Task Force on Maryland Maternal and Child Health

August 18, 2020

The Honorable Bill Ferguson
President of the Senate
State House H-107
100 State Circle
Annapolis, MD 21401

The Honorable Adrienne A. Jones
Speaker of the House
State House H-101
100 State Circle
Annapolis, MD 21401

Re: Chapters 661 and 662 of the Acts of 2019 (House Bill 520/Senate Bill 406) – Final Progress Report of the Task Force on Maryland Maternal and Child Health

Dear President Ferguson and Speaker Jones:

Pursuant to Chapters 661 and 662 of the Acts of 2019 (House Bill 520/Senate Bill 406) the Task Force on Maryland Maternal and Child Health (Task Force) submits this final progress report summarizing the work of the Task Force and its work groups. This report includes the findings and recommendations of the Task Force, which is an independent body from the Maryland Department of Health.

Thank you for your interest in the health of Maryland's mothers and children. Should you have any questions or comments, please do not hesitate to contact Webster Ye, Director of the Office of Governmental Affairs, at Webster.Ye@maryland.gov or 410-767-6480.

Sincerely,

Steven J. Czinn, MD
Chair

Cc: Webster Ye, JD, Director of the Office of Governmental Affairs, Jinlene Chan, MD, MPH, FAAP, Acting Deputy Secretary, Public Health Services

Donna Gugel, MHS, Director, Prevention and Health Promotion Administration
Courtney McFadden, MPH, Deputy Director, Prevention and Health Promotion Administration
Shelly Choo, MD, MPH, Director, Maternal and Child Health Bureau
Sarah Albert, MSAR #12105

Task Force on Maryland Maternal and Child Health

Final Progress Report
August 18, 2020

Chapters 661 and 662 of the Acts of 2019
(House Bill 520/Senate Bill 406)

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Acronyms Used

ACE	Adverse Childhood Experience
CDC	United States Centers for Disease Control and Prevention
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare and Medicaid Services
CNM	Certified Nurse Midwife
COVID-19	Coronavirus Disease 2019
FPL	Federal Poverty Level
HSCRC	Health Services Cost Review Commission
MCH	Maternal and Child Health
MCO	Managed Care Organization
MDH	Maryland Department of Health
PNC	Prenatal Care
REM	Rare and Expensive Case Management Program
ROI	Return on Investment

Task Force Overview

The Task Force on Maryland Maternal and Child Health (Task Force) was established by Chapters 661 and 662 of the Acts of 2019 (House Bill 520/Senate Bill 406).

The Task Force has convened ten times under the leadership of Dr. Steven Czinn (Chair) University of Maryland representative and Tina Cheng (Vice Chair) Johns Hopkins Children's Center representative. The remaining Task Force members are listed below:

Maryland Department of Health Linda Alexander, MD (designee of Secretary Neall)	**Maryland Affiliate of the American College of Nurse Midwives** Mairi Rothman, CNM, DM
Maryland Department of Human Services David C. Rose, MD, MBA, FAAP (designee of Secretary Padilla)	**Maryland Chapter of the American Academy of Pediatrics** Melvin Stern, MD
Maryland Medical Assistance Program Laura Goodman, MPH (designee of Secretary Neall)	**Maryland Association for the Treatment of Opioid Dependence** Vicki Walter
Health Services Cost Review Commission (HSCRC) Tequila Terry, MBA (designee of Executive Director)	**Physician specializing in neonatology, maternal fetal medicine, or pediatric cardiology from a hospital other than JHU or UMD** Wayne Kramer, MD
Representative from a community-based organization focused on maternal and infant care support and currently partnered with Johns Hopkins Children's Center Jazmyn Covington, MPH	**Maryland Patient Safety Center** Bonnie DiPietro, MS, RN

Representative from a community-based organization focused on maternal and infant care support and currently partnered with University of Maryland Children's Hospital Deborah Rock, MSW	**Maryland Section of the American College of Obstetricians and Gynecologists** Ishrat Rafi, MD
Three representatives of participants who qualify, are receiving, or have received care coordination from targeted programs within the current care coordination system (1) Tausi Suedi, MPH; (2) Wendy Bates, CAC-AD; and (3) Nichole Walsh Meadows, MHS, BSN, RN, CPN, CCM.	

The Task Force met on these dates in 2019: August 8 and 22, September 5 and 27, October 24, November 22, and December 12. Meeting dates for 2020 were January 24, March 2, and March 27.

Disclaimer Statement and Editorial Notes

The recommendations contained herein were brought forth by members of the Maryland Maternal Child Health Task Force for consideration and approved by a majority of the members. Inclusion in the report does not indicate consensus or approval by all Task Force members.

