Perinatal Quality Collaborative of North Carolina

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.

Maternal Cardiac Action Plan

Secondary Aim	Primary Drivers	Secondary Drivers
1. Preparation	1.1 Train all obstetric (OB) providers to perform a basic Cardiac Conditions Screen	1.1.1 Determine which screening tool will be used and the training needed to use it.
	1.2 Develop a patient education plan based on the 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 (WHO) Risk Criteria in Pregnancy, including those patients with known CVD, given that the normal cardiovascular changes in pregnancy can result in decompensation of CVD. 1.2.2 Emphasize shortness of breath, tachycardia, and other chief complaints as a key issue and know when to prompt immediate consultation. 1.2.3 Inform and educate physicians and nurses to not presume that patients with adult congenital heart disease know the signs and symptoms of worsening cardiac conditions imposed by their pregnancy experience.
	1.3 Establish a multidisciplinary "Pregnancy Heart Team" (PHT) or consultants appropriate to their facilities' designated Maternal Level of Care to design coordinated clinical pathways for people experiencing cardiac conditions in pregnancy and the postpartum period.	1.3.1 Identify members of team with specified roles and responsibilities. 1.3.2 Run drills for team with scenarios in different hospital settings including in-situ, clinical settings, and operating room. 1.3.3 Run simulations for PHT with basic and high-risk perinatal and postpartum scenarios 1.3.4 Educate nursing about when PHT should be consulted and how to contact them to come to bedside. 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)

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2. Recognition and early treatment of cardiac issues and timely escalation of care for patients with cardiac issues	2.1 Obtain a focused pregnancy and cardiac history in all care settings, including emergency department, urgent care, and primary care	2.1.1 Staff triage (OB and emergency) with skilled nurses for 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 definition of maternal mortality and the health disparities associated with it
	2.2 In all care environments, assess and document if a patient presenting is pregnant or has been pregnant within the past year. 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 risk 2.5 Conduct a risk-appropriate work-up for cardiac conditions to establish diagnosis and implement the initial management plan 2.6 Screen each person for condition-associated risk factors and provide linkages to community services and resources	2.2.1 Build inquiry into all entrance portals for care .
	2.7 Facility-wide standard protocols with checklists and escalation policies for management of cardiac symptoms	2.7.1 Develop protocol and escalation policy 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 transfer within a system. 2.7.3 Embed protocols in EHR.

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2. Recognition and early treatment of cardiac issues and timely escalation of care for patients with cardiac issues (cont)	2.8 Facility-wide standard protocols with checklists and escalation policies for management of people with known or suspected cardiac conditions 2.9 Coordinate transitions of care, including the discharge from the birthing facility to home and transition from postpartum care to ongoing primary and specialty care.	2.7.4 Involve patients with lived experience in development of protocol. 2.7.5 Create individualized plans for discharge from emergency department or postpartum using specific criteria and with follow-up plans. 2.8.1 Create system-wide protocols as needed for transfer within a system. 2.8.2 Embed protocols in EHR. 2.8.3 Involve patients with lived experience in development of protocol. 2.8.4 Designate provider to take lead on patient and family communication during a crisis and ensure use of interpreter when needed. 2.9.1 Provide access to shared EHR across settings. 2.9.2 Maintain list of cardiologists willing to focus on pregnant and postpartum patients and OB/GYN and primary care providers (PCPs) who are comfortable with cardiac conditions. 2.9.3 Create treatment plans readily accessible in EHR. 2.9.4 Standardize hand-off tools and communications for transitions of care
3. The Multidisciplinary Team process	3.1 For pregnant and postpartum people at high risk for a cardiac event, establish a culture of multidisciplinary planning, admission huddles, and post-event.	3.1.1 Have formal review following serious cardiac event to assess alignment with standard policies and procedures (with appropriate updates) and to identify opportunities for improvement (including identification of discriminatory practices) 3.1.2 Archive debriefing documentation for OB cardiac conditions events and review systematically with unit-specific and QI leadership teams. 3.1.3 Conduct huddles in conjunction with stage-based algorithm to be responsive to evolving clinical scenarios. 3.1.4 Have immediate post-event debrief (with equity lens) for support and learning.

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3. The Multidisciplinary Team process (cont)	3.2 Perform multidisciplinary reviews of serious complications (e.g., intensive care unit (ICU) admissions for reasons other than observation) to identify systems issues. 3.3 Include each pregnant or postpartum person and their identified support network as respected members of and contributors to the multidisciplinary care team.	3.1.5 Have more formal after-action review with designated leader and standardized content. 3.1.6 Include assessment of transfers to higher levels of care and multidisciplinary planning and treatment as part of review 3.1.7 Include each pregnant or postpartum person and their identified support network as respected members of and contributors to the multidisciplinary care team 3.2.1 Have formal review following care of those at highest risk (e.g., mWHO III or IV) and those 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). 3.2.2 Include involved providers (specialists and generalists) in review process with focus on ways to improve care. 3.2.3 Include near-misses and establish system for reporting near-misses and unexpected outcomes.
4. Communication to Ensure Equitable Care	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. • Aligned with the postpartum person's health literacy, culture, language, and accessibility needs. • Include a designated support person for all teaching with patient permission (or as desired).

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		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.