

Ohio Commission on Minority Health



Medical Expert Panel:

White Paper

*Achieving Equity and Eliminating Infant Mortality Disparities
within Racial and Ethnic Populations:
From Data to Action*

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While the white paper has benefited greatly from their input and guidance, the views presented in this discussion paper do not necessarily represent the decisions, policies or views of panel member organizations for which the contributors work.

We are grateful for everyone’s passion and commitment to address what is a public health crisis in Ohio and to develop recommendations designed to help Ohio’s most vulnerable citizens.

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Executive Summary

Background

This document summarizes the findings of the Ohio Commission on Minority Health's Medical Expert Panel (OCMHMEP). The OCMHMEP's sole purpose is to offer insight and recommendations to eliminate disparities in poor birth outcomes and infant mortality. Infant mortality is defined as the death of any live-born baby prior to his or her first birthday. National and state public health data reveal that Black/African-American babies die 2 times the rate of White/Caucasian babies. Ohio infant mortality disparities are among the worst in the nation.

Addressing infant mortality disparities is very complex and at times controversial. Some regard these disparities as a failure of government and social institutions to create environments conducive to good health. Some believe the disparities are a failure of the healthcare system while others believe disparities reflect an inability of women and families to take personal responsibility for their health. The OCMHMEP considered a variety of perspectives and acknowledges that infant mortality disparities emanate from the intersection of many social issues. These include, but are not limited to: poverty, structural racism, unequal economic opportunity, educational attainment, access to quality health care, access to family planning services, and ineffective policy coordination. Moreover, the political considerations surrounding this topic are extremely intense and multifaceted. The failure to acknowledge the political aspects of infant mortality would diminish the OCMHMEP's credibility to honestly and appropriately address the problem.

Process

OCMHMEP is comprised of experts in public policy development, advanced clinical practice and management of state and local public health interventions. Over a nine (9) week period, the OCMHMEP deliberated on the root causes of infant mortality disparities and strategies to address this problem. Throughout the development of the white paper, panelist sustained a mindset grounded in health equity as opposed to reducing health disparities. This is a very important distinction which posits that long-time success will be reflected by the lowest infant mortality rate among minorities that mirror those of the referent group with the **best** birth outcomes and survival rates. This does not mean that the death of infants within the first year of life will be totally eliminated. Rather, that all babies in Ohio regardless of race, ethnicity or social-economic status will have the same chances of survival and optimal health.

Categories and Scope of Interventions

The OCMHMEP identified six key focus areas that must be addressed in a comprehensive manner to achieve health equity in infant survival and birth outcomes. These include:

- Assuring access to uninterrupted insurance coverage;
- Building and sustaining capacity within communities and institutions to proactively overcome health inequities;
- Establishing and sustaining care coordination protocols to link women and families to comprehensive health and community services;
- The meaningful use of data to make informed decisions resulting in improved infant survival and birth outcomes, including public availability of provisional or preliminary data and the timeliness of final data;
- The development of a competent workforce to effectively address the multifaceted challenges of infant mortality;

- Directly addressing social determinants of health which are primary root causes of infant mortality and poor birth outcomes.

These six identified strategies must be implemented based upon the appropriate scope to achieve health equity. By scope we mean identifying the level of impact described as “upstream”, “midstream” and “downstream” interventions. Downstream interventions are those practices that influence health status by direct services. Midstream interventions are those that occur as the result of an organization’s sphere of influence. Upstream interventions involve policy approaches through laws, rules, and regulations. The strategies are not mutually exclusive to a particular scope and indeed function across a wide continuum.

The categories are further explained in the *Medical Expert Panel Overview* and will not be repeated here for the sake of brevity. However, as the reader reviews the entire document, there are four main points to keep in mind:

- 1) The goals established within this white paper are indeed aggressive. This was purposely done to avoid the tendency of supporting activities which function to **reduce** infant mortality disparities instead of pursuing interventions to achieve health equity. Achieving these goals requires a new mindset which emphasizes that changing social conditions is equally as important as improving healthcare services.
- 2) The challenge of infant mortality disparities and poor birth outcomes did not occur overnight. Therefore, substantial reductions in infant mortality disparities and poor birth outcomes will require a well-coordinated response over a period of years and resources that last beyond conventional budget cycles or priorities of any one administration.
- 3) No single institution has the capacity to solve this problem. Moreover, while substantial financial resources are needed, money alone will not solve this problem. Governmental agencies, community-based organizations, healthcare institutions, faith-based organizations and private industry must provide leadership within their spheres of influence to effect meaningful change. This requires unprecedented collaboration and the wisdom among partners to know when it is appropriate to lead and when is it appropriate to follow the leadership of others.
- 4) This white paper identifies specific policy initiatives to eliminate infant mortality disparities in a measurable way. Equally important, however, is the need to address difficult topics such as structural racism which directly impacts infant mortality disparities. This will require institutions, including government, to honestly acknowledge the existence of this problem and recruit subject-matter experts to dismantle structural racism in all of its forms and manifestations.

Medical Expert Panel Overview

Since 1987, the Ohio Commission on Minority Health (OCMH) has been at the forefront of addressing health disparities and health inequities in Ohio. The persistent nature of health inequities, the effect of social determinants and new opportunities for systemic change requires expertise to address old challenges and maximize new opportunities. In 2014, the OCMH established the Medical Expert Panel (*OCMHMEP*) as one of its strategies to overcome health disparities and achieve health equity in Ohio.

The *OCMHMEP* functions under the OCMH's Communication Committee and is comprised of experts with extensive experience in addressing inequitable health outcomes of minority populations based on policy formulation, modification of clinical practices and enhancement of public health interventions. The *OCMHMEP* is designed to think "outside the box" and to challenge conventional practices and policies. Often health improvement strategies are well intentioned but consistently fail to meet thresholds necessary to overcome disparities. Over a nine (9) week period, the OCMHEP deliberates on a particular health issue which culminates into a set of practical recommendations that if implemented can effectively address disparities. This particular panel was assembled to address Ohio's tremendous challenge of infant mortality disparities, which are among the worst in the United States.

Infant mortality is the death of any live-born baby prior to his or her first birthday. The infant mortality rate (IMR) is a public health indicator of a complex societal problem. Numerous frameworks have been used to help understand the primary determinants of infant mortality in a given society and to identify interventions to address this problem. The root social causes of infant mortality are persistent poverty, pervasive, and subtle racism, and the chronic stresses and other psychological and environmental barriers associated with these socio-economical conditions.

The vision required for health equity in birth outcomes is not characterized by a modest reduction of disparities among racial and ethnic minority communities. Rather, it is best characterized by the lowest infant mortality rate among minorities that is the same for the referent group with the best birth outcomes and survival rates. In Ohio, we must resist any efforts to reinforce the 'status quo' approaches which have continually failed to achieve the Healthy People 1990, 2000, and 2010 goals for African-American infant mortality.

This document provides unique insights of practitioners and policy makers who are on the front lines of addressing infant mortality disparities in Ohio. The recommendations go beyond the use of advanced medical technologies which can result in a live birth but whose influence does not prevent a baby from dying before their first birthday. These recommendations call for an integrated approach that includes, but is not limited to, access to quality health care; policy formulation which address social determinants; program integration; strategic use of data; and a thorough understanding of dynamic political processes which influence health outcomes (US Department of Health and Human Services Office on Minority Health, 2011). These recommendations are also grounded in health equity concepts and make a clear distinction between those intervention levels which are "upstream" "midstream" and "downstream." To put these recommendations into further context we have identified the following categories: capacity, access to care, care coordination, data, and workforce to ensure that they are actionable.

I. The Significance of Intervention Levels

Downstream interventions are those practices that influence health status by direct services. However, downstream interventions often do not address the circumstances that place people at increased risk for experiencing compromised outcomes in the first place. Midstream interventions are those that occur as the result of an organization's sphere of influence. However, organizations alone cannot eliminate infant mortality disparities. Upstream interventions involve policy approaches through laws, rules, and regulations. These interventions have the ability to influence the health of entire populations. Historically, there has been a great deal of emphasis (and heavy burden) on downstream approaches to improve the health of populations. However, while all approaches must be used, for the elimination of disparities a heavy emphasis must be placed on upstream interventions. The OCHMMEP believes that fully implementing the following recommendations that contain upstream, midstream and downstream interventions and if implemented over a protracted period will eliminate infant mortality disparities in Ohio.

II. Summary of Recommendations

A. Upstream Recommendation

Capacity

- Identify current (2015) and projected capacity (2016-2020) of advance practice nurses/nurse practitioners and other midlevel practitioners to deliver prenatal, postpartum and newborn care in medically underserved/health professional shortage areas across Ohio.
- Conduct a survey to determine the payment differential between Federally Qualified Health Centers (FQHC) practice sites, providers affiliated with health systems or providers working independently.
- Align with federal, state, and local efforts to overcome health care provider shortages.
- Verify race, ethnicity, and language of prenatal care providers who are credentialed providers with health systems and health plans.
- Discontinue cut-backs to or elimination of programs designed to improve infant mortality.

Access

- Ensure that Medicaid coverage for pregnant women up to 200% of the federal poverty level is maintained on an annual basis and continue to aggressively enroll Ohioans without insurance.
- Reinstate the Family Planning Waiver (State Plan Amendment). This Family Planning waiver has been found to be cost neutral and has demonstrated substantial savings in other states.
- Conduct an on-going environmental scan of proposed or existing state policies, which function to delay or interrupt essential services of low-income women based on the inability to secure co-payments for health services.
- Conduct periodic audits of Ohio Medicaid managed-care plans to verify providers have capacity to accept new patients and identify restrictions applied toward Medicaid enrollees e.g. practice hours and locations.
- Promote enrollment in Patient Centered Medical Homes as a vehicle to address disparate birth outcomes.
- Require Medicaid managed-care plans and health systems to verify the "active" or "open" status of providers to accept new patients. Work with Ohio Department of Health (ODH) and Ohio Association of Community Health Centers (OACHC) to identify geographical gaps in provider capacity.