Executive Summary

There is an urgent need to invest early in the lives of Marylanders to improve the overall and long term health of the State and to ensure health equity. The Coronavirus Disease 2019 (COVID-19) pandemic has worsened family stress, child hunger, poverty, and child and adolescent mental health globally and in our state.[1, 2, 3] In 2018, 12 percent of Maryland children lived in poverty with great racial/ethnic disparity. This was concentrated in certain regions, such as Baltimore City, where over one in four children live in poverty.[4] Poverty rates in Maryland and in the nation are highest among children.[5] Past recessions, like the one we are experiencing, have often affected children the most and they have experienced the longest consequences.[3 ,6, 7] Forecasting estimates of poverty during the COVID-19 crisis suggest that poverty rates in the United States could reach their highest levels in over 50 years, with working-age adults and children facing particularly large increases. The poverty rate for children is projected to rise by 53 percent.[3]

According to the Centers for Disease Control and Prevention (CDC), Maryland's maternal mortality rate from 2013 to 2017 (24.8 maternal deaths per 100,000 live births) ranks 22nd among all states. The maternal mortality rate for African Americans is almost four times that of Whites (44.7 maternal deaths vs. 11.3 per 100,000 live births).[8, 9] For infant and neonatal mortality, Maryland ranks 35th and 39th among the states, respectively. These mortalities are significantly higher than the national rate.[10] Prior to the pandemic, rates of mental, emotional, and behavioral disorders, including depression, suicide, anxiety, and self-harm, were increasing among children and youth.[11, 12] For the 2017 birth cohort, the financial toll of untreated perinatal mood and anxiety disorders is projected to cost 14 billion dollars, from conception to five years postpartum.[13] Healthy People 2020 goals on maternal, infant, and child health (MCH) focus on improving the health and well-being of women, infants, children, and families.[14] Sentinel MCH health indicators require State-wide and national attention.

Under the auspices of the Total Cost of Care Model (i.e. Medicare waiver), the Maryland Department of Health (MDH) is identifying three population health goals to serve as cornerstones of the Maryland Integrated Health Improvement Strategy. While the first two goals have been identified, MDH should select MCH as the third goal with a focus on maternal and infant mortality and promoting child and family mental, emotional, and behavioral health.

Also, the strategy's first two goals under the population health domain, diabetes and opioid/substance use disorder, must include strategies that target the MCH population, women of childbearing age, children, adolescents, and families, where these disorders often begin and can perpetuate an intergenerational cycle of poor health. MDH must establish a standing Maternal and Child Health Committee to develop and fund an action plan, implement strategies, and monitor outcomes.

Addressing family contextual factors, social needs, and early manifestations of physical and behavioral health conditions in the preconception, prenatal, child, and adolescent stages of life will produce long-term improvements in population health and will strengthen the economic sustainability of Maryland's health systems. A growing body of research demonstrates that adult

chronic diseases originate early in the life course, illustrating the need for preventive strategies.[15, 16, 17]

Prevention also saves money. The incremental lifetime medical cost of an obese 10-year-old child relative to a child who maintains a healthy weight through adulthood is $19,000. Multiplying this by the number of obese 10-year-olds today yields a total direct medical cost of obesity of 14 billion dollars for this age alone.[18] Children are our greatest resource and are the message we send to the future. Making sure they are born healthy, ready to learn, and on a trajectory to healthy adulthood must be our highest priority.

The all-payer hospital payment model approved in January 2014 aligns hospital incentives with community and primary care efforts to improve health by shifting from volume-based reimbursement to a global budget revenue system. The model incentivizes hospitals to support population health. Thus far, however, the vast majority of population health efforts have focused on adults.

While adult health needs represent an enormous share of medical costs and poor health outcomes, growing evidence spotlights opportunities to address the early conditions that cause individuals to become high-cost and high-need patients in the first place. The record shows that the path to becoming a high-risk, high-needs adult starts as early as in utero and infancy, and that conditions during childhood greatly affect individual health trajectories across the entire life course. Bending the cost curve and improving health outcomes is a powerful win-win opportunity, but it demands that we focus our efforts on upstream factors and eliminating racial/ethnic and socioeconomic disparities. Strengthening MCH creates an effective and efficient focus on those upstream factors.

Fortunately, evidence-based interventions exist to improve outcomes for Maryland's families and children. Crucially, the benefits are both immediate and lasting. Early investment to ensure safer pregnancies and healthier children saves money otherwise spent on high-risk maternity care, long infant neonatal intensive care unit stays, and MCH emergency department visits. By making these investments, the State can proactively build better health for individuals for decades to come.

Realizing these opportunities for improved health and lower costs in Maryland requires a sustained investment and a long-term commitment. MCH and health equity must be central to the state's Integrated Health Improvement Strategy. Among the task force's recommendations, two are foundational: (1) MCH should be the focus of the state's third goal under the population health domain; and (2) A standing State MCH Committee must be established and charged with developing, implementing and monitoring a Blueprint for MCH and shared accountability framework that provides a roadmap to achieving Statewide outcome goals.

In addition to identifying these crucial steps, this report outlines specific recommendations to improve access, payment, and population health, including MCH metrics, separate consideration of this population and health equity in financing and payment, expanding maternal postpartum Medicaid coverage, and integrating multisector resources to support two-generation family approaches and place-based initiatives (e.g. school health).

