1+

BEYOND YEAR ONE

WAKE COUNTY
NORTH CAROLINA

Infant Mortality

2020 Workgroup Report

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INTRODUCTION

Infant mortality is the death of an infant before his or her first birthday.

African American infants born or residing in Wake County are four times more likely to die than White infants with a rate of 12.3 deaths per 1,000 births in 2018 compared to 3.2 deaths per 1,000 births for Whites. African American women in Wake County have poorer birth outcomes than White and Hispanic women for birthweight, gestational age, and adequacy of prenatal care as measured by the Kotelchuck index. The percentage of African Americans without health insurance (23.4%) is more than twice the overall uninsured rate for Wake County (10.1%). Moreover, African American percentages for early prenatal care and adequate prenatal care are lower than those for White women.[1]

In response to these disparities, Wake County launched a new workgroup in June 2019 on Reducing the Infant Mortality Gap for African American Babies under the vision and leadership of then-Board of County Commissioner Chairwoman Jessica Holmes. The Wake County Board of Commissioners charged the workgroup with assessing existing programs and identifying gaps in order to develop and implement a comprehensive plan to support healthy and thriving babies and mothers (BOC Goal 2.4).

As co-chairs, Commissioner Holmes and Dr. Michelle Bucknor, a pediatrician and chief medical officer for United Healthcare, asked workgroup members to discuss the causes of the disparities in infant mortality rates, identify evidence-based practices to close the gap, and develop specific recommendations to reduce inequities. Specifically, the workgroup was asked to explore root causes and structural factors that contribute to racial inequities that lead to disparities in infant mortality. Members of the workgroup included representatives from community-based organizations, community residents with lived experiences, clinicians, health and human services staff, hospital representatives, elected officials and others.

The full workgroup met four times over a period of seven months. A subcommittee of the workgroup held an additional two meetings to refine and prioritize recommendations for consideration by the full workgroup. This report summarizes the work of the infant mortality workgroup, including recommendations going forward and an implementation

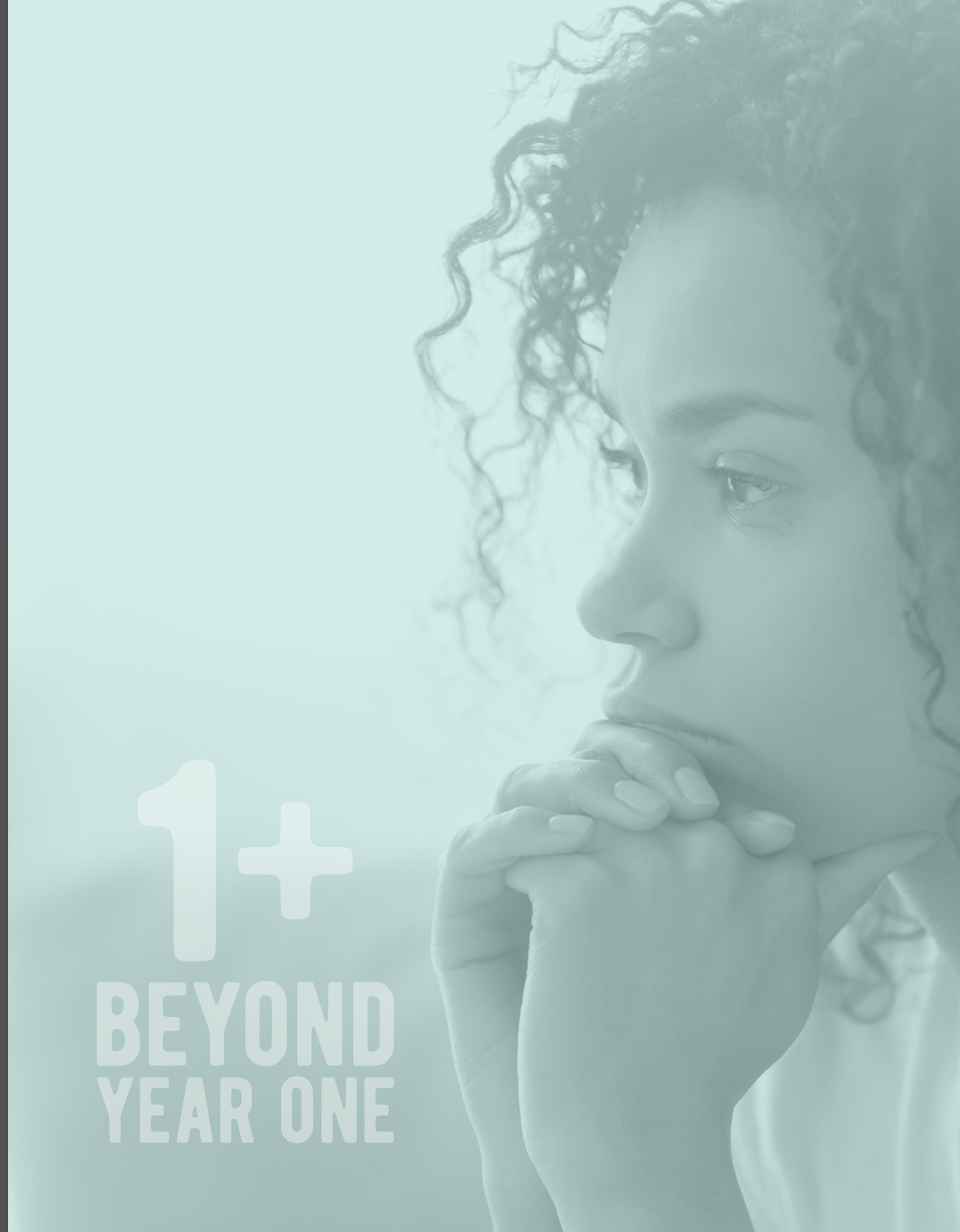
Lived Experiences of Community Residents

Infant mortality workgroup members heard from several community members about their personal experiences and the experiences of their family members during pregnancy, labor and delivery, and the postpartum period. These stories represent the voices of families and share their understanding of the events that occurred around the time of their losses.

Shana Arrington, a resident of Southeast Raleigh, shared her experience of being pregnant with twins when she was 21. While pregnant, she took four pregnancy tests at home to confirm that she was pregnant. Ms. Arrington contacted the Wake County Health Department to schedule an appointment, only to find out that she would have to come in for another pregnancy test and wait another month to be seen for a prenatal appointment. Prior to her prenatal appointment, Ms. Arrington experienced bleeding and went to one of the local emergency departments. When the bleeding stopped, she returned home, but had to return to the hospital two days later when the bleeding started again. She waited at the hospital for eight hours before she was seen. At a subsequent prenatal appointment, she was told that she had lost one of her twins. Ms. Arrington shared with the group that her baby would have been 13 years old this past year.