- Configure interventions to eliminate infant mortality disparities to reflect a “life-course” perspective approach to assure they are comprehensive in nature and scope.
- Uphold and enhance policies, which support widespread family planning methods to reduce closely spaced births, unintended pregnancies, encourage childbearing in their 20s and 30s, and thereby reduce the chances of having a baby who dies in infancy³.
- Implement the original design of the Health Equity Workgroup formulated by the Ohio Commission on Minority Health, Ohio Department of Health, and the Ohio Department of Medicaid to establish baseline health equity metrics among the Medicaid Managed Care Plans.
- Advocate at the federal level for pregnancy to be a qualifying condition for year round Affordable Care Act enrollment.

Care Coordination

- Promote the Pathways Community Hub Model as one model of care coordination model to be considered to reduce health disparities.
- Ensure the Pathways Community Hub Model collaborates with public and nonprofit entities, along with Medicaid managed care plans, to ensure that women have timely access to culturally competent services.
- Ensure that women who are at high risk for poor birth outcomes have access to culturally competent services that will address medical, social and behavioral health needs during and post pregnancy.

Data

- Establish a statewide infant mortality dashboard that updates preliminary county-level infant mortality data quarterly and statewide infant mortality data at least quarterly.
- Develop aggressive infant mortality disparity targets that (1) do not function to perpetuate health disparities and (2) can be used as the basis for funding decisions and performance metrics for statewide health systems, economic and education targets such as employment and improved graduation rates.
- Establish with Ohio Collaborative to Prevent Infant Mortality to develop health equity metrics to set targets for the elimination of infant mortality disparities.
- Continue to invest in the state’s capacity to use geospatial technology.
- Identify and prioritize census geographies and incorporate small area analyses to identify disparate health outcomes, better focused interventions and evaluate effectiveness of interventions.
- Expand use of the Ohio Birth Registry to measure trends in the improvement of birth outcomes and reduction in health disparities in Ohio and in comparison to other states.
- Require the collection of data to include race, ethnicity and primary language within all state data systems and Medicaid managed care contracts.
- Acquire data from the Ohio Hospital Association on a quarterly basis to monitor the impact of clinical interventions in eliminating infant mortality disparities.

Workforce

- Adoption of the National CLAS standards that require training for healthcare, behavioral health and health related workforce.

- Increase cultural competency practices and policies throughout state and local health and human service agencies, healthcare systems and managed care plans to overcome unequal access to quality care and healthcare disparities.
- Survey existing health care providers including support personnel, therapists, and licensed counselors to determine baseline capacity of current CLAS competencies
- Advocate for state licensure boards to incorporate CLAS training courses as part of licensure and recertification.
- Identify existing staff who are qualified to serve within Ohio health and human services cabinet agencies as Health Equity Officers to work collaboratively with OCMH to establish a focus on disparities elimination and equity efforts across the state.
- Collect and publicly report data on the healthcare and health care related workforce diversity at the state level.
- Provide community-based training for Area Health Education Centers (AHEC) targeting underserved populations.
- Develop grants for Community Health Workers tuition reimbursement.
- Increase workforce diversity in the healthcare and healthcare related workforce.

Social Determinants

- Develop and fund statewide interventions that identify, detect, and dismantle structural racism in health care settings, and promote economic development, and education.
- Recommend that state agencies responsible for stimulating economic growth to develop investment plans in census geographies with the worst birth outcomes. Implement neighborhood level revitalization programs in historically under-resourced and marginalized communities targeting racial and ethnic communities. Such programs should be designed to address concerns like underperformance in school, higher drop-out rates, higher unemployment rates, higher imprisonment rates, higher rates of occupants working lower-wage jobs, etc. All these circumstances influence health and, influence the incidence of infant mortality.
- Directly leverage existing resources within health and human service cabinet agencies to address social determinants of health closely associated with poor birth outcomes.
- Work with the Ohio Hospital Association for the development of statewide perinatal regionalization.
- Provide preferential housing to homeless or displaced pregnant women using the Boston City model.
- Implementation of a continuum of educational endeavors for the baby, starting during pregnancy and continuing through the third grade that establishes and monitors the attainment of milestones, especially for children born to mothers from historically under-resourced neighborhoods:
 - During pregnancy: Help-Me-Grow or Parents as Teachers
 - Early Head-Start
 - Head Start
 - Upon enrollment into Kindergarten and through the 3rd grade establish standards and attainment of milestones that ensures that by the 3rd grade children are “reading to learn” and no longer “learning to read”.

B. MIDSTREAM

Capacity

- Conduct an audit of health system prenatal clinics to determine capacity for services and quality of services provided.
- Work with hospital trade associations to conduct audits of health system prenatal clinics to determine capacity for services.
- Address the issues of lost compensation among providers who are willing to serve Medicaid enrolled moms if the women are sanctioned during their pregnancy.
- Incentivize health care providers to accept Medicaid patients by improving overall reimbursement, as well as the efficiency of the payment reimbursement by up to 50%.
- Provide resources to increase the number of providers who provide interpreter services.

Access to Care

- Increase efficiency of presumptive eligibility with a focus on rapid acquisition of a Medicaid number to reduce barriers to prenatal care.
- Assure that women have timely and culturally competent services which adhere to the US Department of Health and Human Services' Office on Minority Health's Culturally and Linguistically Appropriate Standards.
- Coordinate with systems that serve women who are homeless, ex-offenders, undocumented, in recovery and receiving treatment for addiction, or have behavioral health diagnoses to ensure they are receiving timely and appropriate preconception and prenatal care.

Care Coordination

- Ensure there is integration and coordination of behavioral health, medical care, health education, smoking cessation programs, chronic disease self-management programs and peer support programs that are culturally appropriate and patient centered.
- Enact safeguards to prevent the interruption of prenatal care services during eligibility and redetermination.
- Ensure all eligible women are enrolled and maintain insurance coverage during and post pregnancy.

Data

- Assure that new and existing data systems adhere to the HHS Data Standards for Race, Ethnicity, Primary Language, and Disability Standards.
- Support local health departments and other relevant entities in the acquisition and use of geospatial-mapping technology to identify and prioritize population clusters that demonstrate disparities in education, income, housing (rental vs. owned), and other high need census geographies.
- Provide monthly reports using preliminary data on infant mortality.
- Combine data sets from public health (e.g., Vital Statistics), state agencies, and the Ohio Hospital Association to develop near real-time data to plan, monitor and evaluate interventions.
- Require that population surveys collect and report data on race, ethnicity and primary language.
- Collect and publicly report disparities data in Medicaid and Children's Health Insurance Program (CHIP).

- Monitor and publicly report health disparities trends in federally-funded programs.

Workforce

- Recommend the review of policy guidelines and placement protocols of the National Association of Physicians and Nurse Practitioners to ensure the prioritization of racial and ethnic workforce diversity.
- Collect and publicly report data on workforce diversity at the state and local levels, as well as within health system and health plans to assure equal access to care and improved patient engagement.
- Increase patient engagement capacity of the workforce to improve patient participation in clinical decision-making.
- Acquire health researcher capacity at OCMH.
- Establish more robust, mutually accountable strategic collaboration with entities across the state that addresses health disparities.
- Provide loan repayment preference for experience in cultural and linguistic competency.

Social Determinants

- Provide economic incentives for the implementation of regional strategies that address social economic status variables employment, graduation rates and housing.

C. DOWNSTREAM

Capacity

- Assess the actual availability of prenatal care providers serving low-income women through regular monitoring and public reporting.
- Increase earlier access to prenatal and preconception care through patient centered medical homes and other advanced practice models to identify risks and improve the health of each woman before pregnancy.
- Identify providers who have extended hours to accommodate working pregnant women who need access to prenatal care and have experienced service barriers.
- Review Medicaid plan policies and protocols for transportation services to eliminate barriers of access e.g. 48 hour advance request for pick-up; limitation of number of children that can be transported with a mother to appointments; limitation of only picking up a mom from the address “on file” when she enrolled with a plan.

Access to Care

- Provide timely and appropriate access to care that meet the needs and preferences of ethnic and minority women to include targeting of high disparate racial and ethnic communities.
- Ensure family planning services are a covered benefit and readily accessible to women to prevent unwanted and closely spaced pregnancies that result in more adverse birth outcomes.
- Provide access to culturally relevant tobacco cessation services for pregnant women.
- Provide support for weight loss counseling to improve preconception health status for women, with a priority on women who are hypertensive or diabetic.
- Survey Medicaid-approved practices to assess diversity of providers and clinical teams.
- Provide timely and appropriate access to transportation to ensure access to care.

- Provide access to interpreter services that meet the needs of ethnic and minority women.

Care Coordination

- Expand Ohio’s Managed Care programs to provide care coordination to all pregnant women. Such expansion should strongly encourage the preferential recruitment of individuals from targeted communities to be trained as Certified Community Health Workers (CCHW). These CCHW’s should then work directly with patients, instead of telephonic case management, to coordinate services.
- Ensure outreach services such as home visiting and community based care coordination provided by CHWs to families and women who are assessed as high risk pregnancies as well as mothers of premature infants.
- Promote the use of the First Steps Hospital Discharge Intervention/Home Visitation intervention protocol as one means of ensuring appropriate care coordination.

Data

- Develop protocols for providers to use Electronic Health Records to identify high-risk mothers and get them into care such as through the use of algorithms to classify members as high risk.
- Ensure appropriate training of healthcare staff to obtain Racial, Ethnicity and primary language information.

Workforce

- Mandate the provision of Cultural and linguistic competency training to improve health care professionals’ ability to provide quality care to diverse populations.
- Identify providers who are able to offer services in languages other than English via interpreters or a qualified provider.
- Promote primary education science, technology, engineering and math program development, especially in under-resourced communities, and provide the resources necessary to assist students from these neighborhoods to successfully matriculate through such programs.

Social Determinants

- Ensure that interventions address the impact of social determinants of health on birth outcomes.

III. Alignment with National, Federal, and State Plans

The *OCMHMEP* is in alignment with the many national, federal, and state health equity efforts. According to the 2013 U.S. Department of Health and Human Services’ (HHS), Secretary Advisory Committee on Infant Mortality (SACIM), “Our ability to prevent infant deaths and to address long-standing disparities in infant mortality rates between population groups is a barometer of our society’s commitment to the health and well-being of all women, children, and families.”