Background

MCH forms the foundation for health across the lifespan through adulthood. The MCH population includes women, children, adolescents, and families.[14] Children have unique developmental needs that require consideration and investment to improve life course population health. Growing research demonstrates the importance of maternal health, preconception influences, and prenatal influences on child and adult health.[15, 16, 17] Differences between health promotion for children and adults have been conceptualized as the "5 D's." These include demographics, disease/differential epidemiology, developmental change, dependency, and dollars.[1920, 21 ,22] The 5 D's have important implications for MCH policy and health equity.

Demographics

In 2018 the U.S. poverty rate for children was 54 percent higher than that for adults.[3] Eighteen percent of children—approximately one in five—were living below the federal poverty level (FPL), which was an annual income of $25,465 for a family of four. Nearly two out of every five children lived in low-income families, defined as being at or above 200 percent of the FPL.[23,24] Black and Hispanic children are nearly three times more likely to live in poverty compared to White children.[25]

In Maryland, 12 percent of children live in poverty, though it is concentrated in certain regions such as Baltimore City (27 percent) and the racial/ethnic disparities are of similar magnitude.[26] In addition, 34 percent of children in the State are raised in single-parent households. In the past, economic downturns like we are currently experiencing often affected children the most and children experienced the longest consequences.[5, 6, 7] A survey in late April found that more than 17 percent of young children in the United States did not have sufficient food, a rate three times higher than during the worst of the Great Recession.[1] High poverty, with associated racial/ethnic disparities, disproportionately affect our young and must be addressed to ensure they are on a trajectory to healthy, productive adulthood.

Development

The preconception and prenatal health of mothers influences child health. Chronic child health problems such as obesity, cognitive disability, and neurodevelopmental disorders are often related to preventable maternal conditions. Child health centers on developing social, emotional, and physical competencies and attaining basic skills. Adult health focuses on health maintenance, remediation, and rehabilitation. Health metrics must expand to include an individual's entire life course, including the preconception and prenatal health of mothers and their children. Health metrics must consider a broader range of outcomes such as wellbeing, life chances, opportunity, risk and resilience, health potential, educational outcomes, and quality of life, in addition to the traditional focus on disease status and health care provision.[27, 28]

Disease/Differential Epidemiology

The complex interplay of maternal health with child health requires a specific approach to epidemiology and different metrics for monitoring and evaluation. Maternal and child exposures

to psychosocial (e.g. maternal stress, adverse childhood experiences) and environmental threats (e.g. toxins) are often unique, manifest differently, and may accumulate over time in utero and during childhood. There is ample evidence demonstrating how adverse exposures hamper maternal and child health and development and contribute to the cognitive, behavioral, and mental health challenges facing US children today.[29, 30, 31]

Epidemiologic research has demonstrated a strong dose-response relationship between adverse childhood experiences (ACEs) and adult physical and mental health and workforce outcomes.[32, 33] These ACEs include economic hardship, exposure to violence and exposure in the home to substance abuse, mental illness and suicide, parental separation and divorce, incarceration, or violence. Data from 2016 show that nearly 40 percent of children in Maryland have experienced at least one ACE. [34] Preventing and buffering the impact of maternal stress and ACEs must be a priority to improve population health.

Of 185 World Health Organization Member States with a population greater than 100,000, the U.S. and the Dominican Republic were the only countries in which maternal mortality increased between 2000 and 2017.[35] Women with preexisting chronic conditions, women living in poverty, and racial/ethnic minority women were disproportionately affected.[36] Infant mortality in the U.S. has declined; however, compared with other industrialized countries, the U.S. ranks 33rd out of 36 countries with persistent large racial disparities.[37] According to CDC data, Maryland ranks 22nd across states in maternal mortality and 35th and 39th in infant and neonatal mortality, respectively, with large racial/ethnic disparities.[8, 9] These are sentinel health indicators that require Statewide and national focus.

Dependence

Optimal MCH requires optimal functioning of the family unit and community supports. Family capacities are the resources caregivers bring to the task of raising children. These include physical and mental capacity, financial resources, time, and human capital (education and employment opportunities).[38] Family capacities are dependent on resources in the families' neighborhoods and communities.[39] Children directly rely on adults in childcare, schools, and social services. MCH must ensure healthy families and communities and work across sectors of health, education, social services, juvenile justice, and child welfare.

Dollars

To promote MCH trajectories to healthy adulthood, the context of services and policy for intervention are unique. Children are dependent on: (1) family income, wealth and supports; (2) educational attainment; (3) health and education spending; and (4) private insurance, Medicaid, and the Children's Health Insurance Program (CHIP). Forty percent of all American children ages 0-18 are insured by public sources (Medicaid, CHIP, and other) and five percent are uninsured.[40] Studies of women who have delivered a child have found that a quarter were uninsured in the month prior to pregnancy, over half of whom had less than 12 years of education.[41]

The MCH population must continue to be a priority for all health payers (e.g. Medicaid, CHIP, and private payers), including ensuring coverage and strengthening population health programs. Maryland's all payer hospital payment model as a Medicare waiver has focused on Medicare, which covers primarily elderly adults and almost no mothers or children, and initial efforts at population health have focused on the needs of adults.