Tiffany Perry shared her story of having three consecutive, second-trimester losses. She experienced losses at 27, 21, and 20 weeks gestation and then delivered a healthy term baby in May 2019. She shared that she experienced her last lost in 2018. Ms. Perry expressed that because of her age and how she looked, she was not provided information about why she repeatedly experienced these losses. She reported feeling dismissed and not listened to by the doctors.

Charvetta Batchilly, a customer feedback technician with Wake County Human Services, shared the story of her daughter who experienced a high-risk pregnancy that resulted in the loss of her grandson. She assumed this pregnancy would be like her daughter's other high-risk pregnancies, however, this time her daughter was very sick. She experienced fainting, as well as extremely high blood pressure. The medication her daughter received to treat her blood pressure worsened her condition, so Ms. Batchilly urged her daughter to see another doctor. One day, the ambulance had to be called and her daughter was taken to a local emergency room due to her elevated blood pressure. She was told by the doctors that she was okay and sent home. Her daughter later suffered two strokes and lost hearing in one ear. Her baby was born prematurely with collapsed lungs. Doctors initially told the family that the baby's intestinal tissue had died, and withheld food for five days. They then communicated to the family that the intestinal tissue had not died but that the baby would need surgery. The family transferred the baby to another local hospital where surgery was performed to repair the intestines. Tragically, the baby did not survive the surgery. Ms. Batchilly stated that her daughter lacked health insurance during her pregnancy and feels that this resulted in her not receiving appropriate medical care. The family has still not received the medical report with an account of why the baby died, although it has been requested several times.



Recommendations

With a commitment to focus work on racism, equity, and the reduction and elimination of poor birth outcomes and infant health disparities, the workgroup prioritized six focus areas to address racial inequities in infant mortality. A brief description of the recommendations for each focus area and desired outcomes in these areas is provided below.

FOCUS AREA 1

Home Visitation Services

The 2016-2020 North Carolina Perinatal Strategic Plan[2] recommends that pregnant and postpartum individuals receive home visiting services that include promotion of resiliency, mental health screening, substance use intervention, tobacco cessation and prevention, reproductive life planning, chronic disease management, and assistance with access to health care. The Center for American Progress' Policy Strategies for Eliminating Racial Disparities in Maternal and Infant Mortality[3] also recommends enhancing supports for families before and after birth through an investment in home visiting.

For this focus area, the workgroup had two related recommendations. The first was to establish an evidenced-based universal home visiting program for all families with newborns during the first two weeks after delivery with referrals to other services based on identified needs of the mother, infant and family.

The second was expanding the Nurse-Family Partnership program to serve a greater number of first-time mothers. This program brings nurses into the homes of low-income women who are expecting their first child and then continues those outreach visits for two years after they give birth. Wake County Human Services currently offers postpartum home visiting supports to mothers with high risk conditions and care management for at risk children from birth to age 5 years.

Desired outcomes from these recommendations are that:

- Every mom and family with new baby are offered a home visit within two weeks of delivery;
- All eligible first-time moms receive home visits for two years after delivery;
- Women receive post-partum depression screening as part of the home visit;
- African American mothers have universal access to a community advocate.

FOCUS AREA 2

Racial Equity

The 2016-2020 North Carolina Perinatal Strategic Plan also recommends that equity is infused and incorporated in the delivery of health services. The plan promotes high quality training about institutional and structural racism and its impact on communities of color for individuals and organizations serving pregnant and postpartum women.

Consistent with the North Carolina Perinatal Strategic Plan, the workgroup recommended incorporating racial equity in the delivery of health services for women of reproductive age. Specifically, the workgroup emphasized the need to provide training to individuals who deliver services to families and communities around cultural competency in order to mitigate racism/oppression and focus on resilience and community building. Recommendations also included engaging and employing consumers of programs, services, and initiatives in the planning, design, and implementation of health delivery services. In order to build and strengthen trust in communities, the workgroup recommended employing community health workers who are from the communities at greatest risk for poor maternal and infant outcomes.

Desired outcomes from these recommendations are that:

- Individuals who provide prenatal, labor and delivery, and postpartum care to women receive high quality racial equity training to increase awareness of implicit bias and racism; and
- Every mother receives equitable, high-quality care.

FOCUS AREA 3

Safe Sleep

In an effort to reduce the risk of all sleep-related infant deaths, the American Academy of Pediatrics' (AAP) updated policy statement and technical report includes new evidence that supports skin-to-skin care for newborn infants; addresses the use of bedside and in-bed sleepers; and adds to recommendations on how to create a safe sleep environment.[4] A crib, bassinet, portable crib, or play yard that meets the safety standards of the Consumer Product Safety Commission (CPSC) is recommended along with a tight-fitting, firm mattress and fitted sheet designed for that particular product. The AAP recommends room-sharing because it can decrease the risk of SIDS by as much as 50% and is much safer than bed-sharing. The baby's crib, bassinet, portable crib, or play yard should be placed in the mother's bedroom, close to her bed. Bed-sharing is not recommended for any babies.

The Wake County Infant Mortality workgroup recommended increasing awareness about safe sleep practices and resources. Recommendations included expanding public education, using resources such as Safe Sleep NC[5] to enhance awareness among community partners who provide outreach and referrals to Wake County families. Safe Sleep NC , housed at the UNC Center for Maternal and Infant Health, exists to strengthen the adoption of infant safe sleep practices that reduce the risk of Sudden Infant Death Syndrome (SIDS) and that prevent infant sleep-related deaths such as accidental infant asphyxiation and suffocation across the state. The organization is guided by the NC Safe Sleep Advisory Committee. The Safe Sleep NC website contains resources for healthcare providers, parents and caretakers. The workgroup also recommended that eligible families receive cribs or pack-and-plays, crib sheets, and other infant care items to promote safe sleep. The workgroup recommended that the $20 cost of cribs and pack-and-plays be eliminated to reduce any barriers for eligible families needing a safe place for their infants to sleep.

Desired outcomes from these recommendations are that:

- Every baby in Wake County has a safe place to sleep;
- Public awareness about safe sleep practices and resources is heightened; and
- Cribs and/or pack-and-plays are available to all families in need based on income and financial situation.