The SACIM recommendations focused on the need to:

- reflect a life course perspective;
- engage and empower consumers;
- reduce inequity and disparities and ameliorate the negative effects social determinants;
- advance system coordination and integration;
- protect existing maternal child health programs;
- leverage change through multi-sector, public and private collaboration; and
- define actionable strategies that emphasize prevention and continue to be informed by evidence and measurement.

The *OCMHMEP* recommendations are also aligned with the Robert Wood Johnson Foundation’s core mission for public health, “to reduce the leading causes of preventable death with special emphasis on underserved populations and health disparities, this serves as our perpetual North Star” (The High Achieving Governmental Health Department, 2014).

Additionally, *OCMHMEP* concurs with the findings of the 2015 Minnesota Infant Mortality Reduction Plan. This document states that “Health is created through the interaction of individual, social, economic, and environmental factors (as illustrated by Graph 1), and in the systems, policies, and processes encountered in everyday life. These include job opportunities, wages, transportation options, the quality of housing and neighborhoods, the food supply, access to health care, the quality of public schools and opportunities for higher education, racism and discrimination, civic engagement, and the availability of networks of social support. When groups (within a state) face serious social, economic, and environmental disadvantages, such as structural racism and a widespread lack of economic and educational opportunities, health inequities are the result.”

Consequently, communities across *Ohio* are devastated by high rates of infant deaths, diabetes, cardiovascular disease, cancers, and other preventable infectious diseases. Policy and decision makers often do not make the connection between these social determinants of health and the resulting drain on resources. The inability to make the connection perpetuates skyrocketing costs and limited improvements in disparate health outcomes (Infant Mortality Reduction Plan for Minnesota, 2015).

Graph #1



Infant Mortality Reduction Plan for Minnesota, 2015

IV. Statement of Problem

Infant mortality is defined nationwide as the death of a live-born baby before his or her first birthday. Infant mortality rate is calculated as the number of such deaths per 1,000 live births. The Ohio Department of Health reports that infant deaths in Ohio declined from 1,084 in 2011 to 1,024 in 2013, although Ohio’s 2013 overall infant mortality rate still remains higher than the national average by 23 percent.

Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. For three decades, Healthy People has established benchmarks and monitored progress over time in order to: encourage collaborations across communities and sectors, empower individuals toward making informed health decisions and to measure the impact of prevention activities. The overarching Goals for Healthy People 2020 are to attain high-quality, longer lives free of preventable disease, disability, injury, and premature death; achieve health equity, eliminate disparities, and improve the health of all groups; create social and physical environments that promote good health for all; and promote quality of life, healthy development, and healthy behaviors across all life stages. The Healthy People 2020 Goal for Infant Mortality rates are 6.0 for all populations.

It is important to note that Ohio have achieved this goal for white infant mortality rates. Ohio has achieved the Healthy People national infant mortality rate goals for White infants for the 3 of the 4 Healthy People decades (1990, 2000, and 2020 respectively), however, Ohio has never achieved the Healthy People Black Infant Mortality Rate goal established in any decade, and Ohio’s current Black infant mortality rate still exceeds the Healthy People Black infant mortality rate goal for 1990. Ohio infant mortality disparities are substantial in that black infants die at more than twice the rate of white infants as shown in Table 1.

Table 1:

Ohio Infant Mortality Rate (Number of Infant Deaths per 1,000 Live Births)

Ohio Infant Mortality Rate (Number of Infant Deaths per 1,000 Live Births)		
	<u>2013</u>	<u>2012</u>
Overall:	7.4	7.6
White:	6.0	6.4
Black:	13.8	13.9

Table 1: Ohio Infant Mortality Rates by Race, 2012 - 2013, Ohio Department of Health – Office of Vital Statistics, 2015

A. Clinical & Non-Clinical Factors

Clinical

The *OCMHMEP* recognizes that the three leading causes of infant deaths in Ohio are prematurity/pre-term births, sleep-related deaths and birth defects (Ohio Department of Health, 2015). The *OCMHMEP* has identified significant downstream strategies to contribute to the elimination of disparities in birth outcomes. *OCMHMEP* acknowledges that these practices are not widely implemented throughout Ohio. In order to influence infant mortality disparities these recommendations must be available as a comprehensive array of services that are routinely offered to racial and ethnic women of childbearing age. If these services are unavailable, the healthcare system or practice must make significant investments to bring them into fruition.

Non-Clinical

According to the 2010, World Health Organization’s Commission on Social Determinants of Health, “Social Determinants of Health (SDOH) are defined as ...”the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness...These social conditions are the single most important determinant of one’s health status *and* these social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries,

communities or groups. The structural roots of health inequities lie within education, taxation, labor and housing markets, urban planning, government regulation, health care systems, all of which are powerful determinants of health, and ones over which individuals have little or no direct personal control but can only be altered through social and economic policies and political processes.”

Non-clinical factors have a tremendous effect on overall health and on infant mortality. We frame them in order to influence clinical practices and policy formulation that results in health equity in birth outcomes. The *OCMHMEP* has identified upstream, midstream, and downstream strategies to eliminate disparities in birth outcomes.

The *OCMHMEP* contends that the root causes of infant mortality disparities begin during critical periods in the health of women and families and within the social, economic, and environmental conditions of communities where the child is conceived. Because factors that underlie infant death are multiple and complex, there is no single “silver bullet” to reduce infant mortality. Strategies to reduce infant mortality requires attention to a variety of risk factors with prevention being the most cost-effective approach. Moreover, this requires a broad based coordinated effort across private and public stakeholders, which, include but are not limited to, government agencies, educational systems, law enforcement, hospital systems, payers, funders, housing agencies, transportation, business roundtables, consumers, community based organizations, and faith based organizations.

Assembling this broad-based coalition is easier said than done because of a lack of understanding of the threat posed by poor birth outcomes on financial, governmental, communal, and familial “bottom lines.” There is also confusion or a lack of ownership as to who is responsible for addressing and ameliorating this problem. The *OCMHMEP* acknowledges that historically this responsibility has been incorrectly and exclusively assigned to the medical community, specifically health systems. However, no one entity is sufficiently equipped to eliminate infant mortality. Therefore, the non-clinical recommendations reflect the broad based effort needed to solve this problem.

B. Statistical Overview

The *OCMHMEP* acknowledges the importance of using various data sets to understand Ohio’s disparate infant mortality burden. It is important to compare Ohio’s burden relative to international, national, and state level data to characterize the extent of the problem.

Infant Mortality: United States compared to other countries:

According to the Report of the Secretary’s Advisory Committee on Infant Mortality, for the HHS Action and Framework for a National Strategy in January 2013, “. . .in 2010, the US ranked 27th in infant mortality compared to other nations in the Organization for Economic Cooperation and Development (OECD). The US infant mortality rate is higher than the industrialized country average of 5 per 1,000 live births and is greater than the infant mortality rates in most of Western Europe, Canada, Israel, and Japan. Particularly worrisome is that the US rank among nations in the OECD group has consistently dropped since 1960 when the United States ranked 12th. By 1980, the US ranked 19th, dropping to 30th in 2005, and then 27th in 2010.

Differences in how live births are recorded in the OECD nations may affect some of the comparisons; however, researchers at the National Center for Health Statistics (NCHS), CDC, and HHS do not report this to be a main cause of our low ranking. Better explanations for the differential in infant mortality rates between the United States and other OECD nations are differences across these nations in rates of preterm and low birth-weight births and persistent racial/ethnic disparities in U.S. infant mortality.”

Infant Mortality: Ohio compared to other states for number of births and ranking:

Table 2:

Ohio is the 7th most populous State in the United States and is 7th for the number of births occurring in a State/year.

<u>State Rank by pop.</u>	<u>2010 US Census:</u>	<u># births in 2013 (rank):</u>
1. California	37, 253,956	494, 705 (1)
2. Texas	25, 145, 561	387, 340 (2)
3. New York	19, 378, 102	236, 980 (3)
4. Florida	18, 801, 310	215, 407 (4)
5. Illinois	12, 830, 632	156, 931 (5)
6. Pennsylvania	12, 702, 379	140, 921 (6)
7. Ohio	11, 536, 504	138, 936 (7)
8. Michigan	9, 883, 640	113, 489 (10)
9. Georgia	9, 687, 653	128, 748 (8)
10. North Carolina	9, 535, 483	119, 002 (9)

(Martin JA, Hamilton BE, Osterman MJK, et al. Births: Final data for 2013. National vital statistics reports; vol. 64 no 1. Hyattsville, MD: National Center for Health Statistics. 2015.)

Table 3:

Of the 10 most populous States, Ohio has the highest overall infant mortality rate:

<u>State:</u>	<u>Overall IMR: (2010-2012):</u>
USA	6.07
1. California	4.66
2. Texas	5.88
3. NY	5.07
4. FL	6.37
5. IL	6.64
6. PN	6.92
7. OH	7.73
8. MI	6.87
9. GA	6.48
10. NC	7.23

(User Guide to the 2012 Period Linked Birth/Infant Death Public Use File (2012). Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics Division of Vital Statistics.