In 2016, children ages 0-18 accounted for about 10 percent of total health spending but represented 24 percent of the population.[42] Directing the majority of health care dollars to expensive hospital-based adult care fails to consider the short and long term value of child health. Return on investment (ROI) in child health occurs not only in the health care sector, but also in education, social services, and juvenile justice.[43] However, ROI for child health programs accrue over a longer period of time as children develop. The long trajectory for ROI can weaken incentives for payers, hospitals, and legislators to focus on child health investments.

Nobel Laureate James Heckman has demonstrated that early investment in the wellbeing and skill formation of disadvantaged children pays off economically and is just and equitable. His research and economic modeling has found that quality early childhood development heavily influences health, economic, and social outcomes for individuals and society at large and there are great economic gains to be had by investing in early childhood development.[44] Other studies show that eliminating racial and ethnic disparities dramatically reduces medical care costs and indirect costs of excess morbidity and mortality.[45, 46] Investments in child health also have positive effects on parental health and parental productivity, as well as the child's future health as they become an adult, with societal ROI bridging multiple sectors (e.g. health, education, and social services).[32, 47] Hendren and Sprung-Keyser reviewed 133 social policies to determine which improved social well-being the most and yielded the largest marginal value of public funds. They found that direct investments in the health and education of low-income children offered the highest returns.[48]

Prevention efforts save direct medical costs. These potential savings are illustrated by past successes addressing obesity. Obesity is a known risk factor for a wide range of diseases, including cardiovascular disease, type 2 diabetes and certain cancers. As previously mentioned, preventing the incremental lifetime medical costs of obesity could potentially save a total of 14 billion dollars of medical spending for the current generation of 10 year-old children alone.[18] Each case of childhood obesity prevented and maintained would allow for funding greater than one year of a child's public college education. While children account for 10 percent of total U.S. health spending, they are 100 percent of our future.[38]

Objectives

The State of Maryland established a Maternal Child Health Task Force to study and make recommendations on:

(1) How MDH policies can be used to incentivize early intervention and prevention of key adverse health outcomes, such as asthma, adverse birth outcomes, sickle cell crisis, and mental health crises;

(2) How State policies and payment mechanisms can:

(a) Support community-based and school-based models of care;

(b) Encourage partnerships under the Maryland Model to improve maternal child health;
(c) Assist in collaborations with public health care; and
(d) Use the Core Set of Children's Health Care Quality Measures for Medicaid to monitor improvement; and
(3) Programs that the Maryland Medical Assistance Program should implement.

Methodology

A Task Force of representatives with expertise in MCH from across Maryland was established. The Task Force met 10 times from July 2019 to April 2020. The Task Force established four work groups. Their charge was to: (1) discuss what data, information or presentations are needed to address MCH issues in the work group area of focus; (2) discuss priorities; and (3) draft actionable recommendations to be considered by the Task Force. At each Task Force meeting work groups reported back on discussions. The four work groups were: Maternal Health; Infant, Child, Adolescent Health; Care Coordination; and Metrics and Finance.

Recommendations

The need to invest early in the life course of Marylanders is urgent to improve health outcomes. The following recommendations focus on the MCH population, which includes women, children, adolescents, and families.[14]

Recommendation #1

Make MCH the third goal under the population health domain of Maryland's Integrated Health Improvement Strategy with the Centers for Medicare and Medicaid Services (CMS), with a focus on reducing maternal and infant mortality and fostering child and family mental, emotional, and behavioral health. Ensure that the strategy's first two goals under the population health domain, diabetes, and opioid/substance use disorder, include the MCH population.

MCH is the foundation of adult health and a critical point in the intergenerational cycle of poor health. The U.S. fares poorly in maternal and infant mortality compared to other industrialized countries, with large racial/ethnic disparities for each outcome; Maryland's maternal mortality rate from 2013 to 2017 (24.8 maternal deaths per 100,000 live births) ranks 22nd among states with the rate for African Americans almost four times that of Whites (44.7 maternal deaths vs. 11.3 per 100,000 live births).[49, 50] For infant and neonatal mortality, Maryland ranks 35th and 39th among states, respectively, significantly higher than the national rate.[51] The mental, emotional, and behavioral health of children and adolescents is a pressing issue that has worsened globally with the COVID-19 pandemic.[52, 53] Maryland's Total Cost of Care Model is a major driver of health system transformation in Maryland and has focused on the adult population.

