Perinatal Quality Collaborative of North Carolina

Primary Aim: Provide the facilitation, support, and education necessary to implement evidence-based measures to guide health care teams in developing coordinated, multidisciplinary care for pregnant and postpartum people with cardiac conditions and to respond to cardio–obstetric emergencies.

Secondary Aims:

1. Preparation	
Primary Drivers:	**Secondary Drivers:**
1.1 Train all obstetric (OB) providers to perform a basic cardiac conditions screening	1.1.1 Determine which screening tool will be used and any training needed
1.2 Develop a patient education plan based on a pregnant and postpartum person's risk of cardiac conditions	1.2.1 Emphasize occurrence of adverse obstetrical events based on the modified World Health Organization (mWHO) Risk Criteria in Pregnancy, including patients with known cardiovascular disease (CVD) given that the normal cardiovascular changes of pregnancy can result in decompensation of CVD 1.2.2 Emphasize shortness of breath, tachycardia, and other chief complaints as key issues and know when to prompt immediate consultation 1.2.3 Inform and educate providers and nurses not to presume that patients with adult congenital heart disease know the signs and symptoms of worsening cardiac conditions during pregnancy or postpartum
1.3 Establish a multidisciplinary "Pregnancy Heart Team" (PHT) or consultants appropriate to a facilities' designated Maternal Level of Care to design coordinated clinical pathways for pregnant or postpartum people experiencing cardiac conditions	1.3.1 Identify team members with specified roles and responsibilities 1.3.2 Run team drills with scenarios in different hospital settings including in-situ, clinical settings, and operating room 1.3.3 Run team simulations with basic and high-risk perinatal and postpartum scenarios 1.3.4 Educate nurses about when PHT should be consulted and how to contact them 1.3.5 Establish a known code phrase (appearing on overhead page or in digital alerts) for cardiac emergencies so all disciplines develop situational awareness
1.4 Establish coordination of appropriate consultation, co-management, and/or transfer to appropriate level of maternal or newborn care	1.4.1 Develop and maintain a set of referral resources and communications pathways between obstetric providers, community-based organizations, and state and public health agencies to enhance quality of care 1.4.2 Embed referrals in electronic health records (EHR)

Cardiac Conditions in Obstetric Care
Action Plan

2. Recognition, Early Treatment, and Timely Escalation of Care	
Primary Drivers:	**Secondary Drivers:**
2.1 Obtain a focused pregnancy and cardiac history in all care settings, including emergency department (ED), urgent care, and primary care	2.1.1 Staff OB and ED triage with skilled nurses trained in identification of cardiac issues 2.1.2 Ensure that elements of cardiac history are understood beyond just pregnancy-related assessment 2.1.3 Educate providers about the definitions of maternal mortality, severe maternal morbidity, and associated health disparities
2.2 Assess and document if a patient presenting is pregnant or has been pregnant within the past year in all care settings	2.2.1 Build inquiry into all entrance portals for care
2.3 Assess if escalating warning signs for a potential imminent cardiac event are present	
2.4 Utilize standardized cardiac risk assessment tools to identify and stratify a patient's risk	
2.5 Conduct a risk-appropriate workup for cardiac conditions to establish diagnosis and implement an initial management plan	
2.6 Screen each patient for cardiac condition-associated risk factors and provide linkages to community services and resources	
2.7 Establish facility-wide standard protocols with checklists and escalation policies for management of cardiac symptoms	2.7.1 Develop protocols and escalation policies in accordance with maternal level of care with defined roles, triggers, treatment algorithms, and referral/follow-up plans 2.7.2 Create system-wide protocols as needed for patient transfer 2.7.3 Embed protocols in EHR 2.7.4 Involve patients with lived experience in development of protocols 2.7.5 Create individualized plans for discharge from ED or postpartum using specific criteria and with follow-up plans

2.8	Establish facility-wide standard protocols with checklists and escalation policies for management of known or suspected cardiac conditions	2.8.1 2.8.2 2.8.3 2.8.4	Create system-wide protocols as needed for patient transfer Embed protocols in EHR Involve patients with lived experience in development of protocols Designate a provider to take the lead on patient and family communication during a crisis and ensure use of interpreter when needed
2.9	Coordinate transitions of care, including discharge from birthing facilities to home and from postpartum care to primary and specialty care	2.9.1 2.9.2 2.9.3 2.9.4	Provide access to shared EHR across settings Maintain lists of cardiologists willing to focus on pregnant and postpartum patients, and OB and primary care providers (PCPs) comfortable with cardiac conditions Create treatment plans readily accessible in EHR Standardize hand-off tools and communications for transitions of care
3. Multidisciplinary Care Team Processes			
Primary Drivers:		**Secondary Drivers:**	
3.1	For pregnant and postpartum people at high risk for cardiac events, establish a culture of multidisciplinary planning, admission huddles, and post-event reviews	3.1.1 3.1.2 3.1.3 3.1.4 3.1.5 3.1.6	Have formal review following serious cardiac events to assess alignment with standard policies and procedures (with appropriate updates) and to identify opportunities for improvement (including identification of discriminatory practices) Archive debriefing documentation for OB cardiac conditions events and review systematically with unit-specific and quality improvement (QI) leadership teams Conduct huddles in conjunction with stage-based algorithms to be responsive to evolving clinical scenarios Have immediate post-event debriefs (with an equity lens) for support and learning Have more formal after-action reviews with designated leaders and standardized content Include in after-action reviews an assessment of transfers to higher levels of care and multidisciplinary planning and treatment
3.2	Perform multidisciplinary reviews of serious complications (e.g., intensive care unit (ICU) admissions for reasons other than observation) to identify systems issues	3.2.1 3.2.2 3.2.3	Have formal review following care of patients at highest risk (e.g., mWHO III or IV) and patients who experienced complications to assess alignment with standard policies and procedures (with appropriate updates) and to identify opportunities for improvement (including identification of discriminatory practices) Include involved providers (specialists and generalists) in review processes with focus on ways to improve care Include near-misses and establish systems for reporting near-misses and unexpected outcomes

3.3 Include pregnant or postpartum people and identified support networks as respected members of and contributors to the multidisciplinary team	
4. Communication to Ensure Equitable Care	
Primary Drivers:	**Secondary Drivers:**
4.1 Engage in open, transparent, and empathetic communication with pregnant and postpartum people and their identified support networks to understand diagnoses, options, and treatment plans	4.1.1 Clarify goals and values for pregnancy that are essential to include in a patient's treatment plan 4.1.2 All education provided should: ○ Be in appropriate lay terminology ○ Align with the pregnant or postpartum person's health literacy, culture, language, and accessibility needs ○ Include a designated support person for all teaching with patient permission (or as desired) 4.1.3 Refer patients who have experienced significant cardiac events for trauma follow-up care and consider referral to a support group (such as SCAD Alliance) 4.1.4 Include patient's support network contact information in EHR