\_\_\_\_\_\_\_\_
* I prefer not to answer.

1. Are you Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Cuban-American, or some other Spanish, Hispanic, or Latino group?

* I am not Spanish, Hispanic, or Latino
* Mexican
* Mexican-American
* Chicano
* Puerto Rican
* Cuban
* Cuban-American
* Another Spanish, Hispanic, or Latino group (please specify): \_\_\_\_\_\_\_\_\_\_\_\_\_
* From multiple Spanish, Hispanic, or Latino groups

1. How do you describe your gender identity?
   * Male
   * Female
   * Transgender
   * Gender fluid
   * A gender not listed (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is your age in years?

* Please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* I prefer not to answer (18 or older)

1. Are there any other things you would like to name in terms of your identity?
   * Yes Please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   * No
     + - 1. Glossary of Terms

Birth Weight:

* Low Birth Weight: Infants born between 1,500 and 2,499 grams are classified as low birthweight (LBWT)[5](#_ENREF_5)
* Normal Birth Weight Infants born at 2,500 grams or greater are considered normal birthweight (NBWT)[5](#_ENREF_5)
* Very Low Birth Weight: Infants born with a birthweight less than 1,500 grams are classified as very low birthweight (VLBWT) infant[5](#_ENREF_5)

Health Disparities: Systematic, plausibly avoidable health differences adversely affecting socially disadvantaged groups; they may reflect social disadvantage, but causality need not be established. This definition, grounded in ethical and human rights principles, focuses on the subset of health differences reflecting social injustice, distinguishing health disparities from other health differences also warranting concerted attention, and from health differences in general.

Health Equity: The attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and healthcare disparities.[49](#_ENREF_49) Health equity exists when individuals have equal opportunities to be healthy. The ability to be healthy is often associated with factors such as social position, race, ethnicity, gender, religion, sexual identity, or disability. When these factors limit a person's ability to be healthy it can lead to health inequity.[57](#_ENREF_57)

Historical Trauma: The cumulative emotional and psychological wounding over the lifespan and across generations emanating from massive group trauma. Historical trauma is often related to historical and current systems of oppression.[49](#_ENREF_49)

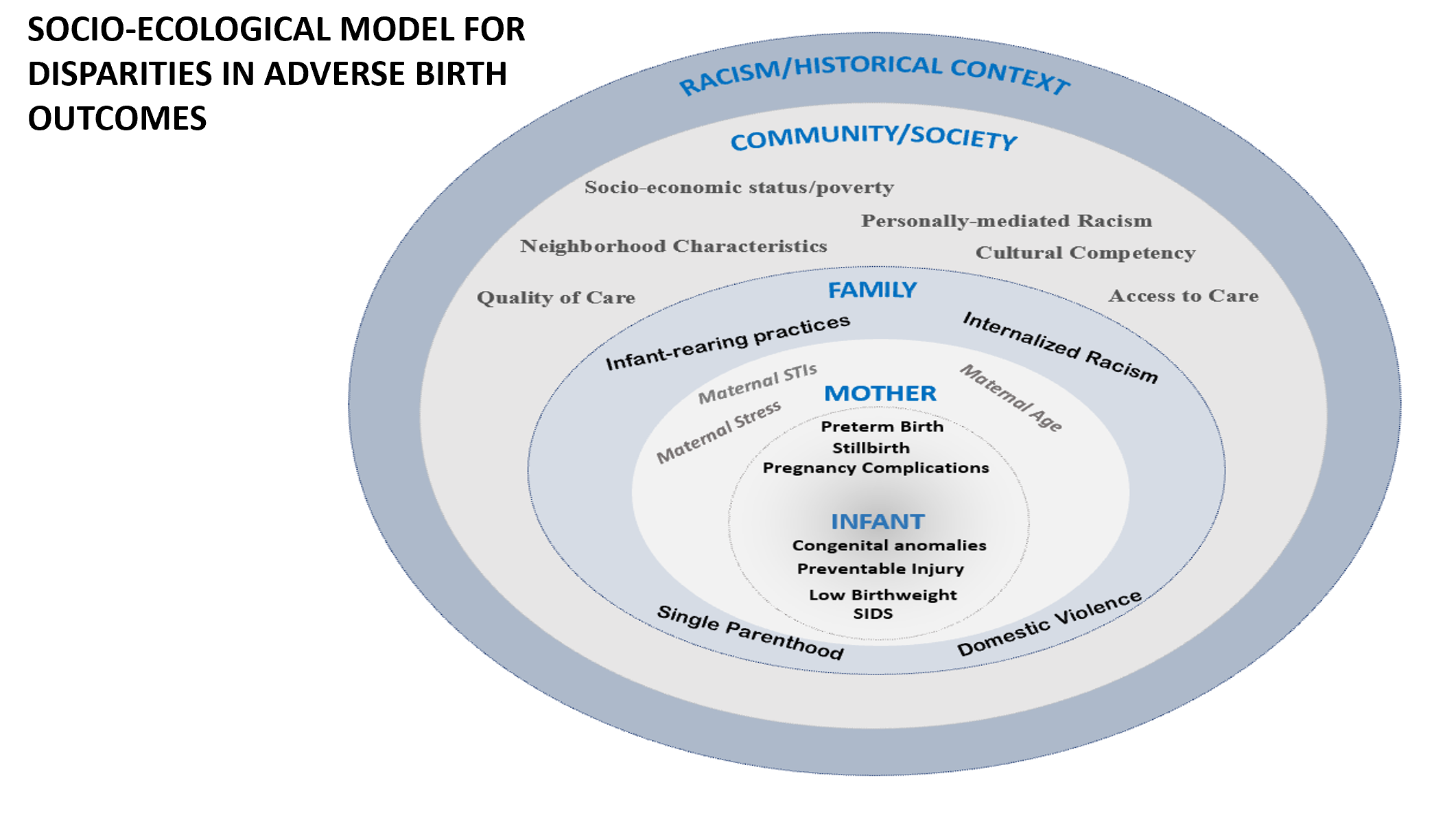
Infant Mortality Rate (IMR): Death per 1,000 live births[10](#_ENREF_10)