FOCUS AREA 4

Prenatal Care

The 2016-2020 North Carolina Perinatal Strategic Plan highlights the need to improve the quality of maternal care (including prenatal, labor, delivery and postpartum care) by expanding the use of evidence-based models of prenatal care and implementing evidence-based clinical standards. In addition, the plan emphasizes the need to improve access to and utilization of first trimester prenatal care. The Center of American Progress Policy Strategies for Eliminating Racial Disparities in Maternal and Infant Mortality also include improving access to critical services for pregnant women, such as screening and treating women at risk for preterm birth, eliminating maternity care deserts, and offering African American women tools to navigate the health care system.

The Wake County Infant Mortality workgroup recommended expanding the use of evidence-based models of prenatal care, such as Project Access and CenteringPregnancy. To improve availability of transportation services to prenatal care appointments, the workgroup suggested exploring agreements with Uber or Lyft to improve access to and utilization of prenatal care during the first trimester. Other recommended options to improve access to prenatal care included availability of childbirth and parenting classes across Wake County, a 24/7 pregnancy information hotline, and an expanded pool of providers serving pregnant women who are uninsured or receiving Medicaid. Consistently providing evidence-based clinical standards in prenatal care, such as 17P for women with previous preterm births, was also recommended.

Desired outcomes from these recommendations are that:

- The first prenatal appointment occurs within 48 hours for women with previous pregnancy loss and within one week for other women;
- The first prenatal visit includes physical, pregnancy date, education about upcoming visits, labs and referrals;
- A pregnancy information line is available 24/7;
- Every pregnant woman has Uber/Lyft transportation to appointments if needed; and
- Expanded models of evidence-based prenatal care are

FOCUS AREA 5

Preconception Health

The 2016-2020 North Carolina Perinatal Health Strategic Plan includes increasing access to preconception care and expanding healthcare access over the life course. Preconception health refers to the health of women during their reproductive years, and focuses on identifying and modifying physical, behavioral and social risks through prevention and intervention. Common modifiable risk factors in women that influence birth outcomes for themselves and the baby include pregnancy intention, interpregnancy interval, maternal age, folic acid supplementation and other nutritional factors, exposure to substances, chronic disease control and toxic stress.

The Wake County Infant Mortality workgroup recommended promoting women's health prior to pregnancy through preventive health services that include substance use intervention, tobacco cessation and prevention, access to effective methods of contraception, chronic disease management and access to health care, including access to ongoing health insurance coverage and a medical home. Integrating preconception healthcare and messages into primary care for people of reproductive age and providing reproductive life planning counseling is essential, particularly for those women identified with medical conditions that put them at risk for maternal mortality/morbidity and poor birth outcomes. The workgroup recommended evaluating resources and access to holistic care for underinsured/uninsured residents in the community. In addition, an assessment of clinical and care management services at Wake County Human Services was recommended to ensure optimal health prior to pregnancy by proactively identifying diseases/conditions that may impact future pregnancies. Moreover, a communication plan is needed to share and distribute information on available services for women.

Desired outcomes from these recommendations are that:

- Women of reproductive age have expanded entry points to preventive care; and
- Women with chronic conditions have access to primary and specialty care.

FOCUS AREA 6

Fathers

The 2016-2020 North Carolina Perinatal Strategic Plan includes strengthening father involvement in families. The plan recommends identifying successful fatherhood programs and resources by collaborating with local fatherhood task forces. The plan also highlights the need to improve and develop guidelines for including men in preconception and prenatal services. Awareness campaigns, such as the First 2000 Days of Life media campaign, should include messages tailored for fathers and male caregivers.

The Wake County Infant Mortality workgroup recommended taking steps to strengthen father involvement in families and promote parenting and co-parenting skills through existing programs. Identifying and piloting successful fatherhood programs, such as Dads Matter, increasing awareness of current fatherhood training through Wake County Family Services, and expanding an existing partnership, Day 2 Day Dads, with the Family Resource Center South Atlantic was also suggested.

The group also recommended developing and improving guidelines for including men in preconception, prenatal and postpartum services and ensuring that Wake County Human Services clinics are welcoming to fathers. Promoting the role of fathers through support of paid parental leave efforts was identified as an important strategy to promote healthy family relationships.

Desired outcomes from these recommendations are that:

- Fathers feel included and not overlooked;
- Fathers have meaningful ways to participate in parenting; and
- Messaging is inclusive and welcoming to fathers.

Existing Resources to Address the Focus Areas

With a commitment to focus work on racism, equity, and the reduction and elimination of poor birth outcomes and infant health disparities, the workgroup prioritized six focus areas to address racial inequities in infant mortality. A brief description of the recommendations for each focus area and desired outcomes in these areas is provided below.

FOCUS AREA 1

Home Visiting

The Nurse-Family Partnership (NFP) program brings nurses into the homes of low-income women who are expecting their first child and then continues those outreach visits for two years after they give birth. NFP only serves clients within Wake County zip codes 27610 and 27604. Wake County's NFP program is comprised of four full-time home visiting nurses and one nurse supervisor. Funding has been requested from Wake County Smart Start to support one additional home visiting nurse for three years.

Public health nurses also perform home visits that are medically ordered for high risk prenatal patients. Additionally, postpartum and newborn assessments are made in the home usually within 14 days of delivery. The High Risk/Postpartum home visiting program is comprised of eight home visiting nurses and a nurse supervisor.

The Family Connects Newborn Home Visiting will be implemented in Wake County as part of the new Improving Community Outcomes for Maternal and Child Health (ICO4MCH) program. The Public Health Division has received funding to pilot this model in Southeast Raleigh, which is currently a Best Babies Zone. The program will enable home visits to all families of newborns residing in the zone and other contiguous areas in this region. The selected zone has significantly higher unemployment and poverty, as well as a higher percentage of African American families. The Family Connects Newborn Home Visiting program will provide one home visit by a registered nurse to all parents of newborns in the zone and two additional home visits from the nurse home visitor for families who need additional support.

FOCUS AREA 2

Racial Equity

The Maternal and Child Health Section of the Wake County Public Health Division provided Racial Equity Institute (REI) training for 78 staff in 2018. Since that time, Wake County Human Services has secured funding from the ICO4MCH program and the NC Office of Minority Health and Health Disparities to provide racial equity training to additional Human Services staff and community partners. In addition, CityMatCH will continue to provide racial equity resources and technical assistance as part of the Best Babies Zone work in Southeast Raleigh. A Health Equity Impact Assessment will also be conducted as part of the ICO4MCH initiative to help facilitate conversations about root causes of disparities and inequities. Information gathered through this process will provide community perspective and guide strategic planning and implementation of concrete action steps aimed at improving policies and programs to reduce health disparities and inequities within the impacted populations.