Metrics for this third goal should include: (1) reducing Maryland's maternal and infant mortality rates and reducing the racial/ethnic disparity; and (2) improving the behavioral health care

measures in the 2020 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP (Child Core Set).[54]

On January 1, 2014, the State of Maryland and CMS entered into a new initiative to modernize Maryland's unique all-payer rate-setting system for hospital services. As the State's hospital rate-setting authority, the Health Services Cost Review Commission (HSCRC) plays a vital role in the implementation of this innovative approach to health reform. Through this approach, the State is leading a transformative effort to improve care and reduce the growth in health care spending.[55]

While there are condition-specific areas of focus of the Maryland HSCRC's Regional Partnership program (e.g. diabetes, substance use), there must be inclusion of the MCH-related origins of these conditions. The majority of those who meet criteria for a substance use disorder in their lifetime started using substances during adolescence, demonstrating the critical importance of prevention initiatives aimed at children and youth.[56, 57] Similarly, there are early life origins of adult diabetes.[58] Making MCH the third goal of the population health domain under the State Integrated Health Improvement Strategy would increase the likelihood that Regional Partnership funding could go toward MCH initiatives.

Recommendation #2

Establish a standing Maternal and Child Health Committee (Committee) in MDH to develop a Blueprint for MCH and shared accountability framework that provides a roadmap to achieving outcome goals. This committee would develop an action plan, implement strategies, and define and monitor outcomes to improve MCH and eliminate racial/ethnic and socioeconomic disparities.

The State of Maryland and CMS have developed Maryland's unique all-payer rate-setting system for hospital services. While very few in the MCH population are insured by Medicare, initial efforts have focused on adult population health and Medicare metrics. While MDH and other agencies have many programs addressing MCH, there is a need for a State-wide standing committee and a shared accountability framework, led by MDH's Maternal and Child Health Bureau, to monitor health and education measures and develop and oversee a proactive strategy for MCH improvement.

This Committee will identify and address the needs of children, adolescents, and families while considering health and education outcomes, health equity and the triple aim of improving patient experience, population health, and cost savings. The Committee must develop dashboards, review policies and strategies to drive outcomes and improvement, and study the ROI. The Blueprint for MCH must be updated every five years and reported to the Governor and General Assembly annually. The Committee should leverage and align with existing and future MCH resources, such as the recently funded Maryland Maternal Health Innovation Program, which is a collaboration among the Johns Hopkins University, MDH, the Maryland Patient Safety Center, and the University of Maryland, Baltimore County.

The Committee should also synergize with ongoing efforts of Maryland's Prenatal-to-Age-Three Initiative. The Initiative's mission is to establish, enhance, and expand high-quality programs and services for at-risk, expectant families in collaboration with the Maryland State Department of Education, MDH, and Maryland Department of Human Services. This proposed standing MCH Committee should include representatives from the community, education, social services, child welfare, the State's children's hospitals, pediatric and obstetrics clinicians, MDH, and Maryland HSCRC.

Recommendation #3

The Maternal and Child Health Committee should define, collect, and track process and outcome metrics throughout the care delivery system for the MCH population to improve data utilization, data quality, and population health management, and to monitor progress toward high-priority outcomes relevant to MCH.

As noted above, Maryland's All-Payer Model focuses on Medicare metrics, which exclude the vast majority of the MCH population. In Maryland, nearly 625,000 children are insured by Medicaid and CHIP, with the remainder insured by employer-based insurance. Of all births in the State, nearly 45 percent are covered by Medicaid.[59] Recognizing that health costs are changing with COVID-19, it is critical to monitor MCH metrics including across all payers, all care settings, and all levels of health and education.[60]

Meaningful metrics must assess process and outcomes related to: (1) women's health, including preconception health, maternal morbidity and mortality, and behavioral health; and (2) child and adolescent health and education including the 2020 Core Set of children's health care quality measures for Medicaid and CHIP, infant mortality, behavioral health, and National Academy of Medicine Vital Signs of childhood poverty rate, childhood asthma, high school graduation rate, and consideration of education measures including school readiness and school absenteeism.[61, 38,62]

In addition, MCH metrics for hospital utilization and outcomes, stratified by payer, must be included, tracked, and incentivized similar to the way hospitals are incentivized related to Medicare metrics. The value proposition for the MCH population should be payer-agnostic; a model that works for all children and functions as one system is essential to ensure coverage and health benefits for all.

An integrated Statewide data system, potentially in the Chesapeake Regional Information System for our Patients (CRISP), should be established in tandem with other agencies to identify and monitor the health and service utilization of children and families. These data should include not only health information (including claims data and screening program results for newborn metabolic, congenital heart disease, and hearing screening) but also social services, education, juvenile justice, and other relevant sectors. This data system can be used to more effectively provide cross-sector services to families in need while ensuring appropriate privacy and confidentiality.

The Committee should undertake longitudinal studies and financial and social ROI modeling to understand the contributions of MCH on later adult and societal health, as well as the ROI to health care and other sectors.

Recommendation #4

Tailor financing and payment models to the MCH population, including establishment of a Maternal and Child Health Payment Advisory Subcommittee of the Maternal and Child Health Committee (see Recommendation #2). The Subcommittee should advise MDH and HSCRC on care delivery models and payment methodologies across the care delivery system that ensure quality and outcomes for the MCH population. This includes focus on Medicaid and commercial insurer policies, care transformation initiatives across the delivery system, incentivizing hospitals to invest in MCH care and population health programs, and creating MCH regional partnerships.