Post neonatal Morality: Death that occurs between the 28th and 364th day of life[10](#_ENREF_10)

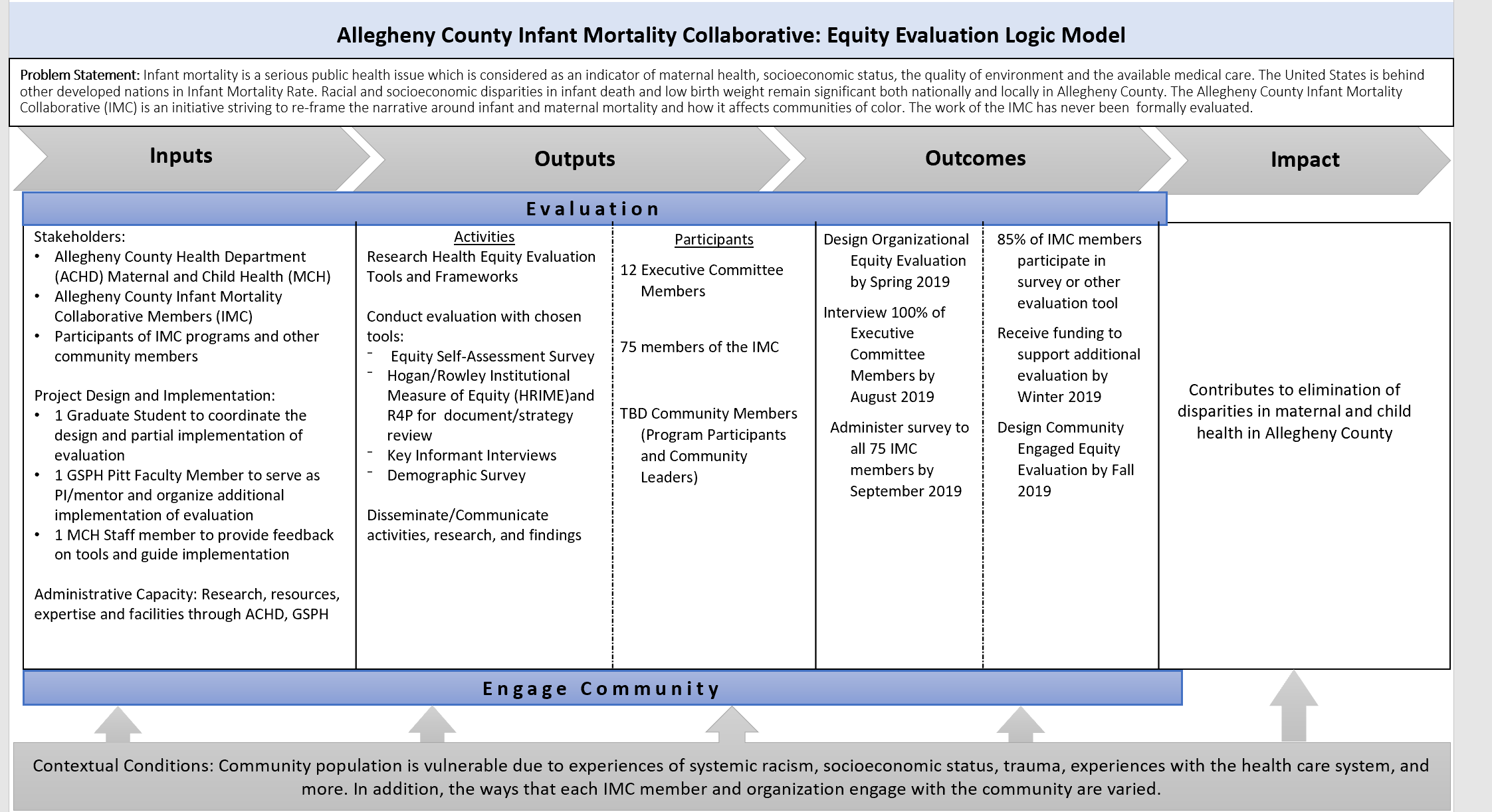
Racial Equity: The condition that would be achieved if one's racial identity no longer predicted, in a statistical sense, how one fares. When we use the term, we are thinking about racial equity as one part of racial justice, and thus we also include work to address root causes of inequities, not just their manifestation. This includes elimination of policies, practices, attitudes and cultural messages that reinforce differential outcomes by race or fail to eliminate them.[58](#_ENREF_58)

