Circulation

AHA POLICY STATEMENT

Call to Action: Maternal Health and Saving Mothers

A Policy Statement From the American Heart Association

The American College of Obstetricians and Gynecologists supports the value of this clinical document as an educational tool, September 2021.

Society for Maternal-Fetal Medicine supports this document.

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ABSTRACT: The United States has the highest maternal mortality rates among developed countries, and cardiovascular disease is the leading cause. Therefore, the American Heart Association has a unique role in advocating for efforts to improve maternal health and to enhance access to and delivery of care before, during, and after pregnancy. Several initiatives have shaped the time course of major milestones in advancing maternal and reproductive health equity in the United States. There have been significant strides in improving the timeliness of data reporting in maternal mortality surveillance and epidemiological programs in maternal and child health, yet more policy reforms are necessary. To make a sustainable and systemic impact on maternal health, further efforts are necessary at the societal, institutional, stakeholder, and regulatory levels to address the racial and ethnic disparities in maternal health, to effectively reduce inequities in care, and to mitigate maternal morbidity and mortality. In alignment with American Heart Association's mission "to be a relentless force for longer, healthier lives," this policy statement outlines the inequities that influence disparities in maternal outcomes and current policy approaches to improving maternal health and suggests additional potentially impactful actions to improve maternal outcomes and ultimately save mothers' lives.

Key Words: AHA Scientific Statements ■ health equity ■ health policy ■ maternal health ■ maternal mortality ■ pregnancy

Maternal mortality is alarmingly high at ≈700 deaths a year in the United States.[1] It is estimated that 2 of 3 US pregnancy deaths may be preventable, highlighting the need for improvement in maternal health, including enhancing access to care and delivery of care.[2] Pregnancy-related death is defined by the US Centers for Disease Control and Prevention (CDC) as "the death of a woman while pregnant or within 1 year of the end of a pregnancy—regardless of the outcome, duration or site of the pregnancy—from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes,"[1] whereas the World Health Organization defines maternal deaths as "the annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy."[3] The global maternal mortality ratio (number of maternal deaths per 100 000 live births) has declined by 38% from 2000 to 2017, yet it has been steadily increasing in the United States from 7.2 deaths per 100 000 live births in 1987 to 17.4 deaths per 100 000 live births in 2018.[1,4,5] The maternal mortality ratio in the United States is more than double the ratio of 10 other high-income countries.[5] In addition, the rates of severe maternal morbidity (SMM), which are unexpected outcomes of labor and delivery that have significant short- or long-term consequences to a woman's health (eg, obstetric hemorrhage requiring intensive care unit

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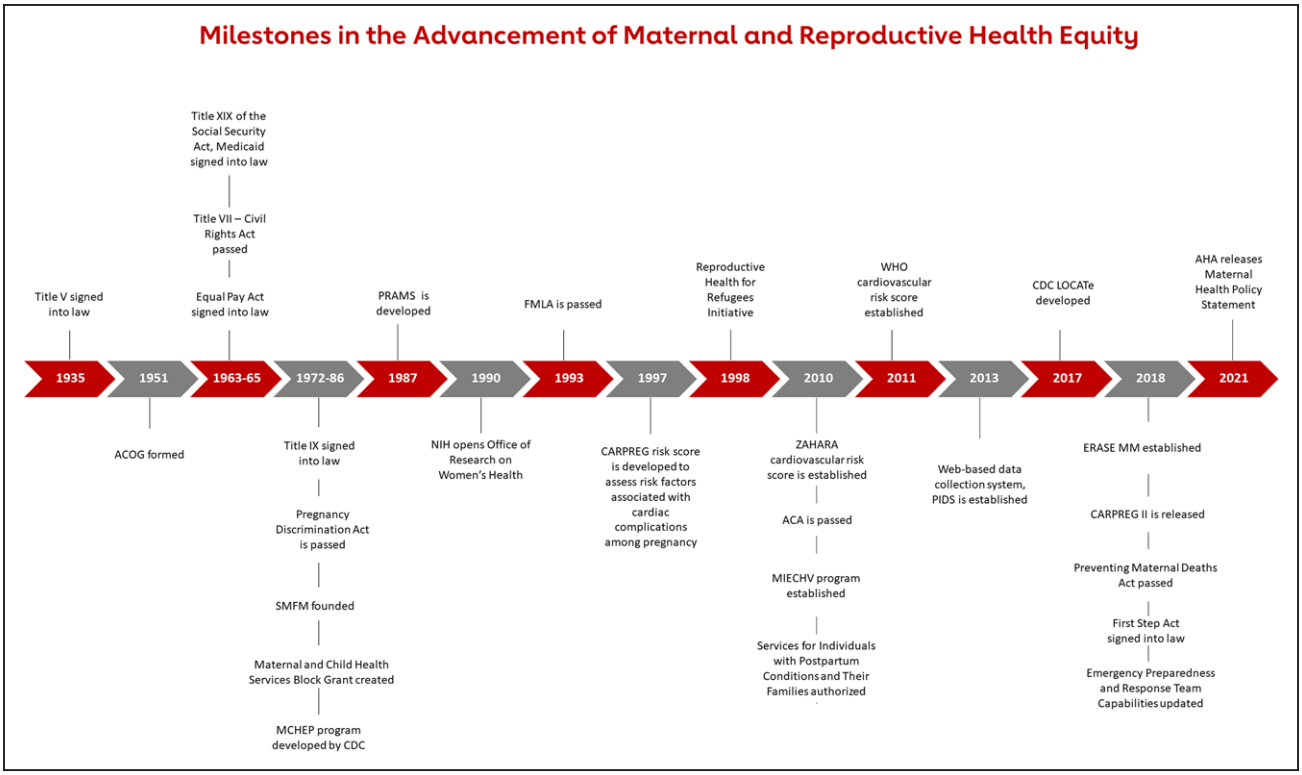

Figure 1. Milestones in the advancement of maternal and reproductive health equity.
ACA indicates Affordable Care Act; ACOG, American College of Obstetricians and Gynecologists; AHA, American Heart Association; CARPREG, Cardiac Disease in Pregnancy Study; CDC, Centers for Disease Control and Prevention; ERASE MM, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality program; FMLA, Family and Medical Leave Act; LOCATe, Levels of Care Assessment Tool; MCHEP, Maternal and Child Health Epidemiology Program; MIECHV, Maternal, Infant and Early Childhood Home Visiting program; NIH, National Institutes of Health; PIDS, PRAMS Integrated Data System; PRAMS, Pregnancy Risk Assessment Monitoring System; SMFM, Society for Maternal Fetal Medicine; WHO, World Health Organization; and ZAHARA, Zwangerschap bij Aangeboren Hartafwijkingen.

monitoring, emergency hysterectomy, eclamptic seizure, stroke, or sepsis), have also increased almost 200% over the years, from 49.5 in 1993 to 144.0 in 2014.[1,6]

Cardiovascular disease (CVD) is the leading cause of maternal mortality in the United States, accounting for >1 in 3 pregnancy-related deaths, primarily from cardiomyopathy, cerebrovascular disease, or other cardiovascular conditions.[1,7] Whereas maternal deaths caused by hemorrhage and hypertensive disorders of pregnancy (HDP) and anesthesia-related deaths have declined, cardiovascular deaths have increased over the past 20 years.[8] Pregnancy-related mortality rates for non-Hispanic Black and American Indian/Alaska Native women are up to 2 to 3 times that of White women,[8] and these disparities persist independently of socioeconomic variables. Factors contributing to poor maternal health outcomes in the United States include social determinants of health (SDOH) and structural racism, which creates inequities in access and quality of care.[8,9] The recent American Heart Association (AHA) scientific statement "Cardiovascular Considerations in Caring for Pregnant Patients" highlighted the importance of coordinating cardio-obstetrics teams to improve maternal health and to reduce morbidity and mortality with a team-based approach to the care of pregnant women.[10] However, to have a sustainable and systemic impact on maternal health, further efforts are necessary at the societal, institutional, stakeholder, and regulatory levels to effectively reduce inequities in care and to mitigate maternal morbidity and mortality.