FOCUS AREA 3

Safe Sleep

Home visiting nurses and pregnancy care managers currently provide sleep education to families they serve. In addition, families receiving low-cost cribs and pack-and-plays are required to attend educational programs on safe sleep. In response to one of the recommendations from the Wake County Infant Mortality workgroup, cribs and/or pack-and-plays are now free to any Wake County resident with demonstrated financial need.

FOCUS AREA 4

Prenatal Care

Wake County Human Services provides prenatal care to low-risk pregnant women residing in Wake County at its main clinic and four regional sites. Services, such as WIC and Pregnancy Care Management, are co-located in prenatal clinics. Pregnancy care managers are also embedded in public as well as private clinics that serve Medicaid women. Obstetric high-risk care is provided by WakeMed, UNC and Duke. UNC Horizons and Alliance Behavioral Health provide services to pregnant and postpartum women with behavioral health needs.

FOCUS AREA 5

Preconception Health

Wake County Human Services provides women's preventive health services to low-income women residing in Wake County at its main clinic and four regional sites. Wake County intends to implement Reproductive Life Planning (RLP) in partnership with Upstream USA as part of ICO4MCH. The program will include educational workshops and training for Wake County Human Services providers and other public/private health care facilities to educate men and women of reproductive age about family planning methods, such as long-acting reversible contraceptives (LARCS) using a reproductive justice approach. Consumers of services will be involved in developing and implementing educational materials, policies, protocols and strategies to increase access to family planning methods, including LARCs. Staff will also collaborate with Upstream NC to educate, train, and provide technical assistance and resources to Human Services clinical staff to increase access to same-day insertion of LARCs and the availability of a full range of family planning methods.

FOCUS AREA 6

Fathers

Wake County offers several parenting programs to fathers and male caretakers. A Father Forever is an example of a program for non-custodial fathers to promote responsible fatherhood. The 12-week/24-hour curriculum consists of classes such as job readiness training, anger management, substance abuse and destiny development. Participants receive individual coaching throughout the length of the program. Wake County Human Services Child Welfare Division offers parent education and one-to-one coaching to parents with children ages 0-17. The Family Resource Center South Atlantic offers fatherhood and in-home parenting education to families and maintains a resource portal called "Family to Family Health Information Center."

Implementation Plan

The following pages identify the desired outcomes by focus areas and the resources needed to implement strategies over the next three years to achieve success.

In order to move this work forward, a Community Action Team is recommended (and required for the new Improving Community Outcomes for Maternal and Child Health funding) to provide guidance and expertise during the implementation and evaluation of these recommendations.

Collaboration among community organizations, Wake County Human Services staff, consumers, hospitals, health care providers and other key stakeholders can lead to long-term systematic changes. The Community Action Team should consist of representatives from public health, hospitals and health systems, faith leaders, consumers, business and industry and other important organizations.

In addition, an infant mortality program manager and implementation teams for each of the focus areas are needed to provide the structure and resources necessary to effectively carry out activities in a timely manner.

Home Visits

OUTCOME

- Every mom/family is offered home visit within 2 weeks of delivery (Family Connects – Universal visit)
- All first-time moms receive home visits for up to two years (Nurse Family Partnership [NFP])
- Post-partum depression screen at home visit
- Universal access for African American families to community advocate

NEED

- ~12,580 births calculate to min 31 FTE to max 63 FTE[6]
- ~734 first time Medicaid births calculate to min 15 FTE to max 30 FTE[7]
- No additional resources required
- ~2692 births to African American mothers calculate to min 7 FTE to max 14 FTE[11]

EXISTING CAPABILITIES

- 2,000 births = 9 nurses; 7 existing high-risk program nurses and 2 nurses from ICO4MCH
- 100 births = 4 nurses from NFP program
- Currently all home visiting and care management providers conduct screenings PHQ-9, Edinburgh
- ~400 families

GAPS

- Unmet need is 10,580 births.
- Unmet need is 634 births
- Unmet need is 2300 families

RESOURCES NEEDED TO ADDRESS GAPS

- 22 nurses (assume 50% accept services)
- 11 nurses (assumes 50% accept services)
- 7 CHW (assumes 50% of families accept services)

IMPLEMENTATION YEAR 1

- Launch Family Connects in SE Raleigh with addition of 2 nurses[8]
- Expand NFP to serve an additional 25 families with 1 nurse[9]
- Implement community health worker program with 2 ICO4MCH CHW[12] positions

IMPLEMENTATION YEAR 2

- Continue Family Connects in SE Raleigh with 2 nurses funded in Year 1
- Continue same level of service with 1 additional nurse from Year 1
- Maintain community health worker program with 2 CHWs from year 1.

IMPLEMENTATION YEAR 3

- Expand Family Connects to serve an additional 1000 families (need to add 4 nurses @$85,000 per nurse=$340,000)
- Expand NFP to serve an additional 100 families (need to add 4 nurses @$340,000,
- 1 Nurse Supervisor @$100,000, 1 Admin Support[10] @$45,000)
- Expand community health worker program to serve an additional 1000 families (add 4 CHW positions @$55,000= $220,000)

Racial Equity

OUTCOME

- Individuals who provide prenatal, labor and delivery, and postpartum care to women receive high quality racial equity training to increase awareness of implicit bias and racism
- Every mother receives equitable, high quality care

NEED

- ~528 Wake County Human Services medical/public health staff eligible to receive racial equity training at average of $218 dollars per staff = $105,600
- Additional data needed on availability of training for labor and delivery staff
- Additional data needed to assess racial equity in policies and practices

EXISTING CAPABILITIES

- 78 Maternal and Child Health Staff trained at $17,000[13]
- BBZ provided training on including racial equity in policies and hiring practices

GAPS

- 450 providers and staff still need training for an approximate cost of $88,600
- Best Babies Zone training was provided only to a limited number of staff

RESOURCES NEEDED TO ADDRESS GAPS

- Leadership buy-in and funds for training at least 75% of WCHS medical/public health staff
- Effective messaging to staff regarding importance of training
- Trust and engagement from community members with lived experiences

IMPLEMENTATION YEAR 1

- Provide racial equity training for an additional 115 staff with $25,000 CLAS grant
- Establish and support community group to drive policy evaluation

IMPLEMENTATION YEAR 2

- Continue racial equity training for additional 115 staff with new funding of $25,000
- Identify systemic issues that exacerbate inequities in care and develop recommendations to address

IMPLEMENTATION YEAR 3

- Continue racial equity training for an additional 115 staff with recurring funding of $25,000
- Implement recommendations

Safe Sleep

OUTCOME

- Cribs and pack-and-plays are available to all families in need based on income and financial situation
- Every baby has safe place to sleep
- Increased awareness about safe sleep practices and resources

NEED

- 450 families eligible for no-cost pack-and-plays annually
- 375 families eligible for no-cost cribs annually
- 12,580 families with newborns need information about safe sleep practices

EXISTING CAPABILITIES

- ~300 pack-and-plays distributed annually
- ~250 cribs distributed annually[14]
- All care management and home visiting programs provide safe sleep education.