Delivery system and payment reform, including the Maryland model, have largely followed the money by focusing on high-cost adults.[63] ROI in child health initiatives often have a longer time horizon and accrue across multiple sectors, but the payoff to families and society is high.

The Maternal and Child Health Payment Advisory Subcommittee (the Subcommittee) must be established to focus on MCH outcomes and life course ROI. In this role, the Subcommittee should pay particular attention to exploring and evaluating alternative payment models that focus on improving access to primary care for mothers and children, and ensuring quality pediatric care across the health care continuum, including primary and specialty care, hospital care, post-acute care, home care, and population health strategies in the community.

The State and HSCRC must invest in MCH-focused partnerships that align with State population health priorities. For this reason, this report includes as its first recommendation making MCH the third goal under the Statewide Integrated Health Improvement Strategy's population health domain. In addition, while there are condition-specific areas of focus in the regional partnerships (e.g., diabetes, substance use), hospitals should include the MCH-related origins of these conditions in their plans. This additional focus along with other incentives would direct hospitals to support MCH population health initiatives and help hospitals develop crucial partnerships with community organizations to improve the health and wellbeing of Maryland's mothers and children.

Global budget methodologies must recognize differences between adult care and children's health care, with particular attention to quality, market-dominant conditions, medical (case mix index or relative value that is assigned to a diagnosis-related group of patients and is used to determine the allocation of resources to care for and treat the patients in the group) and social complexity, market shift, and innovation.[64] For example, the HSCRC should adopt pediatric avoidable admissions in Rate Year 2021 (an indicator of hospitalizations of children that could have been avoided if the underlying medical condition could have been prevented or managed in a primary health care setting) to ensure all hospitals in the State are incentivized to improve the health of the pediatric population in their communities and concomitantly reduce avoidable admissions for children, regardless of whether or not a hospital has a distinct pediatric service.[65]

Furthermore, policies such as the Complexity and Innovation policy should continue to evaluate all hospital service lines, inclusive of all pediatric service lines, and provide additional volume funding when hospitals perform a majority of clinically significant procedure codes.[66]

In the most recent analysis of innovation funding, the single largest year of funded growth among the State's two academic medical centers was Rate Year 2018 (43 million dollars), and of this, 6.4 million dollars was due to the neonatology and obstetrics and gynecology service lines. Future funding in the Complexity and Innovation policy should continue to specially recognize maternal and child service lines and look to further refine its criteria to include more pediatric-related procedure codes. There should be consideration of whole-child, whole-family, and whole-community funding strategies such as bundles that combine health and social services over longer developmental time horizons, and blended and braided financing that incentivizes cross sector integration. MCH quality measures and hospital investment should be monitored with consideration of a separate carve-out of a children's health care budget if quality and investment targets are not met.

Medicaid Managed Care Organizations (MCOs) should work together on MCH population health initiatives and innovation. Multiple MCOs—in addition to commercial coverage—and siloed initiatives are challenging for providers and for effective population health initiatives (e.g. school health). MCOs should streamline policies and procedures to strengthen continuity of care for the population. Efforts should be made to keep families in the same MCO and avoid undesired or inadvertent MCO switching. There is an opportunity for innovation and care transformation through pediatric medical home models, whose principles could be aligned across payers. This should include multidisciplinary wraparound services and telemedicine initiatives, including tele-mental health.

The Rare and Expensive Case Management (REM) Program is part of the Maryland Medicaid HealthChoice Program, managed by MDH.[67] The REM program provides care coordination services for individuals receiving Maryland Medical Assistance with a qualifying diagnosis. The REM program covers approximately 4,000 Maryland children with special health care needs. This important program needs updating and review of qualifying diagnoses, age-out guidelines, and coverage limitations.

Recommendation #5

Extend Medicaid coverage for pregnant women until 12 months postpartum and provide care coordination and health literacy education for individuals as they transition coverage.

U.S. maternal mortality rates are unacceptably high. Considerable maternal mortality and morbidity occurs after the initial postpartum months. Current law provides Medicaid coverage to pregnant women with incomes between 138 percent and 250 percent of the FPL for 60 days postpartum. Once these women lose their Medicaid coverage, many lose alternative coverage, even with subsidies provided through the Maryland Health Benefit Exchange and recent decreases in premiums due to Maryland's authorized reinsurance program. The loss of coverage results in women becoming uninsured at a time when they may have significant health care needs.[68] The extension of Medicaid coverage until 12 months postpartum is a cost-effective

mechanism to improve maternal health outcomes and reduce maternal mortality and morbidity in the State.