Several important initiatives have shaped the time course of major milestones in advancing maternal and reproductive health equity in the United States (Figure 1), including the Pregnancy Risk Assessment Monitoring System, which has monitored pregnancy-related behaviors and outcomes and, in turn, informed policy changes.[1] There have also been significant strides in improving the timeliness of data reporting in maternal mortality surveillance and epidemiological programs in maternal and child health, yet more policy reforms are necessary. This health policy statement outlines the major contributors to maternal health, including the structural inequities affecting maternal outcomes and CVDs that may develop during pregnancy. Thereafter, this statement outlines current policy approaches to improving maternal health and then suggests additional potentially impactful actions to improve maternal outcomes during pregnancy and beyond. This statement concludes with a call to action for the AHA and other key stakeholders to make maternal health a priority in programming, education, research, and policy development.

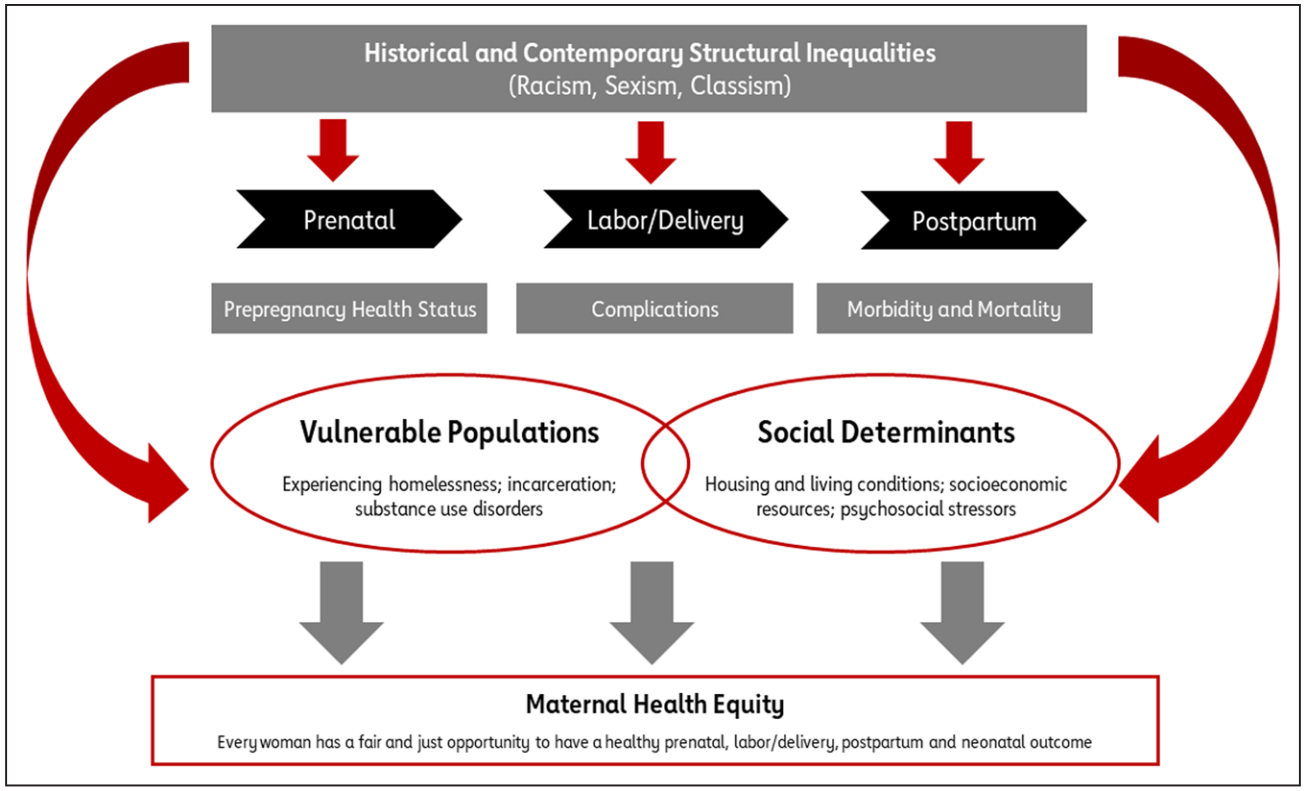

Figure 2. Linking structural inequalities, social determinants of health, and maternal health equity.

INEQUITIES AFFECTING MATERNAL HEALTH OUTCOMES

SDOH, including but not limited to socioeconomic status, availability of resources, and access to high-quality care, affect all aspects of health and have received increasing attention as essential drivers of disparities in maternal and reproductive health globally (Figure 2).[11] A recent 2020 systematic review identified 83 studies investigating social factors contributing to maternal morbidity and mortality, and >94% of the studies demonstrated a relationship between social factors and maternal outcomes. For example, studies documented persistent racial and ethnic disparities in maternal outcomes, as well as socioeconomic gradients in outcomes by maternal education, the most consistently measured indicator of socioeconomic status.[12] Other important social factors such as housing insecurity, financial strain, lack of social support, and psychosocial stressors have not been explicitly examined in relation to maternal outcomes.[12]

There is especially compelling evidence for the critical role of access to health care in maternal outcomes. Health insurance status is an important dimension of access to care, and studies have documented disparities in health insurance coverage among poor, young, and racial and ethnic minority populations,[13] as well as adverse maternal and infant outcomes among uninsured and Medicaid-covered women.[12] Preexisting chronic health conditions also increase health risks for pregnant individuals, making access to preventive health care before pregnancy highly important. A recent analysis assessed the association between race, ethnicity, and insurance status among 107 921 women participating in the CDC Pregnancy Risk Assessment and Monitoring System from 2015 to 2017.[14] It found that women experienced insurance gaps at all stages of the perinatal period (preconception, delivery, and postpartum) and that American Indian/Alaska Native, Hispanic, and non-Hispanic Black women were disproportionately experiencing such gaps. Another important dimension of access to care is quality of care, which may help explain disparities in maternal morbidity and mortality.[15,16] A population-based study in New York City found that Black mothers were more likely than White mothers to deliver their babies at hospitals that had higher risk-standardized SMM rates, contributing to Black and White disparities. The differences in the quality of delivery hospital accounted for almost half (47.7%) of the racial disparity in SMM rates in New York City.[15]

There is also substantial geographic variation in maternal outcomes. Studies have shown that rates of maternal morbidity and mortality are highest in the southeast part of the United States, including rural areas in Appalachia and the Mississippi Delta.[17–19] These geospatial disparities occurring between states, counties, and neighborhoods are more than just a function of demographics, underscoring the importance of place-based and contextual factors for maternal outcomes.[20] For example, several

reviews highlight associations between neighborhood deprivation and pregnancy outcomes, including preterm birth and other neonatal outcomes. More recently, neighborhood deprivation has also been linked to higher SMM and pregnancy-related mortality.[21–24] Moreover, racial and ethnic disparities in maternal outcomes may vary substantially across neighborhoods, being most pronounced in high-poverty neighborhoods.[22]

Impact of Structural Racism on Maternal Outcomes

A growing body of evidence suggests that structural racism may also be a contributor to disparities in maternal outcomes.[25] Racial and ethnic disparities result from a historical context that manifests in differential access to health-enriching resources, power, and privilege for people of underrepresented races and ethnicities. Given that studies have shown that racial and ethnic disparities in maternal outcomes exist at every socioeconomic level, structural racism may explain why Black women may not experience the same health returns from gains in socioeconomic status as non-Hispanic White women.[8,25,26] In response to the disproportionately high rates of maternal mortality among Black women, federal legislators formed the Black Maternal Health Caucus to explore policies to improve maternal outcomes for Black mothers.[27]

Studies have shown that residential segregation is associated with increased risk of preterm birth among Black mothers.[28] A 2020 study conducted in 9 New York State counties found an increased risk of SMM in areas with higher levels of structural racism, as measured by county-level racial inequity in female education. Structural racism also manifests in personally mediated acts of conscious or unconscious discrimination. In a 2018 research survey titled Listening to Mothers, women who had recently delivered in California hospitals were asked whether they had experienced unfair treatment during their hospital stay for childbirth because of race, ethnicity, language spoken, or lack of health insurance coverage. Results suggest that White women, English speakers, and women with private health insurance received better treatment.[29] Approximately 10% of the women also reported being spoken to disrespectfully during their delivery hospitalizations.