GAPS

- 275 families may need cribs and/or pack and plays annually.
- Need to assess extent to which other existing programs and organizations promote safe sleep

RESOURCES NEEDED TO ADDRESS GAPS

- Hospital referral process for pack and plays and cribs; funding for 150 pack-and-plays and 125 cribs
- Contract with community nonprofit to lead Safe Sleep initiative

IMPLEMENTATION YEAR 1

- Provide pack-and-plays and cribs to 275 additional families for a cost of $16,500; consider collaboration with Green Chair
- Engage infant caregivers in the development of content and approaches to deliver information that addresses diverse beliefs, values and practices.

IMPLEMENTATION YEAR 2

- Provide pack-and-plays and cribs to 275 additional families for a cost of $16,500; consider collaboration with Green Chair
- Educate caregivers and community organizations that provide outreach and referrals to families about safe sleep practices and resources.

IMPLEMENTATION YEAR 3

- Provide pack-and-plays and cribs to 275 additional families for a cost of $16,500; consider collaboration with Green Chair
- Implement media and social marketing campaign to raise public awareness

Prenatal Care

OUTCOME

- Co-located clinical services in prenatal clinic locations
- First appointment 24-48 hours for women with previous pregnancy loss; within one week for other women
- First visit includes physical, date pregnancy, education about upcoming visits, labs, referrals
- Telemental health services available to WCHS prenatal clients
- Project Access model implemented for prenatal care
- Transportation to appointments (On demand – Uber/Lyft)
- Pregnancy information line available 24/7
- CenteringPregnancy programs are available in Wake County

NEED

- An estimated 21,000 annual visits are made to WCHS prenatal clinics
- Need to determine number of pregnant women with previous pregnancy loss
- An estimated 1,600 initial prenatal visits are made annual to WCHS prenatal clinics.
- Need to determine how many WCHS prenatal clients would benefit from telemental health services
- An estimated one-third of pregnant women in Wake County receive late or no prenatal care
- Data is needed to determine the number of pregnant clients who do not have reliable transportation to medical appointments
- Approximately 13,000 Wake County residents deliver babies each year
- Approximately one-third of births in Wake County are to low-income women receiving Medicaid

EXISTING CAPABILITIES

- Prenatal care is available at Sunnybrook and all regional centers as is WIC and pregnancy care management
- First appointments currently vary depending on location; regional centers have more availability
- Currently, first visit includes pregnancy test, nurse interview, social work visit, and visit with WIC
- Telemental health is provided by Monarch at NRC, ERC, and SRC only
- Requires research on county resources from all safety net organizations that provide prenatal care
- Right at home transport through a partnership with Uber Health is available for seniors and individuals with disabilities
- Requires research on availability of statewide and national hotlines
- Wake County Human Services has no CenteringPregnancy programs currently. Thirty-four sites in NC are implementing CenteringPregnancy

GAPS

- Need to determine additional services that may be co-located
- Wake County Human Services average appointment times would need to decrease by approximately one week.
- Wake County Human Services would need to add labs and physical to current workflow
- Telemental health services would need to be extended to Sunnybrook and Millbrook
- Need to determine the number of prenatal clients who are eligible for referral to safety net providers, and the number of providers in the safety net that have capacity to provide prenatal care
- Need to document how many pregnant clients are unable to keep prenatal appointments due to unreliable transportation
- Need to determine unmet need based on availability of hotlines and number of pregnant women who would call
- CenteringPregnancy is a model that could be offered to WCHS prenatal clients who are less than 24 weeks pregnant

RESOURCES NEEDED TO ADDRESS GAPS

- Survey prenatal clients to determine what other services they are receiving and at what locations
- Additional prenatal providers needed in clinic at Sunnybrook
- Workflow analysis would help determine additional resources needed
- Data is needed to determine unmet need for pregnant clients with behavioral health issues at Sunnybrook and Millbrook
- Data is needed to document unmet need for prenatal care and the number of additional safety net providers needed
- Agreements with on-demand transportation providers, such as Uber and Lyft, to enable clients to secure reliable transportation for prenatal appointments
- Nurse availability to talk with pregnant women on phone and assess needs
- Approximately $35,000 is needed for start-up costs for CenteringPregnancy and includes training, educational materials, and program support. The cost of preterm birth and related conditions is more than 10x that of a healthy baby.

IMPLEMENTATION YEAR 1

- Assess feasibility of co-locating additional services at prenatal clinic sites
- Collect data on number of pregnant women experiencing previous loss and current wait times for initial prenatal appointment; benchmark number of prenatal providers needed to improve wait times
- Assess feasibility of adding labs and physical to first prenatal appointment
- Review medical records for pregnant clients at Sunnybrook and Millbrook to identify how many may benefit from telemental health services
- Conduct analysis of reasons for late or no prenatal care and inventory safety net organizations that provide prenatal care
- Determine need for on-demand transportation services to prenatal appointments and identify resources to expand Uber Health to WCHS prenatal clinics
- Explore existing hotlines to determine availability of 24/7 expert consultation
- Conduct readiness assessment and receive implementation support and consultation from the Centering Healthcare Institute

IMPLEMENTATION YEAR 2

- Pilot co-location of additional services at a limited number of prenatal clinic sites
- Increase capacity of prenatal clinic at Sunnybrook by adding additional providers or redistributing providers and/or pregnant women from Sunnybrook to regional centers.
- Based on findings from feasibility study, add labs and physical to first prenatal appointment in one prenatal clinic site as a pilot
- Based on findings from medical record review, implement telemental health services at Sunnybrook and Millbrook and assess utilization of services
- Convene network of volunteer specialists and other health care providers to explore donating prenatal care across Wake
- County through one of the partner safety net primary care clinics
- Pilot expanded Uber Health program for prenatal clients needing transportation to Oak City clinic
- Identify resources to raise public awareness of existing hotlines if available and/or establish pregnancy hotline for Wake County
- Pilot CenteringPregnancy program at Sunnybrook to include placing women into groups of 8 to 12 based on estimated dates of delivery and having them meet for ten 90-minute prenatal or postpartum visits at regular intervals.