Table 4:
Of the 10 most populous States, Infant mortality rates, by race,
(2010-2012 IMR/State/Race):

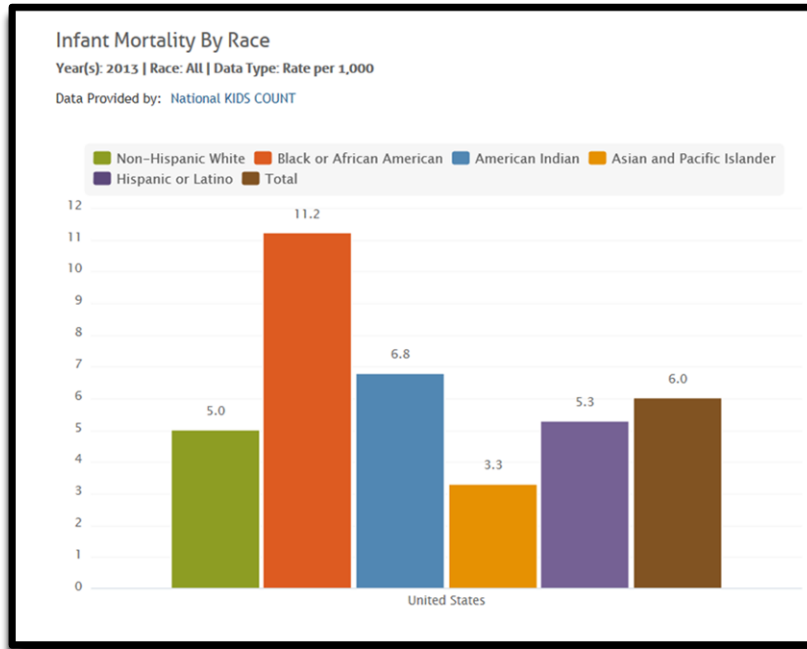
<u>State:</u>	<u>NHW:</u>	<u>NHB:</u>	<u>AI/AN</u>	<u>A/PI</u>	<u>Hispanic</u>
USA:	5.10	11.37	8.29	4.23	5.17
CA	3.93	9.13	6.94	3.79	4.58
Texas	5.22	10.67	*	3.77	5.40
NY	3.92	9.30	10.24	3.49	5.07
FL	4.98	11.06	*	4.04	4.87
IL	5.05	13.17	*	5.30	5.65
PN	5.37	12.74	*	3.92	7.63
OH	6.45	13.87	*	4.61	6.45
MI	5.24	13.60	12.20	*	4.02
GA	5.04	9.72	*	3.39	4.43
NC	5.44	12.74	11.18	4.38	5.46

(User Guide to the 2012 Period Linked Birth/Infant Death Public Use File (2012). Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics Division of Vital Statistics. Red: State with the highest rate. NHW: Non-Hispanic White NHB: Non-Hispanic Black, AI/AN: American Indian or Alaska Native A/PI: Asian or Pacific Islander.)

According to the data presented above for the aggregate period of time from 2010-2012, of the 10 most populous states, which are also the states that experience the most births per year/State, Ohio ranks 7th for the number of births and has the highest Overall, White, and Black infant mortality rates, and the second highest infant mortality rates for Asians/Pacific Islanders and for Hispanics. The data presented in Table 2, Table 3 and Table 4 above suggest that when comparing Ohio’s IMR to States that are responsible for a large number of births, Ohio does not compare well for all racial groups and, for all groups compared, Ohio’s IMRs are above national rates.

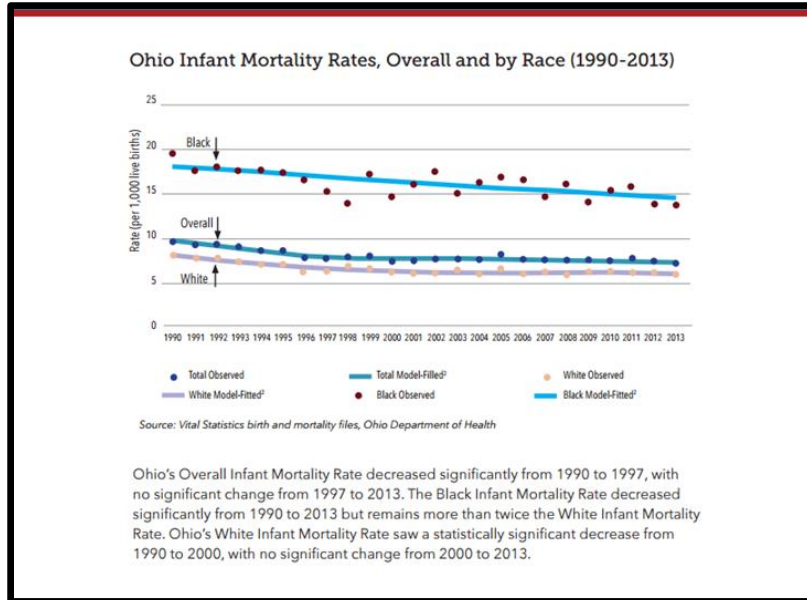
Since 2010, when comparing Ohio’s overall, White, and Black infant mortality rates to all States (not just the most populous states), Ohio’s infant mortality rates rank amongst the highest in the nation. It is important to note that not only is Ohio’s Black IMR more than double Ohio’s White IMR, the Black IMR for Ohio is the highest recorded in this data set, after accounting for 11 States that did not record a Black IMR because they did not meet the standards of reliability based on fewer than 20 deaths in the 3-year aggregate period of time. This unacceptable ranking for Ohio only escalates the importance of decision and policy makers to initiate broad based cross system strategies to address disparate birth outcomes.

Graph 2



National Infant Mortality by Race, 2013, National Kids Count

Graph 3:



Ohio Infant Mortality Rates by Race, 1990-2013, Ohio Department of Health – Office of Vital Statistics, 2015

Table 5

Neonatal, postneonatal, and infant mortality, Ohio and counties, 2007-2011 Rates are per 1,000 births Source: Ohio Department of Health, Office of Vital Statistics									
county	GROUP	YEAR	NUMBER NEONATAL DEATHS	RATE NEONATAL	NUMBER POSTNEO NATAL DEATHS	RATE POSTNEO NATAL	TOTAL NUMBER INFANT DEATHS	RATE INFANT MORTALITY	NUMBER BIRTHS
OHIO	TOTAL	2007	781	5.18	382	2.53	1,163	7.71	150,784
OHIO	TOTAL	2008	755	5.08	389	2.62	1,144	7.70	148,592
OHIO	TOTAL	2009	750	5.19	359	2.48	1,109	7.67	144,560
OHIO	TOTAL	2010	725	5.21	343	2.47	1,068	7.68	139,034
OHIO	TOTAL	2011	724	5.25	362	2.62	1,086	7.87	138,024
OHIO	WHITE	2007	512	4.22	257	2.12	769	6.34	121,267
OHIO	WHITE	2008	461	3.88	253	2.13	714	6.00	118,901
OHIO	WHITE	2009	494	4.28	244	2.12	738	6.40	115,328
OHIO	WHITE	2010	482	4.50	206	1.92	688	6.42	107,189
OHIO	WHITE	2011	439	4.18	233	2.22	672	6.41	104,906
OHIO	BLACK	2007	261	10.05	123	4.74	384	14.79	25,959
OHIO	BLACK	2008	290	11.10	134	5.13	424	16.23	26,131
OHIO	BLACK	2009	251	9.87	111	4.36	362	14.23	25,433
OHIO	BLACK	2010	231	9.84	132	5.62	363	15.47	23,469
OHIO	BLACK	2011	256	11.01	115	4.95	371	15.96	23,252
OHIO	AMER IND	2007	0	0.00	0	0.00	0	0.00	285
OHIO	AMER IND	2008	0	0.00	0	0.00	0	0.00	264
OHIO	AMER IND	2009	0	0.00	0	0.00	0	0.00	283
OHIO	AMER IND	2010	1	3.95	0	0.00	1	3.95	253
OHIO	AMER IND	2011	0	0.00	2	8.03	2	8.03	249
OHIO	ASIAN/PI	2007	8	2.44	2	0.61	10	3.06	3,273
OHIO	ASIAN/PI	2008	4	1.21	2	0.61	6	1.82	3,296
OHIO	ASIAN/PI	2009	5	1.42	4	1.13	9	2.55	3,525
OHIO	ASIAN/PI	2010	11	3.15	5	1.43	16	4.58	3,494
OHIO	ASIAN/PI	2011	6	1.75	3	0.88	9	2.63	3,422
OHIO	HISPANIC	2007	35	5.31	21	3.19	56	8.50	6,588
OHIO	HISPANIC	2008	29	4.21	13	1.89	42	6.10	6,887
OHIO	HISPANIC	2009	30	4.36	21	3.05	51	7.41	6,879
OHIO	HISPANIC	2010	29	4.60	19	3.01	48	7.61	6,304
OHIO	HISPANIC	2011	31	4.90	12	1.90	43	6.80	6,324
OHIO	NON-HISP	2007	746	5.22	360	2.52	1,106	7.73	143,042
OHIO	NON-HISP	2008	726	5.16	376	2.67	1,102	7.83	140,679
OHIO	NON-HISP	2009	720	5.26	338	2.47	1,058	7.73	136,941
OHIO	NON-HISP	2010	695	5.27	324	2.46	1,019	7.73	131,895
OHIO	NON-HISP	2011	683	5.23	360	2.68	1,033	7.91	130,524
OHIO	UNKNOWN	2010	0	0.00	0	0.00	0	0.00	4,629
OHIO	UNKNOWN	2011	23	3.71	9	1.45	32	5.17	6,195

Table 5: Neonatal, post neonatal, and infant mortality, Ohio and counties, 2007-2011, Rates per 1,000 births
Source: Ohio Department of Health, Office of Vital Statistics

Graph 2 is a national infant mortality data set by race and ethnicity provided by Kids Count which reveals the disparity in the White IMR rate versus African-American, American Indian and Hispanic IMR rates. Graph 3 is a state data set from the Ohio Department of Health, Epidemiology Division, which shows Ohio's infant mortality rates by race from 1990-2013. While Table 5 shows infant mortality rates by race and ethnicity for the time period of 2007-2011.

V. Addressing Health Disparities in Infant Mortality while Pursuing Health Equity

Despite medical advances resulting in longer and healthier lives, persistent and well-documented health disparities exist between different racial and ethnic populations. Therefore, the ability of these groups to attain the best health possible, or achieve health equity, remains elusive due to social, economic, and environmental disadvantage experienced where individuals live, learn, work and play (U.S. Department of Health and Human Services Action Plan, 2011). While there are decades of research to document health disparities and the importance of social determinants of health, much of this work has been unfamiliar to leaders outside of public health (Robert Wood Johnson, 2014). Since 2002, the annual Agency for Healthcare Research and Quality (AHRQ) and the National Health Disparities Reports (NHDR) have documented the status of healthcare disparities and quality of care received by racial, ethnic and socio-economic groups in the United States. The 2008 National Healthcare Disparities Report documented that racial and ethnic minorities often receive poorer quality of care and face more barriers in seeking care including preventive care, acute treatment, or chronic disease management, than do non-Hispanic White patients.