Overwhelming data have confirmed that SDOH also affect maternal outcomes. These determinants include patient-related factors such as race, ethnicity, and socioeconomic status, as well as contextual factors such as neighborhood environments. They also include health care–related factors such as access to high-quality, respectful health care. Finally, they include societal factors such as structural and interpersonal racism and implicit bias. Addressing SDOH and other structural barriers to health is essential to achieving health equity in maternal outcomes.

Rural and Urban Disparities in Maternal Health

Rural patients and health care facilities face several unique challenges that contribute to 9% greater probability of maternal morbidity and mortality in rural than urban areas.[19] Rural-urban inequities in care are compounded by increased CVD burden in these populations.[30] Rural areas face more severe challenges in health care coordination, including both health system factors, structural determinants of health, and SDOH (eg, transportation, housing, poverty, nutrition security, racism, violence, and trauma).[19] A recent AHA presidential advisory focusing on existing data on rural populations, communities, and health outcomes was released as a call to action.[31] It noted how individual factors, differences in health care infrastructure, and reluctance to seek health care because of cultural and financial constraints are compounded by a scarcity of services and physicians, inadequate health insurance, insufficient public transportation, and poor availability of reliable internet services to promote telehealth and digital health services.[31,32]

Additional Marginalized Populations

Individuals experiencing homelessness, undocumented immigrants, individuals who are incarcerated, or individuals with substance use disorders are at a disadvantage attributable to numerous intersecting social and structural factors (eg, racism, lack of social support, sexism, psychosocial adversity) and are at a particularly high risk of adverse maternal outcomes, including mortality. Women experiencing homelessness disproportionately report unmet need for medical care and, as a result, often do not receive the necessary preventive prenatal care.[33,34] Individuals experiencing homelessness also have higher rates of mental illness, poorer baseline health, and, in turn, higher adverse maternal and fetal outcomes compared with the general population.[34,35] Undocumented immigrants are at a particular disadvantage because of their low rates of health insurance coverage and higher rates of poverty, both of which result in their receiving limited or no prenatal care. The Affordable Care Act excludes undocumented immigrants from accessing publicly funded health programs or purchasing health coverage in the Affordable Care Act marketplaces.

Women who are incarcerated are more likely to have chronic medical conditions compared with women who are not incarcerated. Furthermore, even before incarceration, these women are often at a disadvantage as a result of poor socioeconomic backgrounds and limited access to health care.[36] Despite health care being provided to all state and federal prisoners, the quality of care and the reporting of data are highly variable because of a lack of standardization. The lack of policies addressing prenatal health care and underlying SDOH during and even before incarceration may result in poor maternal health in women who are incarcerated.[37,38]

Adverse maternal and fetal health outcomes are also associated with untreated substance use disorders dur-

ing pregnancy. The 2019 National Survey on Drug Use and Health showed that among pregnant women, 9.6% used tobacco products, 9.5% drank alcohol, and 5.8% used illicit drugs.[39] Furthermore, some women use electronic vapor products as a smoking alternative, which are considered unsafe during pregnancy given the presence of nicotine, which is linked to adverse pregnancy and infant outcomes.[40] In addition, opioid use assessed at time of delivery quadrupled from 1999 to 2014, and such use is associated with various deleterious maternal and neonatal outcomes, including SMM and maternal mortality.[41]

CVDs AND MATERNAL HEALTH

Risk factors for CVD in women of childbearing age include not only chronic hypertension, prepregnancy obesity, chronic diabetes, hypercholesterolemia, smoking, and sedentary lifestyle[42,43] but also HDP, including preeclampsia, gestational hypertension, gestational diabetes, preterm delivery, small-for-gestational-age neonate, and placental abruption.[42,44–46] Of note, traditional risk factors such as obesity, older age, chronic hypertension, history of HDP, diabetes, and renal disease increase the risk of HDP.[47] Moreover, women with a diagnosis of preeclampsia with either severe features or eclampsia are at particularly increased risk of having a cardiovascular event during their delivery hospitalization compared with normotensive women.[48] The validated World Health Organization risk assessment tool further delineates subgroups of women who are at risk for cardiac events during the peripartum period.[49]

Screening for CVD

Pregnancy acts as a physiological stress test that can unmask previously unrecognized risk factors for CVD and CVD. Moreover, pregnancy may be the first time that a woman formally interacts with the health care system and receives a full physical examination and laboratory tests.[10]

Mortality reviews indicate that most women who die of CVD have no formal diagnosis of CVD. Pregnant individuals with preexisting CVD tend to have better outcomes compared with women who experience their first acute event in pregnancy, perhaps because of closer follow-up in known high-risk patients. In addition, pregnant individuals with known valvular disorders may have better outcomes because they are also closely monitored throughout pregnancy and often are transferred to a center with a higher level of maternal care.

Identification of high-risk factors during pregnancy may set the stage for corrective strategies to improve long-term outcomes.[42] Ideally, women of reproductive age should be screened for cardiovascular risk factors before pregnancy with the goal of preventing disease by dietary changes, improved physical activity, weight loss, smoking cessation, use of adjunct medications when appropriate, and patient education. Such assessment is particularly important because signs and symptoms of normal pregnancy mimic cardiac disease, which makes the detection of cardiac disease challenging.[50] Furthermore, individuals with HDP are at increased risks of future hypertension, myocardial infarction, heart failure, and stroke.[51,52] Individuals with HDP require ongoing individualized care beyond the conventional postpartum period with long-term blood pressure monitoring and lipid and glucose assessment for CVD prevention.[42] Currently, there is no standardized approach for CVD assessment in pregnancy.

Long-Term Implications of CVD Risk Factors

Pregnancy can often provide a window into an individual's future cardiovascular health. For example, women with HDP in their first pregnancy have increased rates of chronic hypertension, hypercholesterolemia, and type 2 diabetes.[51] To that end, although the management of HDP is outside the purview of this statement and has been addressed in the prior AHA scientific statement on cardiovascular considerations in pregnant patients, it is important to recognize the postpartum time frame as a critical time when cardiovascular lifestyle changes may be addressed in a stepwise manner.[10] The American College of Obstetricians and Gynecologists (ACOG) has released guidelines recommending that postpartum care should be an ongoing process in the postpartum period rather than a single encounter, with services and support tailored to each woman's individual needs.[53] In the case of individuals with HDP-associated adverse pregnancy outcomes, addressing chronic cardiometabolic risks posed by obesity, diabetes, dyslipidemia, physical inactivity, smoking, chronic hypertension, and obstructive sleep apnea is essential.[54] In addition, the postpartum period becomes an ideal time to discuss the long-term cardiovascular risks posed by adverse pregnancy outcomes.[55] For example, data affirm that even gestational hypertension, the least severe of the HDP, is associated with an increased subsequent risk of myocardial infarct death, heart failure, and ischemic stroke.[52] Specifically for HDP, several centers throughout the United States have reported multidisciplinary maternal health clinics, which focus on lifetime atherosclerotic cardiovascular risk score, improving glucose control, weight management, and diet control.[56–58] Several care models incorporate in-person and telehealth visits for implementation of preventive measures such as home blood pressure and weight monitoring, nutritional referral, exercise recommendations, and other cardiometabolic risk reduction methods.[59] ACOG offers specific evaluation recommendations for women who experience HDP.[53]