The CDC found that nationally, one-in-three pregnancy-related deaths between 2011 and 2015 occurred between one week and one year postpartum.[69] In 2017, 44 percent of all 52 Maryland pregnancy-associated deaths occurred between six weeks and one year postpartum, representing the majority of maternal deaths in the State over that period. More than 80 percent of 2017 maternal deaths in Maryland were considered preventable or potentially preventable by the Maryland Maternal Mortality Review Committee. The trends illustrated by the 2017 data have been consistently reflected in the findings of Maryland's Maternal Mortality Review program for several years, with growing numbers of overdose-related deaths.[9]

Insurance gaps are a key part of the equation. From 2015 to 2017, one-in-three women in states that have expanded Medicaid under the United States Patient Protection and Affordable Care Act, a category that includes Maryland, experienced a disruption in perinatal insurance coverage.[70] As Medicaid covers approximately 40 percent of births, extending coverage would improve outcomes for a large number of women.

Extension of postpartum Medicaid coverage is supported by multiple national organizations, including the American College of Obstetricians and Gynecologists[71] and the American Medical Association, and has been recommended by maternal mortality review committees in multiple states.[72]

Recommendation #6

Ensure all pregnant women receive comprehensive prenatal care (PNC) by increasing awareness of and access to resources for all women, including a statewide Emergency Medicaid Program that covers undocumented immigrants.

There is a significant number of low-income and uninsured women in Maryland who do not qualify for Medicaid and are unable to afford commercial insurance. Statewide, 7.3 percent of pregnant women received late or no prenatal care.[73] Many of these women are unaware of options for care that may be available to them. Some are undocumented, excluding them from benefits provided by the Patient Protection and Affordable Care Act and leaving them eligible only for Medicaid Emergency Medical Services.[74]

Early and adequate PNC can help patients identify and manage acute and chronic conditions, often preventing devastating and costly health outcomes.[75] Studies have demonstrated that women without PNC are at higher risk of preterm delivery and fetal growth restriction with higher risks of neonatal, infant, and maternal morbidity and mortality.[76, 77, 78] Lack of PNC has also been shown to have longer-term effects on a newborn's health, extending into adulthood. This effect includes a higher risk of developing some chronic illnesses, such as chronic hypertension and diabetes. There are economic repercussions as well; every dollar spent on PNC saves an estimated $3.33, primarily through reduced spending for low birthweight and preterm infants.[79]

PNC and related services must be accessible to all residents of Maryland, including those who do not qualify for Medicaid or cannot afford to pay for private insurance. Federally Qualified Health Centers and other safety net providers, including hospital-based clinics and local health departments, do provide prenatal care and other services to uninsured women, based on a sliding scale fee system or through referrals to providers who serve this population. A significant challenge is that these women are often unaware of resources available to them or may not have transportation. Also, many are concerned about the legal implications of seeking care if they are immigrants, have substance abuse issues, or face other circumstances that may be disincentives to seeking care.

There are successful models in other states that provide essential and critically important PNC to all women regardless of insurance, ability to pay, or residency and citizenship status. For example, in 2008 Oregon piloted Citizen Alien Waived Emergent Medical Plus, an emergency Medicaid program to expand access to care for all recent and unauthorized immigrant women. This led to an increase in the utilization of PNC with women more likely to receive adequate care and preventative health services. There was a significant decrease in extremely-low-birthweight infants and infant death. Infants also received recommended preventive health services and experienced improved health outcomes.[80]

In conjunction with local health departments, Federally Qualified Health Centers, the MCH provider community, other safety net providers, and hospitals, MDH should strengthen public awareness of the importance of PNC and provide access, including transportation, to PNC programs and clinicians for low-income and uninsured pregnant women. Stakeholders should also evaluate current programs designed to provide access to uninsured pregnant patients, such as those in place in Montgomery County and Baltimore City, to determine how similar initiatives could be implemented Statewide.

Recommendation #7

Strengthen the obstetric workforce by further integrating Certified Nurse Midwives (CNMs) into Maryland Hospitals.

Several recent studies have shown that integrating CNMs into health care systems to provide obstetrical and delivery services decreases racial disparities and improves patient satisfaction.[81, 82, 83, 84, 85, 86] In some systems in Maryland, CNMs are partially integrated, but many hospitals lack policies that allow CNMs to practice to the full extent of their credentials (and in some cases, to practice at all). Given the need to improve maternal newborn outcomes and the lack of access to care in some parts of the state, CNMs are an under-utilized resource.

To address access to care, MDH should assess the current policy landscape regarding CNM privileges in Maryland hospitals, and develop recommendations in partnership with major stakeholders (including the Maryland Hospital Association, the Maryland Chapter of the American College of Obstetricians and Gynecologists, the Maryland State Medical Society (MedChi), the Maryland Chapter of the American College of Nurse-Midwives, the Maryland Board of Physicians, and the Maryland Board of Nursing). The recommended policies would provide a framework for adoption by Maryland hospitals and monitoring of outcomes. Expanded

adoption of privileges for CNMs by Maryland hospitals could encourage more CNMs to move to Maryland and start practices, further filling care gaps for those choosing hospital birth.

Recommendation #8

Foster healthy mental, emotional, and behavioral development of children and coordinate care to address MCH population health needs.