IMPLEMENTATION YEAR 3

- Based on findings from pilot, expand co-location of services to additional prenatal clinic sites
- Expand pool of providers serving pregnant women enrolled in Medicaid
- Depending on results of pilot, add labs and physical to first prenatal appointment in additional prenatal clinic sites
- Refine implementation approaches to maximize uptake and effectiveness of telemental health services at Sunnybrook and Millbrook prenatal clinic sites
- Launch referral program for prenatal clients to safety net providers to expand access to prenatal care for those in greatest need
- Expand the number of pregnant clients receiving Uber Health services to all WCHS prenatal clinics
- Launch Wake County hotline and market through social media and other media channels
- Expand CenteringPregnancy program to additional WCHS prenatal clinic sites

Preconception Health

OUTCOME

- Increased access to primary health care (particularly for women with chronic conditions)
- Expanded entry points into care (e.g. mobile primary care, minute clinics, placed-based care)
- Integration of preconception care at well-child visits
- Respectful, person-centered care
- Increased community awareness of importance of being healthy before pregnancy

NEED

- Pregnant women currently lose Medicaid coverage after 60 days postpartum
- Need to determine how many women of reproductive age with chronic conditions in Wake County do not have a primary medical home
- Approximately 7,500 well-child visits are provided through WCHS clinics annually
- Data is needed to determine percentage of WCHS clients receiving women's health services who are highly satisfied with the care they receive
- More than one-third of Wake County African American women who gave birth in 2018 had body mass indices greater than 30
- Unintended pregnancy rates among African American women are more than 20 percentage points higher than White women.[15]

EXISTING CAPABILITIES

- Primary care is provided to women through WCHS prenatal clinics only during pregnancy
- Northern Regional Center provides urgent care services
- Existing system could be configured to offer preconception health at well-child visits
- WCHS currently supports the Voice of the Customer system to provide customers with different ways to give feedback about their service experience
- Wake County Human Services provides nearly 10,000 family planning visits annually which include education about healthy living and planning for pregnancy

GAPS

- Primary care for women age 19-64 who lack insurance is generally not available
- Need to identify other locations that could serve as entry points for referrals and extent to which women are aware of services
- Need data on how many women lack a primary care home when they bring their children in for well-child visits
- Need to assess customer feedback regarding service experience, responsiveness to service needs, timeliness of services, number of times customer needs to return for services
- Need to get health education messages out where people will hear them (social media and well as radio, TV, billboards)

RESOURCES NEEDED TO ADDRESS GAPS

- Expanded Medicaid coverage and/or expanded healthcare workforce to provide services to uninsured/underinsured women of reproductive age
- Partnerships with employers, faith-based organizations, hospitals and health systems
- Funding for FQHC look-alike (WCHS studying feasibility)
- Well-child clinic providers and nursing staff integrate preconception care and referrals at pediatric visits for women without primary medical home
- Leadership buy-in
- Involvement of process-owners on quality improvement teams
- Meaningful input from customers
- Communication plan
- Resources for public awareness campaign

IMPLEMENTATION YEAR 1

- Support expansion of public insurance to cover primary care services for women of reproductive age with chronic conditions or who have had a previous high-risk pregnancy or poor birth outcome
- Conduct review of models that expand primary care access to women of reproductive age, especially those that serve women with chemical dependency and women previously incarcerated
- Explore feasibility of utilizing the IMPLICIT interconception care toolkit in WCHS well-child clinics
- Examine existing WCHS services and identify barriers and gaps to comprehensive preconception health care, and opportunities to expand screening for social determinants of health and referral to resources provided by WCHS and other community organizations
- Conduct key informant and consumer-focused research to identify terms that the public understands and to develop relevant messages for promoting preconception health and reproductive health awareness.

IMPLEMENTATION YEAR 2

- Convene stakeholders (providers, insurance companies, employers, consumers) to develop strategy to address unmet need
- Based on review and feasibility, explore implementing mobile clinic pilots, such as the UNC School of Nursing mobile health clinic which provides free nursing services to meet the health care needs of clients of Wake County crisis ministries.
- If appropriate, pilot the IMPLICIT ICC program in one WCHS well-child clinic site
- Develop new, or disseminate existing tools to support existing clinics, programs and agencies in providing user-friendly and culturally appropriate services to promote preconception health
- Test communication concepts, messages, and materials with representatives of the target audiences

IMPLEMENTATION YEAR 3

- Initiate pilots to provide medical homes to women of reproductive age, especially those with chronic conditions
- If pilots are successful, expand mobile clinic locations and identify resources for sustainability
- Expand the IMPLICIT ICC program to all WCHS well-child clinics
- Evaluate, apply lessons learned, and modify approaches as necessary
- Use mass-reach health communication strategies to promote healthful life planning and counter messages that increase susceptibility to unhealthy lifestyles
- Expand CenteringPregnancy program to additional WCHS prenatal clinic sites

Fathers

OUTCOME

- Waiting rooms are welcoming to fathers
- Fathers participate in care and attend clinic visits; opportunities exist for fathers to be included even if they cannot be physically present
- Programs specific to fathers are available and program staff include males as role models
- Community messaging promotes dads

NEED

- Data is needed to determine the extent to which prenatal clinic waiting areas include objects, items, or décor aimed at men (e.g. magazines aimed at men, pictures of men alone or with babies, and information for fathers)
- Data is needed to determine how often fathers are participating in prenatal care appointments and barriers to attending these appointments
- Of the 33 Wake County Child Welfare children who were discharged and reunified with a family member during the first six months of FY 2019, 16 (48.5%) were reunified with single fathers.
- Approximately 13,000 babies are born in Wake County each year creating a need for education and awareness regarding parenting and healthy families

EXISTING CAPABILITIES

- Several WCHS programs engage fathers who could assist in evaluating prenatal clinic waiting areas and offer suggestions to make environments more father-friendly
- WCHS MCH home visiting staff who provide services to families could gather information related to father involvement in prenatal care and provide encouragement for participation
- WCHS offers Father Engagement services to fathers involved with Child Welfare or Child Support Enforcement, and fathers in the community needing support. Services include coaching, Men's groups, and referral to Day 2 Day Dads
- WCHS and local hospitals offer childbirth and parenting classes to Wake County residents which may include specific information for fathers

GAPS

- Prenatal clinic waiting areas are generally mother-friendly giving the impression that fathers play a less important role in the pregnancy and care of the infant
- Fathers need to feel included and expected to participate in prenatal care. Mothers' desire to include fathers needs to be taken into consideration particularly in instances of previous or current trauma
- Additional fathers could be served if more programs specific to fathers were available, and/or existing programs were expanded.
- Parenting classes provided through WCHS reach approximately 25 families each month. Even with classes offered by hospitals, there are many families who do not participate in any educational programs