Table 1. Existing Evidence-Based Strategies

Program	Key stakeholders	Implementation	Scope
AIM	HRSA cooperative agreement with ACOG	Statewide through PQCs working at the facility level	Data-driven maternal safety and quality improvement initiative based on interdisciplinary consensus-based practices to improving maternal safety and outcomes. The Council on Patient Safety in Women's Health Care and the AIM Program have developed 10 patient safety bundles targeting maternal health since 2013.
ERASE MM	CDC and states	State jurisdictions	Program developed from maternal mortality review committees using common data collection and sharing of findings.
PQCs	CDC and states	States	These are networks of clinical teams, public health professionals, and other stakeholders that work together to improve pregnancy, newborn, and infant outcomes at the state level.
Perinatal Care Services Certification	The Joint Commission	National at facilities	Facilities are expected to meet standards and follow clinical practice guidelines and are evaluated against 6 evidence-based core measures that have been endorsed by the National Quality Forum.
LOCATe	CDC	National at facilities or Departments of Health	The CDC developed CDC LOCATe on the basis of the recent guidelines and policy statements issued by the American Academy of Pediatrics, ACOG, and SMFM. The tool is intended to provide a standardized facility assessment and to promote collaborative approaches to strengthen systems of risk-appropriate care.
Levels of Maternal Care	ACOG/SMFM and CDC	National at facilities	In 2015, the ACOG and SFMF released Levels of Maternal Care. This introduced uniform designations for levels of maternal care at birthing facilities that address maternal health needs, with the goal of reducing maternal morbidity and mortality in the United States.
Maternal Health Innovation Programs	HRSA and states	States	Design, implement, and evaluate innovations in maternal service delivery in 9 states.
Women's Preventive Services Initiative	HHS, HRSA, and ACOG	National	ACOG launched the Women's Preventive Services Initiative, engaging a coalition of national health professional organizations and consumer and patient advocates with expertise in women's health across the life span to develop, review, and update recommendations for women's preventive health care services, including HRSA-sponsored Women's Preventive Services Guidelines.
Cardio-Obstetrics Programs	States, AHA, and ACOG	Facilities	Pregnancy heart teams provide a multidisciplinary team–based approach to the assessment and management of pregnant individuals who have underlying cardiovascular disease or develop it during pregnancy.

ACOG indicates American College of Obstetricians and Gynecologists; AHA, American Heart Association; AIM, Alliance for Innovation on Maternal Health; CDC, Centers for Disease Control and Prevention; ERASE MM, Enhancing Reviews and Surveillance to Eliminate Maternal Mortality; HHS, Department of Health and Human Services; HRSA, Health Resources and Services Administration; LOCATe, Levels of Care Assessment Tool; PQC, Perinatal Quality Collaborative; and SMFM, Society for Maternal-Fetal Medicine.

Overall, individuals with cardiovascular risk factors identified in the ante-, intra- and postpartum periods should be actively managed both during and after the pregnancy. Even beyond the conventional postpartum period, there is a need for ongoing individualized care across the lifespan.[60] Subsequent care, beginning at age 50 years, is well outlined in an AHA/ACOG presidential advisory on promoting risk identification and reduction of CVD in women.[42]

CURRENT POLITICAL ENVIRONMENT AND EVIDENCE-BASED STRATEGIES TO IMPROVE MATERNAL HEALTH

Alliance for Innovation on Maternal Health

National and state efforts are underway and building on large initiatives and recommendations made by key professional organizations (Table 1). Prominent among these is the Alliance for Innovation on Maternal Health (AIM) program, implemented by ACOG and funded by the Health Resources and Services Administration.[62] AIM is a national, data-driven maternal safety and quality improvement (QI) initiative based on interdisciplinary consensus-based practices to improving maternal safety and outcomes. Since 2013, the Council on Patient Safety in Women's Health Care and the AIM program have developed 10 patient safety bundles targeting the leading causes of preventable maternal morbidity and mortality. As of April 2021, the Cardiac Conditions in Obstetrical Care patient safety bundle is under development.[63]

Perinatal Quality Collaboratives

The AIM program works through state teams and health systems in 37 states, benefiting from collaboration with state-based Perinatal Quality Collaboratives (PQCs).[64] The PQCs develop clinical care bundles and toolkits to address SMM and maternal mortality through a series of steps: engaging various disciplines and partner organizations, mobilizing low-burden data to create a rapid-cycle data center and to support the QI efforts, providing up-to-date guidance for implementation using the clinical care bundles and toolkits, and making available coaching and peer learning to support implementation through

multihospital quality collaboratives.[65,66] Thirty-nine states already have functional PQCs, and 8 additional states are working to establish them.[64]

Results from the various state PQCs are promising. The Illinois PQC engaged 110 hospitals in QI work via the Severe Maternal Hypertension Initiative, building on the corresponding AIM bundle. The Illinois PQC reported a decrease in SMM in state population-level data by improving timely treatment of hypertension within 60 minutes from 41.5% to 78.9% over the course of the initiative.[67,68] The California Maternal Quality Care Collaborative's severe hypertension toolkit was implemented in 23 academic and community institutions in California. Over a period of 18 months, compliance with treatment recommendations increased from 50% to >90%, the incidence of eclampsia declined by 42.6%, and the prevalence of SMM decreased by nearly 20%.[69] The California Maternal Quality Care Collaborative CVD toolkit for pregnant and postpartum women aims to assist health care providers in identifying those at increased risk of CVD-related morbidity mortality. Research is currently underway to evaluate its effectiveness in reducing SMM and maternal mortality. The CDC has supported state-based PQCs since 2011 and currently funds 13 state-based PQCs in Colorado, Delaware, Florida, Georgia, Illinois, Louisiana, Massachusetts, Minnesota, Mississippi, New Jersey, New York, Oregon, and Wisconsin.[66]

State-Based Maternal Mortality Review Committees

As of November 2020, all but 7 states have a functional state-based maternal mortality review committee in place at this time, and 4 of these states are working to establish such a committee.[64] Findings from statewide maternal mortality reviews are used to make state-specific recommendations for QI and clinical practice changes, public health programming, and new legislative action. State-based maternal mortality committees should also evaluate county-specific data because there may be variation between counties that would affect recommendations at a county level. State-based maternal mortality reviews also confirmed that health system and provider factors (eg, missed diagnosis, ineffective treatment) contribute to many maternal deaths and that a significant proportion of these deaths are preventable.[70,71] A recent study showed that maternal mortality from CVD can be reduced if signs and symptoms of CVD are recognized early and treatment modalities are implemented quickly during pregnancy, childbirth, and the postpartum period.[71] Members of state-based PQCs, often working in partnership with maternal mortality review committees, identify health care processes that need improvement within their state and then use a learning collaborative model to address these needs and to implement AIM patient safety bundles or other practice guidance to affect change. For example, maternal early warning systems that alert health care providers of impending clinical deterioration may improve maternal outcomes.[72] In addition, multidisciplinary teams that include clinicians with expertise in cardiovascular and obstetric care are recommended at higher levels of care.[54,73]

Maternal Health Innovation Programs

Acknowledging that state initiatives can identify cost-effective interventions with regional and national scale-up potential, in September 2019, the Health Resources and Services Administration made a significant investment to establish Maternal Health Innovation Programs in 9 states to address disparities in maternal health and to improve maternal health outcomes.[74] These states (Arizona, Illinois, Iowa, Maryland, Montana, New Jersey, North Carolina, Ohio, Oklahoma) are implementing activities aimed at addressing maternity care service delivery needs. Innovations in the use of telehealth/telemedicine/telementoring, surveillance of SMM, and postpartum education of women through home visiting programs place great emphasis on recognizing and managing CVD in pregnant and postpartum women. These state innovations build on a key recommendation from the Women's Preventive Services Initiative: that women receive at least 1 preventive care visit per year beginning in adolescence and continuing across the life span to ensure that the recommended preventive services, including preconception and many services necessary for prenatal and interconception care, are obtained and to allow timely identification and management of risk factors for adverse pregnancy outcomes.[75]