Health disparities are persistent in virtually every health condition and disease. The consistent gap in health disparities and health inequities highlights the importance of raising the awareness and broadening the leadership to develop policy strategies to eliminate health disparities, improve healthcare access, increase workforce diversity, and cultural/linguistic competency, and to prioritize the availability and meaningful use of health data and research for all populations (National Partnership for Action, 2011)

The health equity lens of this white paper is intended to be a catalyst for change. Thus, it focuses on the root causes of social determinants of health to influence one's overall quality of life.

VI: Understanding the Impact of Race and Racism on Infant Mortality

In Ohio, Black babies are twice as likely to die during the first year of life as white babies. The persistence of this racial disparity in Ohio has existed over 35 years (for as long as Ohio has reported data by race). The *OCMHMEP* acknowledges the growing body of research that demonstrates the impact of racism as a social determinant on infant mortality. However, key to understanding this issue is to first acknowledge the complex nature of race as a social construct and adverse reactions to race, which is in fact racism. It is also important to recognize a fundamental need to overcome inertia within institutions to address the impact of racism in its various forms. The prerequisite of this however is to first, understand the different levels of racism, and then connect it to birth outcomes and infant mortality.

Moreover, there are different levels of racism. While racial disparities for infant mortality are evident, the ability to address the causal factors constitutes major challenges for communities, practitioners, and institutions working to address this problem.

The work of noted researchers and institutions such as Dr. Camara P. Jones, Dr. Michael Lu, Dr. James Collins, and the Kirwan Institute provide useful concepts to understand the impact of racism. Applied in a manner that provides a strategic response and when applied appropriately, these concepts can address the issue of racism and help us to improve birth outcomes. While a comprehensive review of the impact of racism will not be addressed in this paper, the *OCMHMEP* would like to highlight some of the research findings.

For instance, Dr. Camara Jones provides a useful framework that identifies three levels of racism: personal, interpersonal and structural. This is extremely helpful so that interventions designed to address the impact of racism can be appropriately applied to achieve measureable results. Therefore, we could use this particular frame to address the issue of health care disparities, especially at the interpersonal or structural level.

Dr. James Collin's research demonstrates how the issue of race and disparate birth outcomes transcend obvious demographic characteristics such as income, education, and poverty. Dr. Collins demonstrated that a black woman with a professional degree is more likely to experience a poor birth outcome than a white woman without a high school diploma. He also conducted studies on the birth outcomes of women who immigrated to the United States from Africa and compared their birth outcomes to White and Black American residents. This research reveals that first generation women from Africa have birth outcomes and low birth rates comparable to white women. However, after one generation in the United States their daughters begin to experience poor birth outcomes and disparate low birth rates. This research compels institutions practitioners to rethink the issue of race and birth outcomes, especially when designing interventions.

Dr. Michael Lu's research encompasses the Life- Course Perspective meaning that birth outcomes are the product of not only nine months during pregnancy but experiences over the lifespan. Chronic and repeated stress over the mother's lifespan can adversely influence birth outcomes. Dr. Lu posits that the increased risk of Black/African-American women may be traced to greater exposure to stress hormones earlier in life during pregnancy and during gestation (Lu, 2010).

Given the availability of data and research, the *OCMHMEP* recommends that any serious initiative to overcome disparities in birth outcomes and infant mortality must contain a robust set of strategies to address race and racism. Moreover, subject-matter experts who address racism must be involved in the design, implementation, and evaluation of interventions. Lastly, interventions must be configured to operate at multiple levels

VII. Rationale and Discussion

A. Capacity

In order to ensure that there is timely and appropriate access to care that meets the needs and preferences of ethnic and minority women, there must be adequate capacity within the primary care and acute care settings. Assessment of the actual vs. "registered" prenatal care providers who are serving low-income women should be conducted. While medical providers may accept Medicaid patients, many private practices and practice panels implement restrictions on the number of Medicaid patients they will accept, along with other provisional criteria such as no new patients or only accepting a patient if they are currently registered with the practice (for example, someone who lost their private insurance while a patient with the practice and is now enrolled in Medicaid).

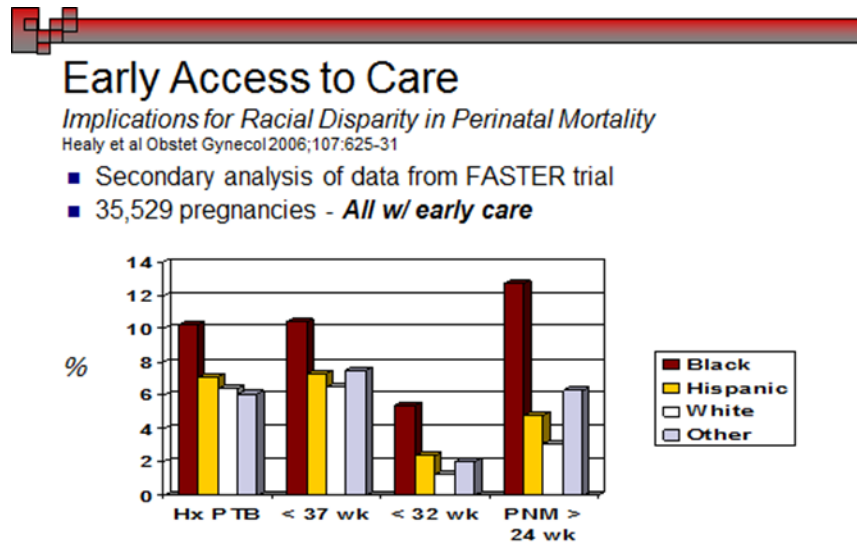
Additionally, there needs to be a way to identify providers who can help decrease the disparity in healthcare outcomes for populations who do not speak English as a first language. There are differences in healthcare use attributed to English-language fluency. Increasing the numbers of providers who are capable of caring for women in their native language can help decrease language as a barrier to quality prenatal care. (Fiscella, Franks, & Doescher, 2002) Efforts must be increased to address medical shortage areas where there are limitations in the distribution of providers in rural areas and in urban communities where the physician to patient ratios are higher than other regions.

B. Access to Care

In Ohio, specific attention needs to be paid to reducing risk factors and assuring the broadest access to family planning, prenatal care, and inter-conception care. Given the association between the lack of and delay to prenatal care and adverse birth outcomes, the highest priority needs to be focused on assuring access to coverage. Preterm birth is a significant factor in infant mortality due in part to barriers accessing care. Therefore, it is important that access to care occur as early as possible. Racial disparities in perinatal mortality can persist in contemporary obstetric practice despite early access to prenatal care as indicated by Graph 4. Which speaks to the importance

of having a medical home and accessing preconception and inter-conception care allows for the diagnosis and control chronic clinical conditions that have the potential of placing pregnant women at increased risk of compromised birth outcomes. Improving maternal health prior to pregnancy and between pregnancies must be a high priority. This includes of decreasing risk factors related to infant mortality.

Graph 4



Healy et al. (2006). Early Access to Care: Implications for Racial Disparity in Perinatal Mortality. *Obstetrics and Gynecology*, 107, 625-31

Risk factors such as obesity, hypertension, smoking, and drug use are often interrelated and occur simultaneously. For instance, hypertension is the strongest predictor of low birth weight (LBW) leading to a 2-5 times increased risk of having a LBW infant. Across all ethnic and racial groups chronic and pregnancy induced hypertension were the strongest predictors of pre-eclampsia leading to an increased likelihood of premature deliveries (Maternal Obesity and Diabetes as Risk Factors for Adverse Pregnancy Outcomes, 2005). Controlling these conditions before pregnancy decreases the risk of infant mortality. In addition, the rate of infants born with Neonatal Abstinence Syndrome (NAS) increased by six fold over the course of 7 years affecting 14 of 10,000 live births in 2004 and 88 of 10,000 live births in 2011 (Ohio Mental Health and Addiction Services, 2013). Efforts to ensure adequate access to drug treatment programs as well as smoking cessation services that address clinical and environmental factors are associated with improved birth outcomes.

Family planning services are one of the most effective interventions to reduce human and financial costs of unplanned births, making family planning one of the most impactful interventions for improving infant mortality (Center for Disease Control and Prevention, 2006). Although the Family Planning Waiver was available to states in 1986, Ohio did not adopt these essential services until 2012. Unfortunately, these services have been discontinued without the provision of a public analysis of the program outcomes and cost savings. Consequently, in Ohio, family planning services are not as widely available as they should be. We recommend increased efforts to provide and expand family planning services to achieve improved health of women, optimal spacing between pregnancies, and overall lower health care costs associated with high-risk pregnancies.

Home visiting is also another useful intervention to connect women to appropriate care and follow-up. Home visiting programs provide information to practitioners about how they should adjust clinical interventions and

arrange for non-clinical organizations to address the social and environmental barriers that women and families face to lead to better birth outcomes and facilitate survival during the first year of life.

At this juncture, it is important to adopt the mindset that infant mortality and poor birth outcomes cannot be solved by clinical interventions alone. Infant mortality is also impacted by socio-economic challenges. According to the 2015 Ohio Poverty report, approximately ninety percent of Ohio's counties had significantly higher poverty rates during 2009-2013 as compared to 1999. Poverty often erects structural barriers that restrict the ability to obtain and/or maintain good health outcomes. These structural barriers include poor housing options, underemployment, unemployment, under performing schools and lack of transportation. Any overarching strategies to address infant mortality must account for poverty and social economic factors (Applegate, 2013).

C. Care Coordination

Care coordination is the work of identifying at risk individuals and ensuring they connect to care. Connection to health, behavioral health, and social service interventions prevents catastrophic outcomes and reduces expense.