RESOURCES NEEDED TO ADDRESS GAPS

- Funds to update clinic waiting areas with appropriate décor, educational resources for fathers, etc.
- Training for providers
- Clinic leadership buy-in
- Clinic flow adaptations to accommodate father involvement
- Training for providers
- Funds to expand existing programs and pilot new evidence-based programs
- Funds for media campaign
- Funds for information resource line
- Funds for conference

IMPLEMENTATION YEAR 1

- Conduct an environmental scan of WCHS prenatal clinic waiting areas and establish baseline data documenting fathers' feelings of inclusion and being welcomed
- Identify barriers in WCHS prenatal care clinics that impede male involvement
- Enhance existing services to reach more fathers and ensure that service providers include males
- Promote health services for fathers, including recommended screenings and check-ups, through culturally appropriate educational materials and media messages

IMPLEMENTATION YEAR 2

- Increase cultural competency among health and human service providers about the unique needs of African American fathers
- Provide health care provider training that includes strategies for including fathers as partners in care
- Pilot evidence-based programs, such as Dads Matter, for African American fathers to help them address barriers to active involvement in their children's lives
- Establish an information resource line to respond to a range of issues impacting fathers

IMPLEMENTATION YEAR 3

- Develop new, or disseminate existing, tools to support existing clinics, programs and agencies in providing father-friendly and culturally appropriate environments
- Implement strategies to include fathers as partners in care even if they cannot be physically present
- Expand evidence-based programs to serve more fathers
- Hold an annual conference celebrating fatherhood and promoting male involvement

Approach

Developing a series of recommendations to improve rates of infant mortality among African American babies was the primary goal of this work. Wake County Human Services, as the convening organization, and its academic partner, the UNC Gillings School of Global Public Health at Chapel Hill, devised a systematic process involving local stakeholders and state and community experts.

The initial meeting of the workgroup was designed to build a shared understanding among members of the disparity gap in infant mortality rates in Wake County. Belinda Pettiford, Women's Health Branch head in the NC Division of Public Health, presented an overview of the state's initiatives to help all North Carolina children get a healthy start and to develop to their full potential. Ms. Pettiford shared details from the NC Early Childhood Action Plan and the NC Perinatal Health Strategic Plan. Following this presentation, Dr. Nicole Mushonga, epidemiologist with Wake County Human Services, provided a snapshot of the health of Wake County mothers and babies and compared the data to that for Mecklenburg County and North Carolina. A panel consisting of Dr. Michelle Bucknor, community resident Shana Arrington and Stephannie Senegal, RN, provided further insights into the challenges and experiences of African American pregnant and postpartum women and their children in Wake County. At the conclusion of the meeting, UNC Gillings School of Global Public Health faculty informed the workgroup members that they would receive an electronic survey designed to collect information on what programs and services related to infant mortality were currently available in the community.

At the second meeting, workgroup members reviewed the inventory of existing programs and services addressing the infant mortality gap compiled from the electronic survey. In addition, UNC Gillings School of Global Public Health faculty shared best practices that address multilevel factors that shape disparities in infant mortality. A summary of these multilevel factors is provided in the diagram on the following page.

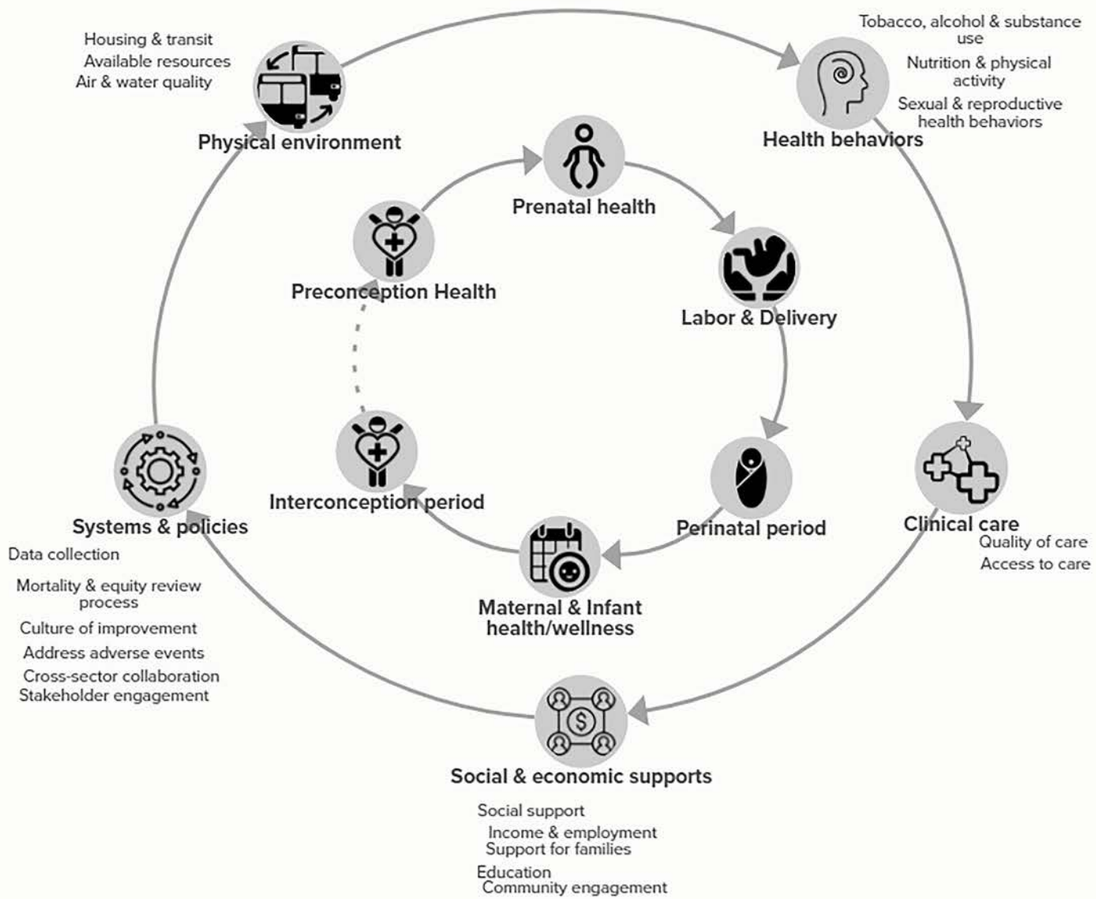
Workgroup members reflected on available resources and gaps, and then heard from three community residents, Shana Arrington, Tiffany Perry, and Charvetta Batchilly, about their lived experiences as mothers and grandmothers navigating health systems designed to serve pregnant and postpartum women and their infants. The workgroup was then asked to generate inequity statements specifically describing the causes of the inequities and who benefits and does not benefit from available services. Workgroup members identified the most important areas to address and brainstormed specific actions targeting these priorities.