Levels of Maternal Care

Risk-appropriate care is a strategy to improve health outcomes for pregnant individuals and infants. The CDC developed the Levels of Care Assessment Tool, which is a web-based tool that standardizes the assessment of maternal and neonatal care capabilities of facilities and aligns with the national guidelines published by the ACOG, Society for Maternal-Fetal Medicine, and American Academy of Pediatrics. Implementation of the CDC Levels of Care Assessment Tool helps measure the capabilities of a facility in an unbiased way.[76]

Levels of maternal care designations are complementary but distinct from levels of neonatal care with the goal of reducing US maternal morbidity and mortality.[77,78] Several states, including Georgia, Indiana, and Texas, have passed legislation establishing maternal levels of care designation for all hospitals providing maternity care.[79–81] With further implementation, research will be critical to help refine and clarify criteria assigned to levels and to

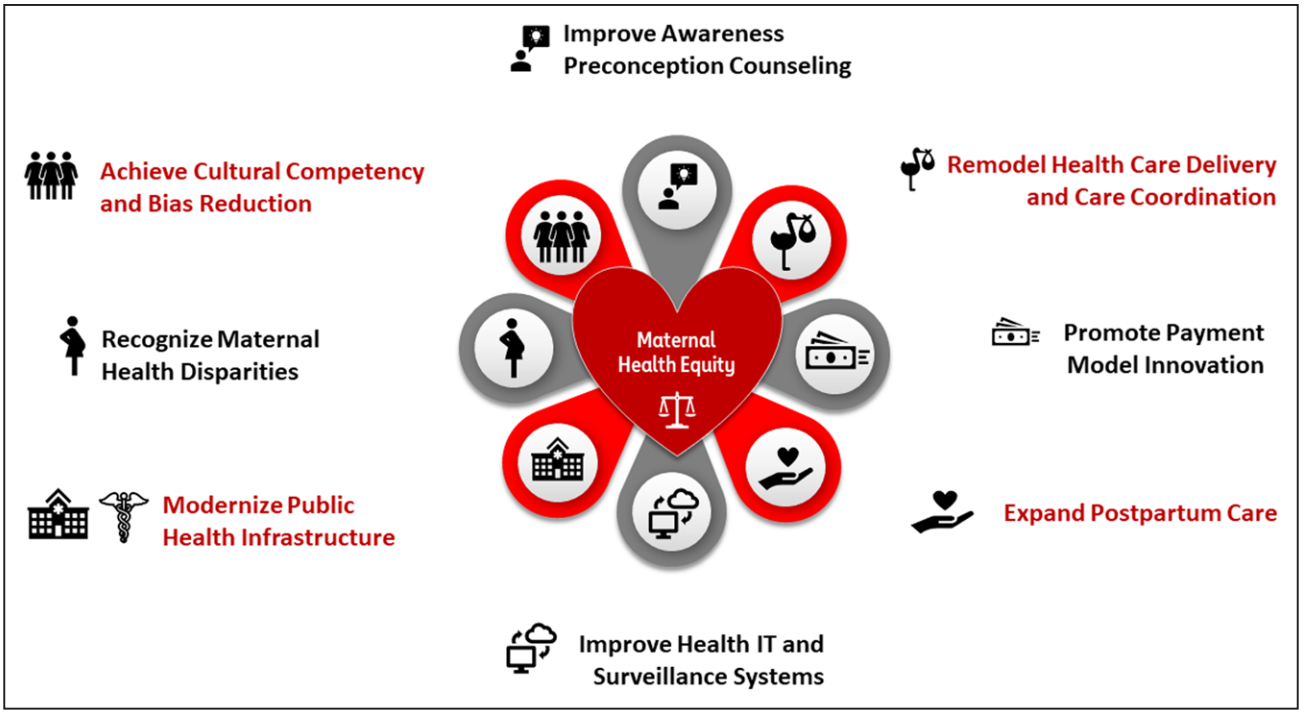

Figure 3. A multipronged approach to achieving sustainable maternal health equity.
IT indicates information technology.

address cost-effectiveness.[82] The Society for Obstetric Anesthesia and Perinatology also has developed a national initiative/certification, Centers of Excellence, which sets benchmarks for levels of expected obstetric anesthesia care with the goal of improving maternal morbidity and mortality.[83]

The Joint Commission established a Perinatal Care Services Certification for health care settings focused on prenatal and postpartum care through a series of core measures using performance measurements that contain established perinatal care bundle elements.[84]

RECOMMENDATIONS TO IMPROVE MATERNAL HEALTH

A systemic and critical exploration of the causes and contributors to maternal morbidity and mortality is critical, including the identification of health care, economic, legal, social, and cultural barriers that could be reduced and the implementation of recommendations, education programs, and policy changes to prevent future deaths and complications.[7,8,19,73,85,86] These issues are multifactorial and complex, requiring broad, innovative, and sustainable solutions in a multipronged approach to help reduce US maternal mortality rates (Figure 3 and Table 2). Such efforts to improve maternal health, including using data to identify evidence-based interventions, expanding advocacy for health care accessibility and new care delivery models, improving clinical competencies, and developing public health education, are mandatory to achieving health equity and have a synergistic benefit in preventing death and disability from CVD and improving overall health and well-being.

Recommendation 1: Improve Health Literacy and Public Awareness of Preconception Care

Studies have shown that many nonpregnant women are not able to identify the major health risks associated with pregnancy.[87,88] Moreover, fewer than half (42%) of pregnant women have been shown to know the risks that alcohol, smoking, and obesity pose in pregnancy.[89] Preconception care is an opportunity for primary prevention, risk assessment, and interventions to modify risk factors to try to improve maternal and infant outcomes. However, only one-third of women with a recent live birth from a 12-state survey reported receiving any preconception care.[90] Improving access to preconception preventive care services, including cardiometabolic risk assessment, and increasing access to public and private health insurance coverage broadly for every person living in the United States, will provide an opportunity to improve cardiovascular and maternal health. Efforts should be made to support clinician counseling on pregnancy risks during routine prepregnancy care, including risks related to advanced maternal age, chronic disease, infectious disease, medication usage, prior adverse pregnancy, and obstetrics outcomes. In addition, the partners of pregnant individuals often play a pivotal role in providing