Racial Justice: The proactive reinforcement of policies, practices, attitudes and actions that produce equitable power, access, opportunities, treatment, impacts and outcomes for all.[58](#_ENREF_58)

*Note on Labeling Race and Ethnicity:* Many studies of racial disparity use inconsistent definitions and interchange the terms ‘race’ and ‘ethnicity.’ For example, some studies examine ‘white’ and ‘black’ populations within the United States, without classifying individuals with regard to Hispanic ethnicity. Others use ‘Caucasian’ and ‘African-American,’ or ‘non-Hispanic white’ and ‘non-Hispanic black.’ Using ‘Caucasian’ and ‘African-American’ may include some women who are Hispanic in either classification. In this paper, I have used race and ethnicity designations reported in the study. However, the inconsistency does limit the ability to compare results across studies.[31](#_ENREF_31)

* + - * 1.  Ecological Model for Disparities in Adverse Birth Outcomes

[59](#_ENREF_59)

* + - * 1.  Logic Model
        2. R4P and BET Questions

*Questions below were utilized for IMC document review and equity analysis*[6](#_ENREF_6)

**REPAIR**

Key Questions (1) Does the strategy explore the community perspective to understand existing beliefs, attitudes, or practices about relevant institutions? Does the strategy address historical damage or existing beliefs to provide improved community engagement?

Other questions: (a) Do strategies REPAIR past or historical damage/harm/setbacks? (Biological, Social, Structural) (b) Does the plan represent “inaction in the face of need” when it comes to repair of past harm? (c) What past exposures produced damage that impact on current ability (of population) to access health care, maintain health, or practice healthy behaviors?

BET checklist: Does the strategy – Actively recognize and discuss historical disadvantages of the populations we serve? - Actively undo or remediate historical disadvantages of populations we serve? - Improve participation by improving quality of service delivery, by increasing outreach and by repairing damaged reputation in community from prior history of poor treatment?

**REMEDIATE**

Key question: Does the strategy buffer/protect disparity populations from inequitable conditions?

Other questions: (1) Do my actions/policies/procedures a. Reduce the impact of the existing stressors that diminish outcome goals? b. Do my actions/policies/procedures c. Ignore the role existing stressor have on populations? (d) How can we buffer people from the adverse side effects while we wait for structural change?

BET checklist: In what was does the strategy: (a) Neglect to help people in the face of need, avoid people of places because they or their neighborhoods are too different or dangerous, too deep to address? (b) Fail to provide timely to accurate information, training, resources, education to a population group that has a need, because we do not know how to address their specific needs. (c) Neglect or marginalize people because they are unable to participate in ways deemed acceptable. (d) Provide alternative strategies for people who do not have access to standard resources? Consider the possible negative consequences of temporary buffers/solutions?

