AIM

ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH

Cardiac Conditions in Obstetric Care Patient Safety Bundle

Core Data Collection Plan

Version 1.1 January 2024

Cardiac Conditions in Obstetrical Care Patient Safety Bundle
Core Data Collection Plan

Measurement Statement: For the purpose of this bundle, cardiac conditions refer to disorders of the cardiovascular system which may impact maternal health. Such disorders may include congenital heart disease, cardiac valve disorders, cardiomyopathies, arrhythmias, coronary artery disease, pulmonary hypertension, and aortic dissection. An ICD-10 codes list of cardiac conditions to be used when calculating outcome and state surveillance data can be found at the end of this document.

State Surveillance Measures

Metric	Name	Description	Notes
CCOC SS1	Severe Maternal Morbidity among People with Cardiac Conditions (excluding transfusion codes alone)	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** All qualifying pregnant and postpartum people during their birth admission with cardiac conditions **Numerator:** Among the denominator, those who experienced severe maternal morbidity, excluding those who experienced transfusion codes alone	Use the standardized SMM definition, subset by **AIM's CCOC codes list** to determine the denominator
CCOC SS2	Pregnancy-Related Deaths Due to Cardiac Conditions	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Live births among state residents **Numerator:** Pregnancy-related deaths due to cardiac conditions	Data can be obtained from MMRIA or state MMRC, with understood delays

Outcome Measures

Metric	Name	Description	Notes
CCOC O1	NTSV Cesarean Birth Rate Among People with Cardiac Conditions	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Among people with cardiac conditions, those with live births who have their first birth ≥ 37 completed weeks gestation and have a singleton in vertex (Cephalic) position **Numerator:** Among the denominator, those with a Cesarean birth	This metric is not necessarily a reflection of quality of care, but a reflection of provider comfort because of a comprehensive, team-based approach to providing care to birthing people with cardiac conditions.
CCOC O2	Preterm Birth Rate Among People with Cardiac Conditions	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Singleton live births among people with cardiac conditions **Numerator:** Among the denominator, preterm live births (<37 completed weeks gestation)	This metric is not necessarily a reflection of quality of care, but a reflection of provider comfort because of a comprehensive, team-based approach to providing care to birthing people with cardiac conditions.

Process Measures

Metric	Name	Description	Notes
ALL P1-Version 2*	Provider and Nursing Education on Respectful and Equitable Care	**Report estimate in 10% increments (round up)** At the end of this reporting period, what cumulative proportion of OB clinicians† has received in the last 2 years an education program on **respectful and equitable care?**	†The overarching intention of this measure is to capture all clinicians who work in a primarily inpatient OB service line or on an L&D, Antepartum, or Postpartum unit. These clinicians will likely be interdisciplinary and could be inclusive of, but not limited to, nurses and nurse managers, advance practice nurses, nurse midwives, physician associates, and Family Medicine physicians or other specialties with delivering privileges at your institution.
CCOC P1	Standardized Pregnancy Risk Assessments for People with Cardiac Conditions	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Patients with cardiac conditions diagnosed prior to their birth admission **Numerator:** Among the denominator, those who received a pregnancy risk classification using a standardized cardiac risk assessment tool by time of their birth admission	Examples of standardized pregnancy risk assessment tools include mWHO, CARPREG I & II, ZAHARA.

* This measure appears in other patient safety bundle data collection plans and are also referred to as multi-bundle measures. For the purposes of collecting data and reporting to the AIM Data Center, please collect and report this measure once per reporting period, regardless of the number of times they appear across data collection plans.

Metric	Name	Description	Notes
CCOC P2	Multidisciplinary Care Plan for Pregnant People with Cardiac Conditions	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Patients with cardiac conditions diagnosed prior to their birth admission **Numerator:** Among the denominator, those who had a multidisciplinary care plan for birth established by time of their birth admission	
CCOC P3	Provider and Nursing Education on Cardiac Conditions	**Report estimate in 10% increments (round up)** At the end of this reporting period, what cumulative proportion of OB clinicians† has received in the last 2 years education on **signs and symptoms of potential cardiac conditions in pregnant and postpartum people?**	†The overarching intention of this measure is to capture all clinicians who work in a primarily inpatient OB service line or on an L&D, Antepartum, or Postpartum unit. These clinicians will likely be interdisciplinary and could be inclusive of, but not limited to, nurses and nurse managers, advance practice nurses, nurse midwives, physician associates, and Family Medicine physicians or other specialties with delivering privileges at your institution.
CCOC P4	Emergency Department (ED) Provider and Nursing Eduaction on Cardiac Conditions	**Report estimate in 10% increments (round up)** At the end of this reporting period, what cumulative proportion of ED clinicians† has received in the last two years education on **signs and symptoms of potential cardiac conditions in pregnant and postpartum people?**	†The overarching intention of this measure is to capture all clinicians who work in a primarily inpatient OB service line or on an L&D, Antepartum, Postpartum unit. These clinicians will likely be interdisciplinary and could be inclusive of, but not limited to, nurses and nurse managers, advance practice nurses, nurse midwives, physician associates, and Family Medicine physicians or other specialties with delivering privileges at your institution.