Table 2. AHA Policy Recommendations to Improve Maternal Health

Improving health literacy and public awareness on preconception care	Efforts to increase uptake of preconception care among women of reproductive age should include increasing access to public and private health insurance for women with low incomes.
	Patient and partner knowledge of pregnancy-related risks and early warning signs should be improved.
	Clinician assessment of pregnancy-related risks should be integrated into routine prepregnancy counseling.
	OB/GYNs and cardiologists should collaborate to counsel women with cardiac conditions on contraceptive options and their associated risks.
	Investments should be made to continue and expand public health and mass media campaigns for smoking cessation, physical activity, CVD in women, and prevention in the postpartum time frame.
Achieving cultural competency and bias reduction	Standardized protocols and training in quality improvement for health care systems should be developed and implemented, particularly in rural and historically medically underserved communities.
	Effort should be made to recruit a diverse maternal care workforce with respect to race, ethnicity, and socioeconomic background.
	Efforts to facilitate access to a full range of culturally aware and linguistically competent providers and safe birthing options for individuals experiencing pregnancy, regardless of their geographic location, source of insurance, or socioeconomic status, should be considered.
	Mandatory cultural humility training, structural competency training, and cross-disciplinary diversity knowledge should start at the beginning of medical training and extend beyond medical schools to include traditional and nontraditional health care professionals.
Mitigating the impact of SDOH and structural determinants of health	Data collection and research on the impact of structural determinants of health and SDOH and their intersection with sex, gender identity, sexual orientation, race, and ethnicity should be expanded and improved.
	Investments should be made to support rural hospitals and to facilitate actionable data collection in rural and other medically underserved communities.
	Access to prenatal, obstetric, and specialty care for pregnant individuals with low incomes or living in rural areas should be improved through regionalization of care.
Transforming payment and promoting value-based care	Efforts to improve maternal health outcomes should be predicated on achieving high-value, patient-centered care for pregnant individuals before, during, and after pregnancy.
	Provider payment should be transformed to incentivize quality improvement and the provision of historically underused, services (eg, maternal health education, home visits, midwifery care, and doulas) and to deprioritize the provision of unnecessary care.
	Evidence-based models of care such as pregnancy medical homes and value-based payment models that bundle payments for treatments and services across the continuum of maternity care should be explored among public and private plans.
Modernizing health care delivery infrastructure and expanding care coordination	Collaborative relationships between hospitals with differing levels of maternal care should be developed through regionalization of care.
	Tools to assess maternal and neonatal care capabilities of facilities should be used by the cardio-obstetrics team to coordinate plans for safe labor and delivery.
	Infrastructure to facilitate uptake of telemedicine and remote patient monitoring in maternal care and mitigation of risk factors should be expanded.
	Individuals experiencing pregnancy should have access to services related to maternal health and well-being consistent with published guidelines from nationally recognized medical organizations and societies.
Improving public health infrastructure and digitally enabled health care	Effort should be made to support and expand a culturally competent public health workforce, including leveraging the role of community health workers in maternal care.
	Access to and quality of freestanding licensed and accredited birth centers for low-risk patients should be improved.
	Health IT and digitally enabled care services should be expanded and leveraged in an equitable way to support healthy behaviors and to improve maternal outcomes.
	A comprehensive, nationwide public health informatics infrastructure, including complete and accurate capture of patient data, should be developed and implemented to give a more comprehensive view of the patient's clinical, social, and behavioral risks.
	Policies that facilitate bidirectional data sharing between patients and the various points of care should be identified and implemented.
Quality reporting of maternal outcomes and health metrics	Support for state maternal mortality review committees should be bolstered.
	Effort should be made to link Medicaid eligibility and claims data with vital statistics data (ie, infant birth, infant death, and fetal death certificates) to monitor key maternal and infant health indicators.
	Standardized quality measures for maternal mortality and morbidity, including those that assess patient-reported experiences of care, should be developed, reported publicly, and stratified by key sociodemographic and clinical characteristics.
Expanding postpartum care	Efforts to increase uptake of Medicaid expansion across the country should continue.
	Federal legislation extending Medicaid from 60 d postpartum to 12 mo of continuous coverage after the end of pregnancy should be implemented and made permanent.
	Guideline recommendations for early counseling of women with CVD risk enhancers and continued monitoring for latent development of hypertension, CVD, and stroke should be elevated in clinical practice.
	Efforts to assess and improve physical, social, and psychological well-being in the postpartum period should include support for the Women's Preventive Services Guidelines in clinical practice and updating US Preventive Services Task Force reviews with evidence-based maternal health recommendations.

AHA indicates American Heart Association; CVD, cardiovascular disease; IT, information technology; OB/GYN, obstetrician/gynecologist; and SDOH, social determinants of health.

psychological and social support before, during, and after pregnancy. Improving partner knowledge about potential medical complications associated with pregnancy and early warning signs may help pregnant woman seek help in a timely manner.

Comprehensive national educational programs that address reproductive health, including risks associated with pregnancy and behaviors that contribute to healthy pregnancies, may help future generations be better informed when making reproductive decisions. For example, the Move Your Way campaign, a national initiative by the Department of Health and Human Services to promote the Physical Activity Guidelines for Americans, has recently incorporated targeted resources highlighting the importance of physical activity during pregnancy and the postpartum period to decrease risk for negative maternal outcomes.[91] Greater patient and provider education on pregnancy-related risks; early signs of decompensation in those with a history of chronic cardiovascular, pulmonary, and metabolic disease; and the impact of uncontrolled underlying cardiometabolic risk factors may allow women to mitigate some of these risks through lifestyle and diet alteration and prepare them for what to expect if these risks and complications do occur.

AHA also recommends expanding access to contraception and contraceptive counseling for women with cardiac conditions given the heightened risk for pregnancy-related morbidity and mortality and the various health considerations for contraception in this population, including the patient's underlying disease and the relative risks and benefits of a particular contraceptive option.[10,92] These conversations should be tailored to suit the educational level and health literacy of each individual patient. In addition, public health and mass media campaigns should be continued and expanded for smoking cessation, physical activity, CVD in women, and prevention in the postpartum time frame.[42,73,93]

Recommendation 2: Achieve Cultural Competency and Bias Reduction

Previous analyses found that in addition to systemic factors (eg, gaps in health care), community factors (eg, securing transportation for medical visits, inadequate housing) and provider factors (eg, delayed diagnosis, delayed referral, incorrect diagnosis) contributed to 34% of pregnancy-related maternal deaths.[85,94]

In addition, Black women are more likely than are White women to receive obstetric care in hospitals that provide lower quality of care.[26,95] Many Black women, including those with limited incomes, report experiencing discrimination in provider practices and personal interactions when receiving prenatal care.[96] Several studies found a significant relationship between racial discrimination and low birth weight, preterm birth, and small-for-gestational-age neonate.[97] Data also demonstrate that feeling upset by experiences of racism in women 12 months before delivery was significantly associated with greater odds of preterm birth.[98]

The AHA's "Call to Action: Structural Racism as a Fundamental Driver of Health Disparities" declares our unequivocal support of antiracist policies and principles in the name of health equity.[99] To that end, an antiracist policy approach to mitigating racial and ethnic disparities in maternal health and eliminating structural racism in health care is imperative. Hospitals and health care systems should implement standardized protocols and training in QI initiatives, ensuring implementation in facilities that disproportionately serve people with community and health facility factors that negatively affect maternal mortality.[85] In addition, implicit racial bias has been reported in the health care system and can affect patient-provider interactions, treatment decisions, patient adherence to recommendations, and patient health outcomes.[95] Therefore, efforts to facilitate access to a full range of culturally aware and linguistically competent providers and safe birthing options for individuals experiencing pregnancy, regardless of their geographic location, source of insurance, or socioeconomic status, should be pursued. This includes exploring opportunities to expand access to different birthing settings such as licensed and accredited birth centers for individuals with low-risk pregnancies, and to better integrate trained midwives* and doulas into the health system. Currently, neither doula care or care provided by sufficently trained, licensed, and skilled midwives are consistently covered by public and private plans. As doulas are nonmedical professionals, doula care is not typically covered by public or private plans and, although all state Medicaid programs cover care provided by midwives, the services provided vary from state to state. Regardless of where delivery takes place, access to doula or midwifery care can provide additional support to individuals experiencing pregnancy and potentially reduce cesarean section rates that put women and infants at risk.[100]

In addition, efforts to diversify the public health and maternal care workforce, combined with cultural humility training, structural competency training, and cross-disciplinary diversity knowledge, can reduce the negative effects of implicit bias, minimize inequities and unequal treatment by medical providers, and improve communication between patients and providers.[101,102] These training efforts should start at the beginning of medical

*"Midwives" refers to midwives credentialed by the American Midwifery Certification Board (or its predecessor organizations) or those whose education and licensure meets the global standards of the International Confederation of Midwives.

education and extend beyond medical schools to include advance practice provider training programs, pharmacy programs, nursing programs, and training of other traditional or nontraditional health professionals.