**RESTRUCTURE**

Key Question: Does the strategy address policy, procedures, rules, regulations, traditions, physical environment, resources, etc. that exclude, hold back or privilege some over others?

Other questions: (a) What process/social forces continue to produce risk, disadvantage and other adverse effects in vulnerable populations? (b) How can we revamp the process or structure so that future generations are no longer exposed? (c) Do my actions/policies/procedures: Restructure policies, procedures, job descriptions, meeting agendas, etc.….and other institutional structures, so that they remove the production and sources of inequity and stressors?

BET checklist: In what ways does the strategy: (1) Pass over a group defined by (race, class, gender, history) because it is just too hard to include them given limited job resources? (2) Omit, forget, exclude, triage, don’t invite or restrict involvement, which keeps people from participating on an equal footing? (3) Disproportionally put obstacles in the path of some groups defined by (race, class, gender, history) resulting in their disadvantage? (4) Impose punishment or limitations that disproportionally affect certain groups because of race, class, gender, history?

**REMOVE**

Key Question: Does the strategy focus on internal organizational change and/or personal assessment of where individuals confer implicit privilege or bias based on ethnicity/race, SES or gender?

Other Questions: Do actions/policies/procedures: (a) Remove the institutional sources and vestiges of racism, classism, gender disadvantage, etc. actions/policies/procedures (b) Ignore the institutional sources and vestiges of racism, classism, gender disadvantage, etc.

BET checklist: Do we always: (a) invite and include populations most affected by health inequity (by virtue of race, class, gender, history) to participate in key decisions for defining the problems and best approaches to address these or for making key decisions for allocating resources equitably? (b) Consider the special vulnerability that these population members have because of how they are/have been treated because of race, gender, etc.…in setting rules and guidelines and priorities? (c) Create environments that reflect respect for diversity? (d) Actively and continuously assess and undo all of the sources of racism and/or race differential effects in our organization?

**PROVIDE**

Provide: Does the strategy directly consider ethnicity/racism, classism, and/or gender discrimination in the programming/services?

Provide: Do actions/policies/procedures: a. Provide culturally and socioeconomically relevant health, education or clinical services to all populations so that they can achieve equity in outcomes? b. Provide the relevant structural supports to ensure that all populations have the tools and resources to carry out educational or clinical recommendations? c. Do my actions ignore special cultural, historical, geographical, environmental, socioeconomic needs?

BET checklist: Do we: (a) Systematically usurp or tie up people’s time/resources as a requirement to receive resources with little consideration to life, time, resources? (b) Provide material support for ppl to access service but neglect to ensure clients have tools and resources to follow through on plans received? (c) Consider the special vulnerabilities that vulnerable population members have because of how they are/have been treated because of race, class, etc.…when we set rules and guidelines and priorities? (d) Systematically ignore conditions in the social environment when we determine policies and procedures?

# Bibliography

1. Allegheny County Health Department/Maternal and Child Health Division's Infant Mortality Collaborative. Infant Mortality Collaborative Executive Charter. 2018.

2. Mathews T, MacDorman, MF, and Thoma, ME. *Infant mortality statistics from the 2013 period linked birth/infant death data set.* Hyattsville, MD: National Center for Health Statistics;2015.

3. Kim D, Saada A. The Social Determinants of Infant Mortality and Birth Outcomes in Western Developed Nations: A Cross-Country Systematic Review. *International Journal of Environmental Research and Public Health.* 2013;10.

4. Eunice Kennedy Shriver National Institute of Child Health and Human Development. What causes infant mortality? 2016; https://[www.nichd.nih.gov/health/topics/infant-mortality/topicinfo/causes](http://www.nichd.nih.gov/health/topics/infant-mortality/topicinfo/causes). Accessed 9/8/2018.

5. National Center for Chronic Disease Prevention and Health Promotion. Reproductive Health: Infant Mortality. 2018; https://[www.cdc.gov/reproductivehealth/index.html](http://www.cdc.gov/reproductivehealth/index.html).

6. Hogan V, Rowley DL. Dimensionality and R4P: A Health Equity Framework for Research Planning and Evaluation in African American Populations. Feb 2018;22(2):147-153.

7. U.S. Department of Health and Human Services. Healthy People 2020. Washington, D.C.2018.

8. Giurgescu C, McFarlin BL, Lomax J, Craddock C, Albrecht A. Racial Discrimination and the Black‐White Gap in Adverse Birth Outcomes: A Review. *Journal of Midwifery & Women's Health.* 2011.