Rates of mental, emotional, and behavioral disorders including depression, suicide, anxiety, and self-harm have been increasing rapidly among children and youth.[11, 12] Poverty rates in the State and nationally are highest among children. Poverty is an ACE strongly associated with poor adult mental, physical, and economic health.[87, 88] The COVID-19 pandemic has exacerbated an already critical problem by worsening family stress, poverty, and child and adolescent mental health.

The standing MCH Committee must articulate Statewide goals, objectives, and a plan to monitor and support the mental, emotional, and behavioral health of the MCH population. This must ensure access by children, youth, and families to effective health promotion and protective and therapeutic interventions, including preconception, PNC, postnatal health care for parents, and care for children and youth from infancy through young adulthood.[12] Strengths-based and trauma-informed approaches should be emphasized. Adequacy of a trained workforce and monitoring, implementation, and scale-up of effective interventions including tele-mental health are critical.

Identification, assessment, and referral of pregnant or postpartum women, infants, children, and youth in need of care coordination services and support are important first steps to avert poor pregnancy and birth outcomes. Universal use of the Maryland Prenatal Risk Assessment and Postpartum Infant and Maternal Referral, as well as screening for family stress and complex social determinants health needs, should be implemented with a robust web-based centralized intake infrastructure.[89, 90] The centralized intake system is a structured gateway for community MCH stakeholders to refer families to be connected to health care providers, specialists in reducing social determinants of health barriers, and community-based programs and services.

In Maryland, Baltimore City's Centralized Intake System based at HealthCare Access Maryland is an evidence-based model that can be expanded and piloted in other jurisdictions to meet the needs of at-risk children and families before they reach crisis, seek medical assistance in the emergency department, result in a lifelong disability, or result in a preventable death. A centralized intake system serves as the single point of entry, ensuring there is no duplication of services and there is equity and coordination in access to services and programs.

Recommendation #9

Ensure that Statewide MCH strategies and programs prioritize parent and community engagement, two-generation family approaches, and place-based outreach initiatives. Important components of these efforts are explicitly supporting families in their

psychosocial needs and reaching children and families in community locations, including child care centers and schools.

Though many services exist, they are often fragmented, difficult to access, or not utilized. Needed services must address social determinants of health. Multiple service sectors are often siloed, including health care, social services, and education. Ensuring the health of MCH populations requires engagement of the community, focus on families, and reach beyond the traditional health care system.

As described by Ascend at the Aspen Institute, two-generation approaches build family well-being by intentionally and simultaneously working with children and the adults in their lives together.[91] Important components of focus include: (1) Postsecondary Education and Employment Pathways; (2) Early Childhood Education and Development; (3) Economic Assets; (4) Health and Wellbeing; and (5) Social Capital. Screening and addressing family needs in these areas offers promise to improve the health and wellbeing of the child, parents, family, and future generations. This requires coordination and integration across service sectors.

Medical homes for children are an important point of contact to address family needs, including parental health and social determinants of health. Similar to the federal investment in the Maryland Primary Care Program for Medicare patients, there must be investment into the pediatric health/medical home to provide multidisciplinary support that addresses the physical, mental, behavioral, and psychosocial health of children, adolescents, and families.

Finally, place-based initiatives to go where children are, in school and home, is another strategy to address children's health and psychosocial needs. Evidence-based programs in home visitation and school health can improve population health outcomes if scaled and executed well. Schools are an important location of contact and opportunity. There is strong evidence that school nursing and school-based health clinics can improve child health and academic outcomes especially in low-income communities.[92] In addition, universal and targeted school-based cognitive behavioral therapy can improve depression and anxiety symptoms.[93, 94, 95] Support is needed for school health programs in all Maryland schools that face high need.

Such support includes school nurses, screening programs with follow-up care (e.g., dental, vision, hearing), school-based health centers, and school-based mental health. In addition, school staff must be trained on pressing health issues, including trauma-informed care, chronic disease management, and Screening, Brief Intervention, and Referral to Treatment (SBIRT) for children and families with substance use issues. Efforts are also necessary to study and address data-sharing barriers related to Health Insurance Portability and Accountability Act and Family Educational Rights and Privacy Act privacy standards. The Maternal and Child Health Task Force supports efforts to improve the quality of Maryland's public education system.

Conclusion

There is an urgent need to invest early in the lives of Marylanders to improve the overall and long-term health of the State and to ensure health equity. Too many Maryland children live in poverty and experience adversities exacerbated by the COVID-19 pandemic. MCH and health

equity must be central to the State's Integrated Health Improvement Strategy and should be the focus of the State's third goal under the population health domain. A standing State MCH Committee must be established and charged with developing, implementing, and monitoring a blueprint for MCH and a shared accountability framework that provides a roadmap to achieving State-wide outcome goals. Additional strategies to strengthen MCH include improving access to care, improving metrics, separate consideration of MCH and health equity in financing and payment, and integrating multisector resources to support two-generation family approaches and place-based initiatives. Children are the message we send to the future. Investment early in the life course sets the foundation for healthier children, adults, and future generations.

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