Recommendation 3: Mitigate the Impact of SDOH and Structural Determinants of Health

The prevalence of preterm birth, fetal growth restriction, fetal demise, SMM, and inadequate receipt of prenatal care all vary by maternal race and ethnicity.[9] Social circumstances such as structural racism, poverty and maternal stress, income, education, employment, housing, transportation, and nutrition insecurity have an impact on maternal and birth outcomes that can explain some of these disparities. Intimate partner violence is also an SDOH and is associated with SMM, mortality, and adverse neonatal outcomes. Training health care providers to identify and address intimate partner violence is a critical step.[103] In addition, rural women must travel greater distances to access prenatal and obstetric care and have more limited access to specialty physician and nursing services, poorer obstetrical outcomes, and more unintended pregnancies compared with those from urban areas.[19,104]

Research on the impact of SDOH and structural determinants of health and their intersection with sex, gender identity, sexual orientation, race, and ethnicity is necessary to identify strategies to mitigate the specific risks attributed to them and to advance equity in maternal care and outcomes. Among potential strategies to address the structural inequities that proliferate disparities in maternal outcomes are expanding access to health coverage through efforts like Medicaid expansion; increasing funding to support rural hospitals; improving access to prenatal and obstetric care and to specialty physicians by regionalization of care, especially for pregnant individuals with low incomes or living in rural areas; promoting coordination between communities and primary care models; and improving actionable data collection in rural and other medically underserved populations. The Black Maternal Health Momnibus Act of 2021, for example, puts forth several policies that facilitate investments in SDOH and improve data collection and availability of quality measures, among other critical measures, to close racial and ethnic disparities in maternal outcomes.[105]

Recommendation 4: Transform Payment and Promote Value-Based Care

Health care reform, including the Affordable Care Act, sought to change the trajectory of health care costs and to improve the quality of care in the United States by improving access to care, providing preventive services without cost sharing, and tying provider reimbursements to patient outcomes.[104] Unsustainable health care costs combined with suboptimal patient outcomes have led health policy experts and payers to consider value-based payment or alternative payment models instead of the traditional fee-for-service models that have disincentivized health care providers from engaging in activities that improve patients' health but are not highly reimbursed such as counseling about healthy behaviors and prevention, watchful waiting, or communicating with patients in nontraditional yet more convenient methods such as via telephone.[106]

The policy efforts to improve maternal health outcomes should be predicated on achieving high-value, patient-centered care before, during, and after pregnancy. Effort should be made to transform payment in a way that prioritizes QI and the provision of historically underused services such a maternal health education, home visits, delivery in licensed and accredited birth centers, and midwifery care and doulas and deprioritizes the provision of unnecessary care. These efforts should include the consideration of evidence-based models of care such as pregnancy medical homes and other value-based payment models that bundle payments for treatments and services across the continuum of maternity care, driving quality and care coordination.

Recommendation 5: Modernize Health Care Delivery Infrastructure and Expand Care Coordination

An important step to improving maternal outcomes would be to expand policy infrastructure to support integration of technology in patient care and to facilitate uptake of telemedicine and remote patient monitoring. Although there is not yet remote technology for pregnant individuals with CVD who need cardiac examination specifically, virtual prenatal and postnatal visits, virtual mental health care, online provider communication, lactation support, and at-home monitoring of blood pressure, sugar, and other measurements can provide an excellent bidirectional access to health information and help break down geographical barriers to care.

Although specific clinical management of cardiovascular conditions, sepsis, and hemorrhage has been instituted through hospital designation, maternal care cooperatives, and levels of care, additional effort should be made to improve the system of care for high-risk pregnant indivduals at the facility and population levels to affect systems of care and to address the main causes of maternal morbidity and mortality.[78,107] Developing collaborative relationships between hospitals of differing levels of maternal care through regionalization of care is critical. This ensures that every maternity hospital has the resources to care for unexpected obstetric emergencies and that consultations and referrals (including telehealth) are readily available when high-risk care is needed.[78] The

CDC Levels of Care Assessment Tool is a web-based tool that standardizes the assessment of maternal and neonatal care capabilities of facilities and aligns with the national guidelines published by the ACOG, Society for Maternal-Fetal Medicine, and American Academy of Pediatrics.[76,108] In addition, the cardio-obstetrics team can identify women at high risk of developing cardiac complications, provide direct antenatal surveillance, and coordinate plans for a safe labor and delivery by recorded into medical records with clear delineation as to the provider responsible for each action item.[10,73,109,110]

AHA advocates a care delivery infrastructure that supports equitable access to services for maternal health and well-being consistent with published guidelines from nationally recognized medical organizations and societies. Multidisciplinary, team–based care with specialists, such as cardiologists, maternal fetal medicine practitioners, primary care physicians, and adult congenital heart disease specialists, among others, is the cornerstone of improving pregnancy outcomes and the timely identification and mitigation of cardiac risks or complications. In addition, sufficiently trained, licensed, and skilled midwives can be incorporated into multidisciplinary clinical teams and operate in an enabling environment to provide effective sexual, reproductive, and adolescent health interventions.[111]

Recommendation 6: Improve Public Health Infrastructure and Digitally Enabled Health Care

A robust public health infrastructure is integral to promoting overall health and improving maternal morbidity and mortality. Effort must be made not only to strengthen our public health infrastructure but also to encourage its integration with clinical care. This includes equitable investments in a qualified and capable public health workforce and health care facilities that service underresourced communities and maternal care deserts where there are few maternal care providers and no hospitals offering obstetric care. Licensed and accredited birth centers have proved to be an effective, safe, and lower-cost model to perinatal care than hospital deliveries for low-risk pregnancies, especially in resource-limited areas, and grew by 75% from 2003 to 2013.[112] Improving the quality of and access to these freestanding licensed and accredited birth centers can support patient choice of birth services and a team-based approach to caregiving.[113]

In addition, community health workers (CHWs) are frontline public health workers with a close understanding of the community that allows them to meet patients where they are and to improve the quality and cultural appropriateness of service delivery.[114] CHWs also have the potential to be far more cost-efficient; to reduce treatment costs via early evaluation and detection, appropriate referrals, and longitudinal support; and to affect maternal health outcomes.[115] CHWs, in particular, have improved health outcomes among patients by helping them adhere to their care plans and reduce visits to emergency departments through education on breastfeeding and child care, providing initial screenings for conditions such as postpartum depression, and linking women to health care and other social supports.[116] Many states have recognized these important contributions and have adopted a wide range of strategies to develop and support CHWs through defined roles and practices, standardized training and certification, sustainable funding, stakeholder partnerships, and integration of CHWs with the public health and health care system.[116]

Health information technology and digitally enabled care services should also be expanded and leveraged in an equitable way to support healthy behaviors and to improve maternal outcomes. For example, states and health systems alike can use phone applications to increase engagement in perinatal services. Text4baby, developed with input from Department of Health and Human Services and private and public stakeholders, is the most widely available app (application) and provides regular text messages on nutrition, safe sleep, doctor visits, pregnancy and baby milestones, and other important health topics.[117] In addition, effort should be made to develop and implement a comprehensive, nationwide public health informatics infrastructure with complete and accurate capture of patient data—including race, ethnicity, socioeconomic status, and other SDOH—to give a more comprehensive view of the patient's clinical, social, and behavioral risks. Such information should be available in electronic health records and be accessible by appropriate public health and health care stakeholders to facilitate the connection of individuals with necessary social services before, during, and after pregnancy. Effort should also be made to facilitate bidirectional information sharing between patients and the various points of care.

Recommendation 7: Improve Quality Reporting of Maternal Outcomes and Health Metrics

The CDC has documented an increase in maternal mortality over the past 20 years.[118] This increase has been shown to be the result in part of better identification of pregnancy-related deaths over time attributable to the use of computerized data linkages by the states, changes in the way that causes of death are coded, and the addition of a pregnancy checkbox to the death certificate.[118] However, errors in reporting pregnancy status with the pregnancy checkbox and the overuse of unspecific codes to classify maternal deaths on death certificates have been well documented.[1] There is a need to validate the information captured on death certificates and to provide accurate and actionable maternal mortality data.[118]

Maternal mortality review committees provide information on the causes of maternal mortality beyond that included on death certificates and develop actionable recommendations to prevent future maternal deaths from occurring. Improving data collection would need better coordination at the federal, state, and hospital levels. Leveraging CDC partnerships with the local maternal mortality review committees to use data tools to standardize their data collection and share the data easily to track preventable outcomes would lead to better opportunities to share best practices with other states on data collection and analyses. Having a robust, diverse state-based maternal mortality review committee that reviews maternal deaths data from a variety of sources is highly recommended by the CDC and professional organizations.

