

PLAN FOR REDUCING INFANT MORTALITY IN MARYLAND
Maryland Department of Health and Mental Hygiene
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Executive Summary

Maryland's progress in reducing infant mortality has stalled in recent years and a comprehensive, multi-faceted plan is needed to achieve the Governor's strategic goal of reducing the infant mortality rate by 10% by 2012. Factors contributing to Maryland's high infant mortality rate are multiple, complex, and include: a high percentage of unintended pregnancies (including a recent rise in the teen birth rate), a worsening early prenatal care rate, and an unacceptably high racial disparity in birth outcomes. Maryland's Plan addresses these issues by targeting interventions initially in three jurisdictions with high infant mortality rates (Baltimore City, Prince George's County and Somerset County) then expanding these efforts statewide. Proven interventions are concentrated at different points along the life span – before pregnancy, during pregnancy, and after delivery. Strategies include the development of comprehensive women's health centers, expediting Medicaid eligibility for prenatal care, and establishing standardized hospital discharge protocols for ensuring risk-appropriate follow up to mothers and infants. The results will be healthier women at time of conception, earlier entry into prenatal care, and comprehensive postpartum and neonatal follow up care leading to healthier infants and fewer infant deaths in Maryland.

Background

Infant mortality is a serious public health problem in both Maryland and the United States. The United States (with an infant mortality rate of 6.8 deaths/1,000 live births) ranks 30th among developed nations, and Maryland (rate of 8.0/1,000 in 2007) ranks 42nd among states in infant mortality. Although there has been a 32% reduction in Maryland's infant mortality rate over the past 25 years, progress has stalled this decade. Maryland jurisdictions with the worst infant mortality rates over the past five years are Somerset County (14.4/1,000), Dorchester County (12.4/1,000), Baltimore City (12.2/1,000) and Prince George's County (10.6/1,000). In 2007, Baltimore City and Prince George's County accounted for 42% of all infant deaths in the State. Furthermore, there is an unacceptable racial disparity in infant mortality in Maryland, with Black infants (14.0/1,000) three times more likely to die than White infants (4.6/1,000) in 2007.

Causes of Infant Mortality

The leading causes of infant mortality are preterm/low birthweight births, congenital anomalies, and Sudden Infant Death Syndrome (SIDS). Preterm/low birthweight births are associated with 2/3 of all infant deaths. Overall, the infant mortality rate for very low birthweight infants (those with birth weights of less than 1,500 grams or 3 ½ pounds) is 240/1,000, more than 100 times the mortality rate for normal birthweight infants.

Risk Factors for Infant Mortality

Risk factors for infant mortality are multiple and include behavioral and environmental risks, health care risks, and socio-demographic risks. Behavioral risks, such as unintended pregnancy, increase neonatal mortality more than two-fold. Health care risks, such as late prenatal care, increase infant mortality more than 40%. Socio-demographic risks involving age, education and income are also associated with increased infant mortality. However, the complexity of infant mortality is reflected by the fact that racial disparities in infant mortality cannot be explained by socio-economic factors alone. For example, college-educated Black women have worse pregnancy outcomes than women of other races/ethnicities (White, Hispanic, and Asian) with less than an 8th grade education.

Costs

The economic costs of preterm/low birth weight births leading to infant mortality are high. Very low birthweight infants require neonatal intensive care unit (NICU) care with daily costs exceeding \$3,500 per infant and total costs which can exceed \$1 million for a prolonged stay. Beyond NICU costs are the extraordinary costs of managing the medical, educational and social needs of very low birthweight infants. Caring for the special health care needs of these children, who may develop neurologic sequelae or chronic diseases, can drain a family financially, physically and emotionally.

Goal

The Governor's overall strategic goal is to reduce infant mortality in Maryland by 10% by 2012. In 2007, there were 622 infant deaths in Maryland and an infant mortality rate of 8.0/1,000 (baseline data when the plan was launched in Aug. 2009). By the end of 2012, Maryland's goal was to have 60 fewer infant deaths, resulting in an infant mortality rate of 7.2/1,000 which would be Maryland's lowest recorded infant mortality rate.

In the fall of 2010, infant mortality data from 2009 revealed that the goal of a 10% reduction in overall infant mortality had been reached. This reduction was largely the result of a drop in White infant deaths, with little change in Black infant deaths, therefore widening the racial gap. In October 2010, the goal for infant mortality reduction was reset with a new goal of maintaining or further improving on the overall infant mortality rate and also reducing the Black infant mortality rate in Maryland by 10% by 2012.

- **2007 baseline – 622 total deaths, rate of 8.0/1,000**
 - **Black infant baseline – 369 deaths, rate of 14.0/1,000 births**
- **2009 status – 541 total deaths, rate of 7.2/1,000**
 - **Black infant status – 343 deaths, rate of 13.6/1,000 births**
- **2012 Goal –total rate \leq 7.2/1,000**
 - **Black infant goal – 319 deaths, Black rate \leq 12.6/1,000 births**

Strategic Approach

The strategic approach focuses on: (1) assessing the data and targeting disparities, (2) building on strengths and partnerships, and (3) taking a comprehensive systems approach. Initially, Baltimore City, Prince George's County, and Somerset County – three jurisdictions with high infant mortality rates – have been targeted by the Plan. The Plan builds on the good work currently taking place in those jurisdictions, including the Baltimore City Health Department's "B'More for Healthy Babies" campaign to reduce infant mortality, Prince George's County Health Department's "Healthy Women, Healthy Lives Program," and the Somerset County Health Department's "Babies Born Healthy Program." With time, the comprehensive services and outreach efforts developed in these jurisdictions will be expanded to other jurisdictions in order to effect a comprehensive systems change throughout the State.