The United States has the best medical care in the world. However, those who are impoverished and most at risk (pregnant women, and children) too often do not connect to that care. These individuals are concentrated in impoverished and culturally isolated neighborhoods and isolated rural settings. They lack transportation, telephones, and have other priorities for survival (food, clothing, utilities, and housing).

Ohio's care coordination business model must focus on mitigating risk for catastrophic health conditions, including poor birth outcomes and infant mortality. Barriers related to social economic status can be impacted through the leveraging of existing resources and intervention. Communities can work together to reach these populations without duplication. The tools, strategies, and proven approaches to care coordination and medical care are ready and available.

One example of this is the Pathways Community Hub Model. This evidenced based model which has demonstrated effectiveness within racial and ethnic populations, received funding support in the 2016/2017 state budget as part of the infant mortality reduction policy. These Hubs specialize in connecting women to vital resources that address basic needs such as housing, nutrition, transportation, and adequately supply of healthy food. These Hubs also focus on risky behaviors such as alcohol and drug addiction, smoking, and behavioral health conditions such as depression. Maintaining connections with ongoing behavioral health treatment is especially critical during pregnancy to avoid harm to the pregnant woman. These risk factors are unfortunately too prevalent among women of color. These conditions are also associated with a delay in seeking treatment. This model has also been endorsed by the Agency for Healthcare Research and Quality, National Institute of Health, Center for Disease Control and Prevention, Center for Medicare and Medicaid Services and other federal and national organizations.

During this new era of Accountable Care Organizations (ACO) and with the increased demand for effective care transition programs, physicians and health systems will face significant challenges in coordinating care for certain patient cohorts who will not respond to traditional practice-based care coordination and telephonic case management. The patients experience poor birth outcomes, high emergency department (ED) utilization, poor medication management, higher acuity, and hospital readmissions. This uncontrolled utilization is often the result of unstable living arrangements and poor adherence to treatment and regular care and adverse health outcomes.

D. Data

Progress toward reductions in infant mortality and associated racial and ethnic disparities can only be determined by sustained measurement of meaningful process and outcome metrics. Subjective descriptions of improvement are no longer acceptable for actual progress. Only well-established metrics that can be independently verified

should be accepted to measure a decline in infant mortality. The *OCMHMEP* prioritizes the availability and meaningful use of data, which includes the timeliness of final data as well as the importance of making provisional or preliminary data available. It is important to note that policy makers, healthcare systems, service providers and consumers cannot afford to wait over two years to find out if implemented interventions were effective. The sustainability of our collective effort is largely dependent upon our ability to demonstrate improved birth outcomes along with a return on investment.

Both population level and granular REAL (Racial, Ethnic, and Language) data contain important markers of progress toward fewer infant deaths in all communities. Systemic interventions aimed at populations are best measured by population-level data, even when such data are imperfect. REAL data are equally important in discerning progress or absence of change in a specific site. One example is the Ohio Perinatal Quality Collaborative 39 Week Project, where population-level data from the Ohio Birth Registry was used as an external marker for the validity and generalizability of hand-collected data obtained at the hospitals participating in the project. Granular data showing improvement at some sites was accompanied by birth registry data that did not match; the resulting investigations and resolution led to improved communication within such sites, and eventually to a successful statewide project to improve the accuracy and timeliness of the birth registry. In this example, granular data drove improvement in the population data collection. The reverse has also occurred, where apparent success in granular data was not accompanied by corresponding trends in population-level data in an Ohio Better Birth Outcomes project. Further review led to changes in granular action steps so that true progress is underway as reported by both population and hand collected measures.

In marking progress toward reductions in infant mortality, the Ohio Birth Registry data reflects the slow rate of improvement over time in Ohio, and allows comparison to other similar states that can enable inquiries about steps taken in successful states that might also help Ohio. The Birth Registry allows measurement of outcomes, such as the incidence of fetal and infant deaths, and of processes, such as pre-delivery administration of corticosteroids to mothers who will soon give birth prematurely. Trends over time display the effect or lack thereof, of interventions such as Ohio Hospital Compare. Announcement that rates of scheduled cesarean births before 39 weeks gestation that lacked a medical indication and use of antenatal corticosteroids would be published online led promptly to improved documentation of use and subsequently to actual improvements.

The identification and removal of the numerous social determinants of health outcomes in reproductive health requires collection of granular data.

To make data useful to a wide array of stakeholders, all forms of health data should meet several criteria:

1. Health-related data should be collected in formats that allow pre-specified analyses to be performed and communicated promptly and clearly to users and the public.
2. Population level data should be:
 - a. Compatible with national (CDC) metrics to allow comparison with other states so that Ohio can benefit from the experiences of others
 - b. Available to the public as it is assembled (preliminary or provisional data) and reported, and in final form
 - c. Available to users from all health-interested communities: public health, medicine, academia, funding agencies, advocacy groups, media, and the general public
 - d. Presented to the public in formats that are specific to populations and geographic regions
 - e. Oversampling within smaller populations
3. Granular data should be:

- a. Tested for reliability before being adopted in final form; REAL data should be presented to the population from which it is being collected to assure it reflects the intended metrics
- b. Presented at intervals as it is being collected so that quality improvement measures and interventions can be applied and tested repeatedly
- c. Increased attention to these data by birth registrars will lead to increased public awareness of disparities and will inform efforts to eliminate them. Details of the ODH VS + OPQC project are available on the OPQC website at <https://opqc.net>

E. Workforce

The *OCMHMEP* endorses the Ohio Statewide Health Disparities Collaborative Workforce Development Strategic Plan to help Ohio create a healthcare workforce that has the competencies needed to effectively assess, respond to, and collaborate with organizations to eliminate health disparities in Ohio.

The Ohio Statewide Health Disparities Collaborative (OSHDC) is a collaboration of individuals and organizations working together to achieve health equity and eliminate health disparities in Ohio. The workforce development subcommittee has developed this strategic plan to drive activities providing opportunities to assess and enhance efforts to address workforce health disparities, inequities and promote equity knowledge.

The Ohio Statewide Health Disparities Collaborative Workforce Development Subcommittee has created the **Ensuring Competency and Diversity of Ohio’s Healthcare Workforce** fact sheet discussing the keys to reducing disparities in Ohio is ensuring there is an adequate, diverse healthcare workforce that can competently provide culturally appropriate services. To achieve this, all involved systems (government, employers, schools...) must recruit, train, and retain the workforce and meet the U.S. Department of Health and Human Services National Standards on Culturally and Linguistically Appropriate Services (CLAS) Standards (McEwen, 2013).

To address, specifically, the health disparities in infant mortality, the fourth strategy, to expand the health care workforce to include certified community health workers has already demonstrated success when community health workers are linked to high-risk women.

“Across the country, Community Health Workers (CHWs) are gaining recognition for their role in building the health service infrastructure of under-served communities. Whether they are known as community health advisors, patient navigators, peer outreach workers, lay health aides, promotores(as), or guides,” (Redding, 2012).

Community Health Workers in Ohio are certified by the Ohio Board of Nursing. Since 2014, Ohio Medicaid, through the OSU Government Resource Center has funded grants to train Community Health Workers, help them become certified, and place them in jobs that serve the Medicaid population. Many of these CHWs are working through Pathways Community Hubs, whose goal is to provide a sustainable source of funding and addresses infant mortality. The Expert Panel endorses this strategic investment in the Community Health Worker profession.

F. Funding Priorities

The ultimate goal of the *OCMHMEP* on Infant Mortality is to achieve health equity in infant vitality (infant mortality reduction) for all Ohioans. In this regard the funding priorities in this section addresses the *OCMHMEP* recommendations of what is required to influence change and improve outcomes for affected populations to achieve the desired outcomes. The resources requested in this section are not necessarily the final or only the requirements for eliminating disparities or achieving health equity. This recognition is important for the development of a fluid, strategic, fortifying collaboration to include the Ohio Commission on Minority Health

(OCMH) to accomplish the tasks, which will require cooperating partnerships with a variety of stakeholders and disparate organizations.

This entire process depends on the development of a collaborative Working Group whose participants span across multiple stakeholders to encompass organizations to include acquiring resources to function effectively, efficiently and to initiate and evaluate statewide infant vitality efforts. The panel's approach provides an opportunity for the OCMH to develop the infrastructure to increase capacity that has utility in other efforts to eliminate health disparities and achieve health equity throughout the life course. The funding priorities adhere to jurisdiction specific target populations and resource outcomes. The approach we are advancing to accomplish the Panel's goal is grounded in establishing a researcher/strategic planning staff capacity at OCMH to assess, promote, and ensure solutions for ending health disparities and achieving health equity.

Therefore, this section's funding priorities are based on:

1. The establishment of a Working Group across state agencies and organizations to include a variety of stakeholders and collaborators, which is most efficient and does not reinvent what already exists.
2. Strengthening the capacity of the Ohio Commission on Minority Health to execute the Medical Expert Health Panel's Recommendations with the additional recommended staff person.
3. Establishing a more robust mutually accountable strategic collaboration with entities across the state focused on these efforts.
4. Developing a process to work with the private sector, especially employers who are responsible for a disproportionate share of low-wage minority employees, to promote and integrate workplace appropriate strategies for prevention and support of pregnant women.

This Working Group would be made up of assigned staff from the Ohio Department of Medicaid, Ohio Department of Health, Ohio Department of Job and Family Services, Ohio Commission on Minority Health, Ohio Hospital Association, OACHC, Ohio Board of Nursing, and others as needed.

Epidemiology, Surveillance & Data

- Assessment of the actual vs. "registered" prenatal care providers who are serving low-income women should be conducted.
- Assess and assure defined target populations at risk receive services.
- Support public and private health care providers who serve those most at risk with competitive reimbursement.
- Assess and assure there is integration and coordination of behavioral health, medical care, health education, smoking cessation programs, and peer support services, such as Centering Pregnancy Programs, that are culturally appropriate and patient-centered.
- Determine and assure PCMH practices are aware of and prepared to offer culturally appropriate care coordination services for pregnant women, newborns and infants.
- Improve the accuracy of maternal race and ethnicity data on the birth registry. Increased attention to these data by birth registrars will lead to increased public awareness of disparities and will inform efforts to eliminate them. Details of the ODH VS + OPQC project are available on the OPQC website at <https://opqc.net>. A precedent of success exists with the Ohio Department of Health Division of Vital Statistics (ODH VS) and the Ohio Perinatal Quality Collaborative (OPQC) to improve the accuracy and timeliness of selected items of data collected for the Ohio Birth Registry.