9. Balke M. 2008-2012 Infant Mortality Birth Cohort Study, Allegheny, PA. 2015.

10. Hacker K. *Allegheny County Mortality Report: 2016.* Pittsburgh, PA: Allegheny County Health Department;2018.

11. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. 2019.

12. California Newsreel. RACE - The Power of an Illusion. 2003.

13. SURJ (Showing Up For Racial Justice). 2018; <http://www.dismantlingracism.org/>.

14. Gaspaire B. Redlining. *Blackpast.* 2012. https://[www.blackpast.org/african-american-history/redlining-1937/](http://www.blackpast.org/african-american-history/redlining-1937/).

15. Rutan D, Glass M. *The Lingering Effects of Neighborhood Appraisal: Evaluating Redlining's Legacy in Pittsburgh.* 2017.

16. Penman M, Schmidt J, Cohen R, Klahr R. Hidden Brain [Internet]: NPR; 2017. Podcast

17. Hoffman KM, Trawalter S, Axt JR, Oliver MN. Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proceedings of the National Academy of Sciences.* 2016;113(16):4296-4301.

18. Armstrong K, Rose A, Peters N, Long JA, McMurphy S, Shea JA. Distrust of the health care system and self-reported health in the United States. *Journal of general internal medicine.* 2006;21(4):292-297.

19. Susan G. Komen. Mistrust in the Health Care System Among Black and African-American Communities. 2015. <http://komentoolkits.org/wp-content/uploads/2015/03/Mistrust-in-the-Health-Care-System-among-Black-and-African-American-Communities-B-AA-Comm.pdf>.

20. Baldwin J. As Much Truth As One Can Bear. *The New York Times Book Review.* 1962.

21. Griffith D, Yonas M, Mason M, Havens B. Considering Organizational Factors in Addressing Health Care Disparities: Two Case Examples. *Health Promotion Practice.* 2009.

22. Griffith DM, Mason M, Yonas M, et al. Dismantling Institutional Racism: Theory and Action. *American Journal of Community Psychology.* 2007.

23. Saetermoe CL, Chavira G, Khachikian CS, Boyns D, Cabello B. Critical race theory as a bridge in science training: the California State University, Northridge BUILD PODER program. *BMC proceedings.* 2017;11(Suppl 12):21-21.

24. Delgado R, Stefancic J, Harris A. *Critical Race Theory (Third Edition) : An Introduction.* New York, United States: New York University Press; 2017.

25. The Combahee River Collective. The Combahee River Collective Statement. 1978.

26. Crenshaw K. *Critical race theory: the key writings that formed the movement.* New York: New Press; 1995.

27. Carbado DW, Crenshaw KW, Mays VM, Tomlinson B. Intersectionality: Mapping the Movements of a Theory. *Du Bois review : social science research on race.* Fall 2013;10(2):303-312.

28. Lu MC. *Racial-Ethnic Disparities in Birth Outcomes: A Life-Course Perspective*, US Department of Health and Human Services: Health Resources and Services Admnistration; 2017.

29. Culhane JF, Goldenberg RL. Racial Disparities in Preterm Birth. *Seminars in Perinatology.* 2011/08/01/ 2011;35(4):234-239.

30. National Center for Health Statistics. Vital Statistics Online Data Portal. Atlanta, GA, 2015.

31. Manuck TA. Racial and ethnic differences in preterm birth: A complex, multifactorial problem. *Seminars in Perinatology.* 2017.

32. Ncube CN, Enquobahrie DA, Albert SM, Herrick AL, Burke JG. Association of neighborhood context with offspring risk of preterm birth and low birthweight: A systematic review and meta-analysis of population-based studies. *Social Science & Medicine.* 2016.

33. David RJ, Collins JW, Jr. Differing birth weight among infants of U.S.-born blacks, African-born blacks, and U.S.-born whites. *The New England Journal of Medicine.* 1997.

34. Shiono PH, et al. Ethnic Differences in Birthweight: The Role of Lifestyle and Other Factors. *American Journal of Public Health.* May 1997 1997;87(5).

35. U.S. Department of Health & Human Services. CDC-Kaiser ACE Study. 2016; https://[www.cdc.gov/violenceprevention/acestudy/about.html](http://www.cdc.gov/violenceprevention/acestudy/about.html), 2017.

36. Anda RF, Felitti VJ, Bremner D, et al. The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience.* 2006:174–186.

37. Thurston H, Bell JF, Induni M. Community-level Adverse Experiences and Emotional Regulation in Children and Adolescents. *Journal of Pediatric Nursing.* 2018;42:25-33.