Proven interventions are concentrated at different points along the life span:

- Before pregnancy – Preconception interventions to ensure healthier women at time of conception.
- During pregnancy – Prenatal interventions to ensure earlier entry into prenatal care.
- After delivery – Perinatal and neonatal interventions to ensure comprehensive, high quality follow up care.

Strategy 1 – Before Pregnancy – Comprehensive Women’s Health Centers

Given the complex and multiple factors contributing to infant mortality, interventions must begin before conception. The health of a woman at the time of conception can profoundly affect the outcome of that pregnancy. As family planning often serves as the entry point for women into the health care system, public health family planning clinic sites, in each of the three targeted jurisdictions, have expanded their scope of services to become Comprehensive Women’s Health Centers and address more than reproductive health needs. Expanded services include screening and referral for Medicaid eligibility, WIC nutrition, substance abuse treatment, mental health, domestic violence prevention, smoking cessation and weight management services.

Strategy 2 – During Pregnancy – Earlier Entry into Prenatal Care

Once pregnant, entry into early prenatal care becomes critical. Beginning Dec. 1, 2009, Medicaid applications for pregnant women at local health departments and local Department of Social Services sites have been expedited through a process called “accelerated certification of eligibility.” If an application can not be completed within 10 days, a pregnant woman is presumptively enrolled in Medicaid and provided up to 90 days of coverage while the full application is being processed. Three local health department sites in the target jurisdictions have also implemented a pilot *Quick Start* prenatal care program, which includes initial screening, counseling and referral services, and assistance in accessing ongoing prenatal care. Increasing access to prenatal services in underserved areas is a key component in addressing infant mortality. Through an innovative partnership between Prince George’s County Health Department, Prince George’s Hospital Center, and the University of Maryland School of Medicine, the “Tapestry Program” began providing comprehensive and cost effective prenatal care services in March 2010. Greater Baden Medical Services, a Federally Qualified Health Center, has expanded services to include prenatal care at a Prince George’s county site in 2011. Both of these programs have received grant support from the Maryland Community Health Resources Commission and contribute to increased provider capacity in Prince George’s County.

Strategy 3 – After Delivery – More Comprehensive Follow Up Care

After delivery, those women with poor pregnancy outcomes, such as preterm/very low birthweight births, must be identified and a coordinated effort made to ensure risk-appropriate follow up for both mother and infant. Hospitals, providers, local health departments, and other community groups must work together to ensure that high risk women and infants receive timely and appropriate services, including safe sleep instruction, breastfeeding support, mental health and substance abuse services, domestic violence support, smoking cessation services, family planning, and other services. Building on the Maryland Perinatal System Standards and quality improvement work currently being done with the Maryland Institute for Emergency Medical Services Systems, Maryland Patient Safety Center, and all 34 birthing hospitals in Maryland, a standardized hospital postpartum discharge process is being developed. A standardized discharge referral form for high risk mothers and infants has been developed to streamline referral to community-based services and is currently being reviewed by key stakeholders. After stakeholder feedback is analyzed, the form will be implemented in the initial target jurisdiction hospitals. The Maryland Patient Safety Center’s Perinatal and Neonatal Learning Networks have committed to work jointly on developing a standardized discharge process in collaboration with the Department. The Department is also working to maximize home-visiting programs and teen pregnancy prevention efforts with funding awarded through the federal Health Care Reform legislation.

Community Outreach

Culturally-competent outreach, education and care coordination efforts in the community are critical in targeting hard-to-reach families and addressing minority health needs. Community-based

interventions are an important part of all three strategies. Perinatal Navigators and other outreach workers are being utilized in the high-risk jurisdictions to reach target populations and assist women in accessing services.

Moving Forward in 2011

Efforts underway will be expanded to other Maryland jurisdictions. Dorchester County will be added to the target jurisdictions in 2011. Efforts such as Comprehensive Women's Health services, expedited Medicaid eligibility for pregnant women, and a standardized hospital post-delivery discharge process will be expanded to all Maryland jurisdictions. New home visiting programs will be implemented in communities at highest risk. The Department will outreach to hospitals on health disparities in the communities they serve. Future data collection on pregnancy outcomes will be greatly enhanced by the electronic birth certificate that went into statewide use in January 2010. Greater public and stakeholder input will be sought through a variety of forums, including an open comment period to provide input on the Plan.

Challenges and Outlook

Although the Plan builds on strengths in Maryland's perinatal care system, including the innovative work being done in the local health departments, hospitals and other community-based groups, there are challenges to reducing Maryland's infant mortality rate at this time. Racial disparities in health outcomes continue to hurt communities in need. The economic downturn has put enormous pressures on families, as well as on public resources for addressing health needs. Safety net providers, like local health departments and community health centers, have been stretched thin over the years. Obstetric and other medical providers continue to struggle with high malpractice premiums, leading to fewer providers able to help with early prenatal care. Uninsured patients, many from working families, continue to face mounting financial pressure from their medical bills. Despite these challenges, Maryland's Plan for transitioning existing resources to develop Comprehensive Women's Health Centers, expediting early entry into prenatal care, and assuring culturally-sensitive follow up services to women and infants at risk and in need, represents a systems change approach for reducing Maryland's unacceptably high infant mortality rate.

Partners

Office of Minority Health and Health Disparities
Medicaid
Alcohol and Drug Abuse Administration
Mental Health Administration
Department of Human Resources
Governor's Office for Children
Maryland Community Health Resources Commission
Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Maryland Patient Safety Center
Maryland birthing hospitals
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