Interpretation and Translation Services

- There needs to be a way to identify providers who can help in decreasing the disparity in healthcare outcomes for populations who do not speak English as a first language.
- Providers must identify language capability in their gateway-portal directories.

Provider Availability, Access and Transportation

- There are limitations in the distribution of providers in rural areas and in urban communities where the physician to patient ratios are of concern.
- Develop a monitoring or surveillance system to determine health system prenatal clinic's capacity for services.
- Identify current (2015) and projected (2015-2020) capacity of advanced practice nurses/nurse practitioners and other midlevel practitioners to deliver prenatal, postpartum and newborn care in medically underserved/health professional shortage areas across Ohio.
- Verify race, ethnicity, and language of prenatal care providers who are credentialed with Ohio Medicaid.
- Identify the status of the National Health Service Corps placements for Ohio and policy guidelines that affect placement of physicians and nurse practitioners.

Managed Care Plans and Provider Availability

- Conduct a semiannual audit of the Ohio Medicaid managed care plans' provider panels to verify that prenatal providers have capacity to accept new patients and if there are any restrictions applied toward Medicaid enrollees.
- Require managed care plans and health systems to verify the "active" or "open" status of providers to accept new patients; identify geographical gaps in provider capacity and provider availability and ameliorate as appropriate.
- Provide Reproductive Health Life Plans (Pre Conceptual Care) that improve maternal health prior to pregnancy and between pregnancies, support for smoking cessation in mothers, address increasing opioid and prescription drug addiction, support weight loss counseling for women prior to pregnancy and provide family planning services.

Managed Care Plans

- Establish a process that would enable physicians to be aware of risk assessment information provided to the managed care plans.
- Develop and put in place a standardized risk assessment form for all managed care plans.
- Providers should receive ongoing information about the case management services that are offered by each health plan, such as member incentive programs that encourage members to keep their prenatal appointments.

Fiscal

- Conduct a study to determine the payment differential between FQHC practice sites and providers affiliated with health systems or working independently. Seek waiver for lost compensation among providers who are willing to serve Medicaid-enrolled moms if the women are sanctioned during their pregnancy.

- A pregnant woman on Medicaid is at risk of having her prenatal care interrupted. Providers who continue to serve women during this interruption of benefits should not be penalized for providing care and receive payment for services. Providers should be fairly compensated.

Care Coordination

- Ensure/promote that Pathways Community Hubs collaborate with public and nonprofit entities, along with Medicaid managed care plans, to ensure that women have timely and culturally competent access to treatment.
- Promote hospital discharge and home visitation target zip code protocol and intervention through programs such as First Steps.

Workforce

- The *OCMHMEP* endorses the Ohio Statewide Health Disparities Collaborative Workforce Development Strategic Plan to help Ohio create a healthcare workforce that has the competencies needed to effectively assess, respond to, and collaborate with organizations to eliminate health disparities in Ohio.
- Health care providers, including support personnel, therapists, and licensed counselors should complete CLAS training and ensure that women of color have access to interpretation and translation services if needed. Providers need to consider that non-English speaking women may not have adequate levels of reading; therefore, providers should utilize visual materials for patient education.
- Funding to assess, monitor, and determine the status e.g. CLAS standards are met.

G. Equity and the Elimination of Health Disparities in Infant Mortality

The Ohio Commission on Minority Health Medical Expert Panel Infant Mortality Reduction Goal for 2020 is 6 infant deaths per 1000 live births (6.0/1000) for all racial and ethnic populations in Ohio. This is consistent with the infant mortality rate goal established by Healthy People 2020. The racial and ethnic populations include but are not limited to African American, Hispanic, Native American, and Asian-American Pacific Islanders. Attaining this goal will initiate the development of a more aggressive goal in the future.

Of concern, Ohio has a well-established history (over three decades) of only accomplishing Healthy People infant mortality goals for whites.

- For HP-1990 the national Healthy People Infant Mortality Rate (HP IMR) goal was an overall goal of 9 and Black IMR goal of 12. Ohio accomplished the overall IMR goal for whites in 1987, well in advance of the 1990 goal date.
- For HP-2000 the national HP IMR goal was an overall goal of 7 and a Black IMR goal of 11. Ohio accomplished the overall IMR goal for Whites in 1996, again, well in advance of the 2000 goal date.
- For HP 2010 the national IM goal was 4.5 for all groups. If States and few groups accomplished this goal. Ohio only accomplished this goal for Asian/Pacific Islanders.
- For HP 2020 the national IM goal is 6 for all groups. Ohio has tentatively accomplished this goal for Whites, achieving a White IMR of 6 in 2013.
- Though accomplishing HP IMR goals for Whites well in advance of most goal dates, Ohio still has not accomplished the HP-1990 goal for Blacks.

Ohio having never accomplished a Healthy People infant mortality rate goal for Black babies, yet accomplishing HP IMR goals for Whites well in advance of most goal dates, clearly indicates that the level of effort to address this disparity has not been effective or proportionate to the problem.

On June 20, 2015, the Ohio 131st General Assembly adopted the Amended House Concurrent Resolution Number 12: *“To declare Ohio’s rate of infant mortality a public health crisis and urge comprehensive preterm birth risk screening for all pregnant women of Ohio.”* This indicates that the political will to address infant mortality as a public health crisis exists.

Therefore, we must resist the tendency to maintain the “business as usual” response to what has been a historically insufficient effort to address the unacceptable rates of death for African American infants. Hence, one of the most fundamental changes that this panel requires is that the State of Ohio hold itself accountable for accomplishing the Healthy People 2020 goal for ALL babies in Ohio, including those born to racial and ethnic populations.

The Ohio Commission on Minority Health Medical (OCMH) Expert Panel establishes infant mortality rate (IMR) targets for aggregate racial and ethnic populations and perinatal health outcomes throughout designated jurisdictions. Additionally, geographic and provider specific IMR and perinatal outcomes will be acquired enabling specificity needed to target resources as appropriate.

The overarching goal is to achieve health equity in infant vitality to include IMR reduction, improve perinatal outcomes and the eventual elimination of racial disparities in birth outcomes. Infant vitality is assessed by indicators of health, access, well-being, morbidity, and mortality.

Addressing social equity in a Life Course context is also considered in formulating the IMR reduction required to achieve the OCMH Medical Expert Panel and HP 2020 Goal, which in effect may eliminate racial and ethnic IMR disparities.

The Problem: The aggregate infant mortality rate (IMR) in Ohio was 7.7 deaths/1000 live births (2008-2012) The IMR for that same period for the racial groups presented below was:

- ❖ White 6.3
- ❖ African American 17.9
- ❖ Hispanic 7.4 (2007-2010)

Infant Mortality by Neighborhood, Zip Code, Geography, and Perinatal Health Care Delivery System

There is empirical evidence that certain zip codes and ethnic sub-populations in neighborhoods, census tracts has IMR variability that does not always reflect a populations aggregate IMR. There is evidence of zip codes that are predominantly White, Hispanic or African American with IMR’s markedly higher and below the HP 2020 6.0 IMR goal. There is also evidence of IMR variability amongst providers such as (and not limited to) hospitals, community health centers, physician practices and health plans.

Limiting the IMR reporting to an aggregate numeric masks jurisdiction specific IMR outcomes.

Outcomes: The reduction of racial and ethnic specific IMR (and perinatal measures) for targeted hospitals, community health centers, physician practices and health plans for every designated jurisdiction throughout the state.

The OCMH Medical Expert Panel health disparity elimination goal is cored around “systems change” and the premise that equity in health is (can be) achieved thru the provision of public health policies that:

1. take into account the social context;
2. core safety net services and multi sector strategic collaboration are essential; and
3. monitor and measure results with accountability.

H. Five Year OCMH Medical Expert Health Disparity Elimination Work Plan

The Medical Expert Panel has delineated annual goals by population groups within Appendix A.

VIII. Call to Action

During the Harlem Renaissance the celebrated author Langston Hughes asked his readers in the poem ‘Harlem’. “What happens to a dream deferred?” The *Ohio Commission on Minority Health Medical Expert Panel* was tasked to answer this question in the form of a White Paper Report on infant mortality. As denoted in this report the United States, despite being the cradle of the technological innovations, continues to have among the highest infant mortality rates compared to all other advanced nations. Ohio residents, and particularly its indigenous African American population, contribute significantly to this shamefully high infant death rate within the first year of life. Ohio cannot put a price tag on the number of infant lives that have been prematurely lost. With each infant loss of life, there is a lost opportunity, a diminished faith in the existing maternal care system, and yet another dream deferred.

This report emphasizes the numerous social determinants that contribute to our embarrassing infant mortality rates. The expert panel found no “magic bullet” in Ohio’s maternal care arsenal that alone will vanquish the 17.9 per 1000 live birth mortality rate for Black infants born in Ohio. Nor were we successful in identifying any singular genetic, psychological, physiological, or socioeconomic evidence unique to Ohio that places our infants more at risk for adverse outcomes. However, the white paper attempts to educate the reader about possible solutions to the problem, by identifying known infant mortality risk factors and clinical outcome statistics within our racial and ethnic populations. Furthermore, we acknowledge the prevalence of disparities in infant mortality and health inequity within and among Ohio’s communities. We conclude this document with recommendations for the reader(s) to consider.

Ohioans who have untreated hypertension, undiagnosed or uncontrolled diabetes, or are classified as obese have a higher probability of adverse prenatal and postpartum outcomes. Mothers who reside in “food deserts,” where fresh nutritional choices are a limited commodity, are also most certainly residing in a community that is lacking in educational, employment, and life enhancing opportunities. These social factors can result in persistent low-level life stressors. These chronic “allosteric” stressors result in the release of stress hormones (catecholamines, cortisol, pro-inflammatory cytokines, etc.) which can contribute to the development of chronic disease processes and place fetal development at risk. This allosteric load is caused by the sustained upregulation of stress response hormones and can be particularly maladaptive and long lasting during the pre or peripubital period of life. This is why any solution to the infant mortality problem must be viewed from a “life course” correction perspective in all females who reside in these “low opportunity deserts.”