At the third meeting, the workgroup identified a set of actions to recommend for further development. They were asked to recommend a set of action priorities that would have impact, would be doable, would leverage local strengths and resources, would have organizational and stakeholder buy-in, and would be aligned and synergistic. Using an Above/Below the Water Line activity, members were asked to identify 8-10 action ideas to bring above the water line. Action ideas above the water line needed to address gaps and inequities.

Following this meeting, a subcommittee was formed to take the action ideas above the water line and describe what success would look like for each action idea. They were also asked to identify what resources would be needed to implement the actions and generate a timeline for implementation.

At the final meeting of the full workgroup, members reviewed the subcommittee recommendations and refined strategies for action. They agreed on the six focus areas described previously in this report and the specific criteria for defining success in each area.

Multilevel Factors That Shape Disparities in Infant Mortality



Source: Center for American Progress (2019)

Evaluation

A comprehensive evaluation is recommended to determine whether the infant mortality action plan described in this report is implemented as intended and achieves the desired outcomes.

The evaluation needs to be useful to Wake County and feasible (i.e., not too costly and time-consuming). It should be conducted in an ethical manner with attention to health equity and should be rigorous enough to provide results that are meaningful and valid.

A process evaluation should be conducted to assess whether the recommended activities are reaching the intended population. Under coverage, or not reaching the targeted number of eligible participants, may have several causes, including the services are not robust enough and cannot meet the need, or insufficient marketing. Process evaluation provides data on the quality and fidelity of delivering the intervention, which helps determine corrective action.

An outcome evaluation is also recommended to assess the effects of the strategies or interventions that occur most immediately and most directly. In addition, as funding permits, an impact evaluation should be considered to assess the effects of the strategies or interventions in the long term. Both types of evaluations are designed to clearly describe benefits for the desired population and quantify how much or to what degree of change (effect or benefit) among the desired population or participants is a result of having received sufficient exposure to the strategies or intervention.

Both process and outcome/impact evaluations require utilization of research skills and knowledge. Choice of the evaluation design depends on whether a comparison group exists, whether members of the comparison group can be randomly assigned to receive the program, and whether the effect variable can be measured at baseline. Data collection methods may consist of questionnaires, observations, interviews, existing data from medical records, or other measures. The data analysis approach and choice of statistical analysis will depend upon the types of data collected and the number of groups for which data exist. An external evaluator may be retained for the evaluation design and implementation if there is not internal capacity to conduct the evaluation and sufficient funds are available to contract with an independent evaluator.

Footnotes

1. North Carolina Department of Health and Human Services, North Carolina State Center for Health Statistics (2019). 2020 County Health Data Book Birth Indicator Tables [data report}. Retrieved from https://SCHS.dph.ncdhhs.gov/data/databook
2. Department of Health and Human Services. North Carolina's Perinatal Health Strategic Plan 2016-2020. 2016; Available from https://whb.ncpublichealth.com/docs/PerinatalHealthStrategicPlan-WEB.pdf
3. Taylor J, Novoa C, Hamm K, Phadke S. Eliminating Racial Disparities in Maternal and Infant Mortality. Center for American Progress 2019. Available from https://www.americanprogress.org/issues/women/reports/2019/05/02/469186/eliminating-racial-disparities-maternal-infant-mortality
4. https://www.healthychildren.org/English/ages-stages/baby/sleep/Pages/A-Parents-Guide-to-Safe-Sleep.aspx Accessed March 29, 2020.
5. https://safesleepnc.org/about Accessed March 29, 2020.
6. Universal home visiting calculates 1 nurse to 200 births. Minimum FTE calculated by assuming 50% refusal of services; Maximum FTE is 100% acceptance of services.
7. Nurse Family partnership model requires 1 nurse to 25 cases. Minimum FTE calculated by assuming 50% refusal of services; Maximum FTE is 100% acceptance

Summary

In order to address the worsening disparities in infant health outcomes among African American women compared to White women in Wake County, Wake County Human Services convened a workgroup of state and local experts and stakeholders to develop recommendations to address the gap in infant mortality outcomes.

The workgroup reached consensus on six priority areas and generated specific strategies with desired outcomes for each priority area. This report compiles their recommendations and action plan to implement strategies over the next three years. Sufficient resources will need to be identified to fully implement the recommendations and an evaluation of the work will be necessary to measure the extent to which the action plan is implemented as intended and achieves the desired results. Other communities interested in improving rates of infant mortality or tackling other challenging public health issues could potentially benefit from a similar process.

The efforts of the Infant Mortality Workgroup provided a foundation to apply for and receive additional resources for implementation of the workgroup priorities. In mid- to late-2019, Wake County Human Services received a three-year technical assistance grant from CityMatCH to focus on a Best Babies Zone. The identified zone is in Southeast Raleigh, a region with some of the highest infant mortality rates in the county.

In early 2020, Wake County successfully competed for a $975,000 grant from the NC Department of Health and Human Services to be used over two years to focus on three aims: improving birth outcomes, reducing infant mortality, and improving the health status of children 0-5. The identified strategies align with the Workgroup's recommendations and will be approached with a health equity lens.

8. Improving Community Outcomes for Maternal Child Health (ICO4MCH) is 2-year grant funding which will only serve census tracts in Southeast Raleigh (Best Babies Zone and contiguous tracts)
9. Currently serving 27610 and surrounding Raleigh zip codes; Maternal Child Health Section is seeking to add to another nurse to NFP through additional Smart Start funding for 2021.
10. NFP model requires 1 nurse supervisor and 1 admin support for each team of 8. This threshold would be reached in year 3.
11. Community Health Workers (CHW) model assumes 1 CHW to 200 cases. Minimum FTE calculated by assuming 50% refusal of services; Maximum FTE is 100% acceptance
12. 2 Community Health Workers were funded through the ICO4MCH grant.
13. Maternal Child Health Section program data.
14. Program data from Maternal Child Health Program; Operation costs include $700.00 a month for storage; Program costs $55 for cribs, $60 for pack and plays
15. North Carolina Department of Health and Human Services, North Carolina Center for Health Statistics. (2017). Pregnancy Risk Assessment Monitoring System (PRAMS). [Data report]. Retrieved from https://schs.dph.ncdhhs.gov/prams/2017/intent3.html

WAKE COUNTY
NORTH CAROLINA

Infant Mortality
2020 Workgroup Report

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