38. Calkins K, Devaskar SU. Fetal origins of adult disease. *Current problems in pediatric and adolescent health care.* 2011;41(6):158-176.

39. Barker DJ. The Developmental Origins of Insulin Resistance. *Hormone Research in Paediatrics.* 2005;64(Suppl. 3):2-7.

40. Bird CE, Seeman T, Escarce JJ, et al. Neighbourhood socioeconomic status and biological ‘wear and tear’ in a nationally representative sample of US adults. *Journal of Epidemiology and Community Health.* 2010;64(10):860-865.

41. Geronimus AT, Hicken MT, Pearson JA, Seashols SJ, Brown KL, Cruz TD. Do US Black Women Experience Stress-Related Accelerated Biological Aging?: A Novel Theory and First Population-Based Test of Black-White Differences in Telomere Length. *Human nature (Hawthorne, N.Y.).* 2010;21(1):19-38.

42. Geronimus A. The Weathering Hypothesis and the Health of African American Women and Infants. *Ethnicity & disease.* 1992;2:207-221.

43. Welberg LA, Seckl JR. Prenatal stress, glucocorticoids and the programming of the brain. *Journal of neuroendocrinology.* Feb 2001;13(2):113-128.

44. Collins JW, Jr., David RJ, Handler A, Wall S, Andes S. Very low birthweight in African American infants: the role of maternal exposure to interpersonal racial discrimination. *American journal of public health.* 2004;94(12):2132-2138.

45. Braveman P, Barclay C. Health Disparities Beginning in Childhood: A Life-Course Perspective. *Pediatrics.* 2009;124(Supplement 3):S163-S175.

46. Goosby BJ, Heidbrink C. Transgenerational Consequences of Racial Discrimination for African American Health. *Sociology compass.* 2013;7(8):630-643.

47. Hogan VK, Rowley D, Bennett T, Taylor KD. Life Course, Social Determinants, and Health Inequities: Toward a National Plan for Achieving Health Equity for African American Infants—a Concept Paper. *Maternal and child health journal.* 2012/08/01 2012;16(6):1143-1150.

48. Michigan Department of Community Health. Practices to Reduce Infant Mortality through Equity (PRIME): Narrative Report. 2014.

49. Michigan Department of Health and Human Services. *Practices to Reduce Infant Mortality through Equity (PRIME): A Guide for Public Health Professionals.* Lansing, MI: Michigan Department of Health and Human Services, Bureau of Family, Maternal and Child Health;2015.

50. Rutter H, Savona N, Glonti K, et al. The need for a complex systems model of evidence for public health. *The Lancet.* 2017, Dec 09 2017;390.

51. U.S. Department of Health & Human Services. Data Collection Methods for Evaluation: Document Review. *Evaluation Briefs,.* 2009.

52. Brooks PE. A Cross Disciplinary Typology (the Brooks Equity/Inequity Typology (BET)). 2004.

53. Government Alliance for Race & Equity. GARE Employee Employee Survey on Race and Equity. 2019; racialequityalliance.org.

54. Shrimali BP, Luginbuhl J, Malin C, Flournoy R, Siegel A. The building blocks collaborative: advancing a life course approach to health equity through multi-sector collaboration. *Maternal and child health journal.* 2014;18.

55. Albert SM, Burke JG. *Methods for Community Public Health Research : Integrated and Engaged Approaches.* New York, United States: Springer Publishing Company; 2014.

56. Brenner PS, DeLamater J. Lies, Damned Lies, and Survey Self-Reports? Identity as a Cause of Measurement Bias. *Social Psychology Quarterly.* 2016/12/01 2016;79(4):333-354.

57. Braveman PA, Kumanyika S, Fielding J, et al. Health disparities and health equity: the issue is justice. *American journal of public health.* 2011;101 Suppl 1(Suppl 1):S149-S155.

58. Center for Assessment and Policy Development. Racial Equity Tool's Glossary. 2019; <http://www.racialequitytools.org/images/uploads/RET_Glossary913L.pdf>.

59. Alio AP, Richman AR, Clayton HB, Jeffers DF, Wathington DJ, Salihu HM. An ecological approach to understanding black-white disparities in perinatal mortality. *Maternal and child health journal.* 2010/07 2010;14:557+.

1. Glossary of Terms can be found in Appendix F [↑](#footnote-ref-1)