The Centers for Medicare & Medicaid Services has developed a core set of perinatal quality measures, including measures related to elective and cesarean sections, prenatal and postnatal care, and contraceptive care.[119] The development of quality measures that assess patient-reported experiences of care should also be explored. Public reporting of quality data stratified by key sociodemographic, including race, ethnicity, and clinical characteristics, will support efforts to address disparities in maternal health outcomes. In addition, effort should be made to link Medicaid eligibility and claims data with vital statistics data (ie, infant birth, infant death, and fetal death certificates) as a means to monitor key maternal and infant health indicators in Medicaid and the Children's Health Insurance Program. Once linked, these data sources provide a wealth of information for surveillance, programmatic monitoring, and evaluation and QI purposes.

Recommendation 8: Expand Access to Quality Postpartum Care

Policy efforts to address SMM and mortality must also include expansion of state Medicaid programs. Medicaid funds nearly half of all births in the United States and is especially important for pregnant individuals who have low incomes or live in rural areas.[120] Nonuniversal uptake of Medicaid expansion across the states has contributed to significant variance in coverage for mothers beyond 60 days' postpartum.[121] There is a particularly high rate of insurance churn and disruption of health care coverage from prepregnancy to the postpartum period in nonexpansion states, which should be addressed.[122] Even in Medicaid expansion states, postpartum women may lose Medicaid coverage, particularly if their incomes are above 138% of the federal poverty line, and need to transition to marketplace insurance, creating a potential gap in coverage that leads to interrupted care.[120]

Federal legislation extending Medicaid from 60 days' postpartum to 12 months of continuous coverage after the end of pregnancy will ensure that women with low incomes and those at high risk of continued morbidity in the postpartum period will have continued access to needed medical care. This is especially important because the data suggest that 1 in 3 pregnancy-related deaths occur in the period of 1 week to 1 year postpartum.[7] In January 2021, the Medicaid and CHIP (Children's Health Insurance Program) Payment and Access Commission recommended that Congress act to require states to extend postpartum coverage to a full year after pregnancy and to provide a 100% federal match for the coverage. It also recommended that full Medicaid benefits, rather than solely pregnancy-related services, be covered for pregnant and postpartum people to ensure that this population has access to all medically necessary services.[123]

Although several states have explored legislative and regulatory pathways to extending postpartum Medicaid coverage, postpartum extension bills have recently been proposed at the federal level. Both the Mothers and Offspring Mortality and Morbidity Awareness Act and the Maximizing Outcomes for Moms Through Medicaid Improvement and Enhancement of Services Act would amend the Social Security Act and extend Medicaid coverage for pregnant women to 1 year postpartum with 100% federal matching.[124,125] In addition, the American Rescue Plan Act of 2021, passed to address the continued impact of the coronavirus disease 2019 (COVID-19) pandemic, includes provisions allowing states to extend postpartum Medicaid coverage to 12 months, although as it stands the option would "sunset" after 5 years.[126] Permanently authorizing states to extend access to the full scope of Medicaid benefits during the pregnancy and postpartum periods, in addition to advancing Medicaid expansion in all 50 states, is critical to mitigating preventable maternal morbidity and mortality.

Women with chronic medical conditions and those who develop adverse pregnancy outcomes, particularly those with HDP, need closer clinical monitoring than their counterparts because a new diagnosis of chronic hypertension after pregnancy often cannot be made until far beyond the typical 6-week postpartum follow-up period. The American College of Cardiology/AHA primary prevention guidelines also stress the importance of early counseling of women with CVD risk enhancers such as preeclampsia and continued monitoring for latent development of hypertension, heart failure, myocardial ischemia, and stroke.[58,127] Individuals who have given birth, especially those with adverse pregnancy outcomes, should have access to appropriate counseling and follow-up care in the months after delivery in the context of a potentially new diagnosis

or long-term cardiovascular event. Extending Medicaid beyond 60 days' postpartum will allow extended monitoring, treatment, and follow-up of women with adverse pregnancy and cardiovascular outcomes and is crucial to reducing the maternal mortality trends in the United States.

The recent ACOG Presidential Task Force on Redefining Postpartum Care identified opportunities for clinicians to engage their patients in a more comprehensive, longitudinal, individual patient-centered postpartum assessment rather than a single encounter.[53] This initiative is especially critical because more than one-third of the maternal deaths occur in the postpartum period and cause-specific mortality from CVD is highest 42 to 365 days' postpartum.[85] Multiple visits and extended monitoring may be required for women recovering from cesarean sections, those with lactation difficulties, and those with CVD and comorbidities, including substance use disorders and postpartum depression.[128]

Policies should ensure access to comprehensive postpartum care that includes a full assessment of physical, social, and psychological well-being, including the following domains: mood and emotional well-being; infant care and feeding; sexuality, contraception, and birth spacing; sleep and fatigue; physical recovery from birth; chronic disease management; and health maintenance in patients with cardiometabolic risk factors.[53] Effort should be made to promote the uptake of these and other evidence-based services, including supporting the application of the Health Resources and Services Administration–sponsored Women's Preventive Services Guidelines in clinical practice and updating US Preventive Services Task Force reviews with evidence-based maternal health recommendations.

CONCLUSIONS: A CALL TO ACTION

Consistent with our mission, the AHA is committed to leveraging advocacy efforts and working with strategic partners to develop sustainable and impactful solutions for preventing maternal death and ensuring that all mothers can live healthy lives before, during, and after giving birth. The current state of maternal health in America requires that we adopt a broader scope of commitment to moving our advocacy for care delivery improvement and policy change farther upstream and support the integration of our clinical care and public health systems. Examples of AHA's commitment include the following:

- Advocate for policies that remove barriers to health care access and quality. This includes continued dedication to advancing Medicaid expansion efforts across all 50 states and territories, expanding broadband access and securing telehealth payment parity to support virtual care opportunities, strengthening our public health infrastructure, and ensuring that individuals giving birth have access to a comprehensive network of diverse, multidisciplinary providers capable of providing culturally appropriate, patient-centered care.
- Pursue an antiracist policy agenda that supports systematically addressing SDOH and structural determinants of health, including expanding equitable access to quality education, safe and equitable housing, food security, and capital.
- Explore partnerships with the Center for Medicare and Medicaid Innovation and local/regional payers and providers to encourage demonstrations that expand the maternal care team and incentivize care coordination among providers across the maternal care continuum.
- Assess ways to leverage AHA's research funding and dissemination capacity to build the evidence base to inform and expand the collective understanding of maternal health needs and which policies and interventions are effective or ineffective in improving outcomes.
- Work with stakeholders to identify and support training needs of the variety of health professionals who provide care to individuals giving birth in the United States.
- Consider ways to extend the reach of AHA educational initiatives such as Go Red For Women to elevate the diverse experiences of individuals who give birth and to improve awareness of heart disease and CVD risk factors among all women, particularly those of reproductive age.
- Collaborate with and support the work of the ACOG, Society for Maternal-Fetal Medicine, and other organizations and entities dedicated to improving maternal health and explore opportunities to facilitate inclusive dialog among stakeholders in public and private sectors.
- Cultivate and expand partnerships that empower community members to promote cardiovascular and maternal health in their communities.

ARTICLE INFORMATION

The American Heart Association makes every effort to avoid any actual or potential conflicts of interest that may arise as a result of an outside relationship or a personal, professional, or business interest of a member of the writing panel. Specifically, all members of the writing group are required to complete and submit a Disclosure Questionnaire showing all such relationships that might be perceived as real or potential conflicts of interest.

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This table represents the relationships of writing group members that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all members of the writing group are required to complete and submit. A relationship is considered to be "significant" if (a) the person receives $10 000 or more during any 12-month period, or 5% or more of the person's gross income; or (b) the person owns 5% or more of the voting stock or share of the entity, or owns $10 000 or more of the fair market value of the entity. A relationship is considered to be "modest" if it is less than "significant" under the preceding definition.

*Modest.

†Significant.

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