With access to 21st century technologies, Ohio has to garner the moral wherewithal and resources necessary to duplicate or best the accomplishments achieved nearly two decades ago in west Alabama. In order to achieve the published Healthy People 2020 objectives cited in this paper it will take the collective efforts of our legislative leaders and policy makers to provide the appropriate funding and rational legislation to clear unintentional administrative roadblocks that restrict access to timely and necessary maternal care. This must include payment for such evidence-based medical interventions as 17 alpha-hydroxyprogesterone caproate to prevent recurrent pre-term deliver. Hospitals can use their communications network and ambulatory care affiliates to educate their communities about health and maternal programs proven to reduce the probability of infant mortality. Medical professionals, who provide maternal care must know how to identify at risk individuals and, using accepted medical community standards, provide consistent quality care for all expectant mothers regardless of their socioeconomic status. The consumers of maternal care must educate themselves of the value of maintaining health between and during pregnancy – “A healthy mother equals a healthy baby.” Community and faith-based

organizations must also lend their voices to the choir that speaks to our youth about life stress reduction, healthy lifestyles, family planning, and appropriate infant care. Government agencies and insurers need to detect potential gaps in prenatal, perinatal, and first-year infant care that result in adverse outcomes and increased investment of resources (i.e. protracted hospitalizations, treatment of chronic diseases, inappropriate use of emergency room care, etc.). With all of these partnerships in tow, Ohio could create a sustainable infant mortality reduction campaign (“Better Buckeye Babies”) and make a sizeable and palpable impact.

It is a social imperative that Ohio commits itself to creating a better life for all of our current and future newborns. We can no longer afford to languish at the bottom of the U.S. infant mortality ratings and publically claim that we value the lives and dreams of all of our citizens. “What happens to a dream deferred? Does it dry up like a raisin in the sun; or fester like a sore?” Ohio has allowed the social plague of excessive infant mortality to fester far too long - It is now time for action.

Multiple Audiences:

This effort will take multiple stakeholders all of whom can stake a claim in the effort to eliminate disparities in racial and ethnic infant mortality rates. Listed below is a list of recommendations that are not intended to be exhaustive toward which audiences can work.

Hospitals:

- 1) Increase education programs (Central Ohio Hospital Council) on the Community Standards for Early Elective Deliveries targeting expecting parents, scheduling staff, and obstetrical providers.
- 2) Provide post education on Safe Sleep.
- 3) Participate in the Baby Friendly Hospital Initiative and support breast feeding.
- 4) Educate Emergency Room staff about presumptive eligibility and patient navigators.
- 5) Move to offer LARC at time of delivery or during maternity stay.
- 6) Increase use of mobile devices and mobile care.

Providers:

- 1) Adhere to Community Standard for Early Elective Deliveries.
- 2) Participate in a Medicaid Program.
- 3) Educate and promote breast feeding.
- 4) Follow up deliveries for maintaining appointments for postpartum visits to have access to counseling for contraception and safe spacing.
- 5) Remove outdated practices such as not taking patients beyond 36 weeks.
- 6) Screening process for eligible women at risk for preterm delivery and aggressive use of progesterone.

Consumer:

- 1) Get healthy before pregnancy: Stop smoking, eat a healthy diet, and obtain a healthy weight.
- 2) Promote fatherhood involvement.
- 3) Ensure safe spacing between pregnancies and use contraception if desired.
- 4) If pregnant, get prenatal care early.

Community Volunteers, Churches:

- 1) Help with transportation to and from prenatal appointments.
- 2) Lend your voice and support to legislation, which supports care for the underserved and at risk population. (Presumptive Eligibility, Affordable Care Act, Medicaid coverage up to 200% of the Federal Poverty Level (FPL).
- 3) Funding should be provided to churches to provide support services to improve birth outcomes.
- 4) Hold community forums on Safe Sleep and tobacco cessation, etc.
- 5) Use bulletin boards, program inserts, educational classes, and prayers services to address infant mortality.
- 6) Provide space for women to feel comfortable breast feeding.
- 7) Link parents to programs like Moms 2B, Celebrate One and Pathways Community Hubs.
- 8) Help provide food, shelter, baby-sitting, and other support to assist mothers in keeping appointments for work, school and doctors' appointments.
- 9) Help them or their spouse find employment.

Agencies:

- 1) Extend case management beyond perinatal period.
- 2) Enroll in home visitation programs.
- 3) Implement incentive programs.
- 4) Provide data assessment and monitoring of progress, use quality improvement strategies, and ensure the distribution of resources to those most at risk.
- 5) Use vital statistics to identify women at risk.

Clinics:

- 1) Promote the power of women to support and learn from each other through programs such as "women's circles" through the Centering Pregnancy model.

All:

- 1) Use multimedia campaign to highlight awareness of infant mortality disparities, educate the community and provide resources.
- 2) Focus efforts in "Hot Spot" areas.
- 3) Promote early entry into prenatal care.
- 4) Provide cultural and linguistic competency training.
- 5) Initiate a Safe Sleep Campaign.
- 6) Raise the awareness of infant mortality disparities and solutions within your families and communities.

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Appendix A
OCMH Medical Expert Panel Infant Mortality White Paper

Five Year Disparity Elimination Work Plan

The data source for the Infant Mortality Rate (IMR) presented below is the Ohio Department of Health Bureau of Maternal and Child Health. Data is derived from the 5 year rolling average 2008-2012. The OCMH Medical Expert Panel goal is to achieve single HP 2020 6.0 IMR for every ethnic-racial population statewide and in every designated jurisdiction throughout the state.

Please Note: OCMH MEP goal for respective racial & ethnic jurisdiction will have to be calculated.

INFANT MORTALITY REDUCTION TIMELINE

GOAL: To achieve health equity in infant vitality for all racial and ethnic populations statewide.

Over the infant mortality reduction period October 2015 – December 2020 the infant mortality rate in Ohio will be reduced from 7.7 to 6.0. This amounts to a 21% reduction in infant deaths (1047 to 830) for the five year period. The Healthy People 2020 Target for all infant deaths is 6.0.

The OCMHMEP infant mortality reduction year target IMR for each race-ethnicity is provided below:

The Healthy People 2020 Objective for all infant deaths (within 1 year):

Ohio Baseline: African American 13.4 infant deaths per 1000 live births. Target: 6.0 infant deaths per 1000 live births by December 31 2020

Infant Mortality Reduction

OCMH MEP Year 1

Baseline:	13.4 infant deaths per 1000 live births (330 deaths)
Target:	12.1 infant deaths per 1000 live births (287 deaths)
Target Setting Method:	10 percent improvement

OCMH MEP Year 2

Baseline:	12.1 infant deaths per 1000 live births (287deaths)
Target:	10.2 infant deaths per 1000 live births (243 deaths)
Target Setting Method:	16 percent improvement

OCMH MEP Year 3

Baseline:	10.2 infant deaths per 1000 live births (243 deaths)
Target:	7.9 infant deaths per 1000 live births (187 deaths)
Target Setting Method:	22 percent improvement

OCMH MEP Year 4

Baseline: 7.9 infant deaths per 1000 live births (187 deaths)
Target: 6.6 infant deaths per 1000 live births (157 deaths)
Target Setting Method: 16 percent improvement

OCMH MEP Year 5

Baseline: 6.6 infant deaths per 1000 live births (157 deaths)
Target: 5.5 infant deaths per 1000 live births (131 deaths)
Target Setting Method: 16 percent improvement

Ohio Baseline: Hispanic 7.1 infant deaths per 1000 live births. Target: 6.0 infant deaths per 1000 live births by December 31 2020

Infant Mortality Reduction

OCMH MEP Year 1

Baseline: 7.1 infant deaths per 1000 live births (45 deaths)
Target: 6.4 infant deaths per 1000 live births (40 deaths)
Target Setting Method: 10 percent improvement

OCMH MEP Year 2

Baseline: 6.4 infant deaths per 1000 live births (40 deaths)
Target: 5.8 infant deaths per 1000 live births (37 deaths)
Target Setting Method: 10 percent improvement

OCMH MEP Year 3

Baseline: 5.8 infant deaths per 1000 live births (37 deaths)
Target: 5.5 infant deaths per 1000 live births (35 deaths)
Target Setting Method: 5 percent improvement

OCMH MEP Year 4

Baseline: 5.5 infant deaths per 1000 live births (35 deaths)
Target: 5.2 infant deaths per 1000 live births (33 deaths)
Target Setting Method: 5 percent improvement

OCMH MEP Year 5

Baseline: 5.2 infant deaths per 1000 live births (33 deaths)
Target: 4.9 infant deaths per 1000 live births (31 deaths)
Target Setting Method: 5 percent improvement

Ohio Baseline: White non-Hispanic 5.1 infant deaths per 1000 live births. Target: 6.0 infant deaths per 1000 live births has been achieved.

Ohio Baseline: American Indian Non-Hispanic 54.7 infant deaths per 1000 live births. Target: 6.0 infant deaths per 1000 live births. Birth and Infant Death data to be acquired.

Ohio Baseline: Asian Pacific Islander 36.6 infant deaths per 1000 live births. Target: 6.0 infant deaths per 1000 live births. Birth and Infant Death data to be acquired.

EXAMPLE

The Healthy People 2020 Objective for all infant deaths (within 1 year):

Ohio Baseline: African American 17.9 infant deaths per 1000 live births. Target: 6.0 infant deaths per 1000 live births

The Healthy People 2020 Objective for reducing all preterm births:

Ohio Baseline: TBD African American percent of live births.

Target: 11.4 percent of live births

The Healthy People 2020 Objective for reducing all live low birth weight births:

Ohio Baseline: African American percent of live births.

Target: 7.8 percent of live births

Ohio Commission on Minority Health
Medical Expert Panel on Infant Mortality

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