Structure Measures

Metric	Name	Description	Notes
ALL S1*	Patient Event Debriefs	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place.** Has your department established a **standardized process to conduct debriefs with patients** after a severe event?	• Include patient support networks during patient event debriefs, as requested. • Severe events may include **the TJC sentinel event definition**, severe maternal morbidity, or fetal death. • This measure is not intended to represent a disclosure conversation but rather reflects a standard part of care that is a discussion between the patient and their care team
ALL S4*	Patient Education Materials on Urgent Postpartum Warning Signs	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place.** Has your department developed/ curated **patient education materials on urgent postpartum warning signs** that align with culturally and linguistically appropriate standards?	
ALL S5*	Emergency Department (ED) Screening for Current or Recent Pregnancy	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place.** Has your ED established or continued **standardized verbal screening for current pregnancy and pregnancy in the past year** as part of its triage process?	More detail on screening for current and recent pregnancy can be found in **AIM's Pregnancy Screening Statement**.

* This measure appears in other patient safety bundle data collection plans and are also referred to as multi-bundle measures. For the purposesof collecting data and reporting to the AIM Data Center, please collect and report this measure once per reporting period, regardless of the number of times they appear across data collection plans.

Metric	Name	Description	Notes
CCOC S1	Multidisciplinary Pregnancy Heart Team	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place.** Has your facility established **a multidisciplinary pregnancy heart team**, which may be comprised of a team of consultants appropriate to your hospital's level of maternal care, to respond to known or potential cardio-obstetric emergencies?	
CCOC S2	Multidisciplinary Case Reviews for CCOC Bundle	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place.** Has your facility established **a process to conduct multidisciplinary systems-level reviews of serious complications experienced by pregnant and postpartum people with cardiac conditions?**	Criteria for multidisciplinary case reviews for people with cardiac conditions may include: • Critical care/ICU admissions for other than observation, • Those at the highest levels of risk, such as mWHO risk levels III and IV.

Optional Measures

Metric	Name	Description	Notes
CCOC OP1	Cardiovascular Disease (CVD) Assessment Among Pregnant and Postpartum Women	**Sample patient charts or report for all patients; report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** All birth admissions, whether from sample or entire population **Numerator:** Among the denominator, those with documentation of a cardiovascular disease assessment using a standardized tool	For sampling guidance, please refer to the **AIM Sampling Workbook**. • Refer to CVD Assessment Algorithm for Pregnant and Postpartum Women developed by CMQCC. • Currently, there is one CVD assessment algorithm developed for pregnant and postpartum people – the **CMQCC CVD Assessment Algorithm for Pregnant and Postpartum Women**. This tool has only been validated using pregnancy- related deaths. As the literature more robustly supports the use of the CVD Assessment Algorithm for Pregnant and Postpartum Women and the tool is validated on patients, AIM plans to include this metric as part of its core set of process metrics.

AIM CCOC Codes List

Variable	Definition
Congenital Heart Disease	Q200, Q201, Q202, Q203, Q204, Q205, Q206, Q208, Q209, Q210, Q211, Q212, Q213, Q214, Q218, Q219, Q220, Q221, Q222, Q223, Q224, Q225, Q226, Q228, Q229, Q230, Q231, Q232, Q233, Q234, Q238, Q239, Q240, Q241, Q242, Q243, Q244, Q245, Q246, Q248, Q249, Q250, Q251, Q2521, Q2529, Q253, Q254, Q2540, Q2541, Q2542, Q2543, Q2544, Q2545, Q2546, Q2547, Q2548, Q2549, Q255, Q256, Q257, Q2571, Q2572, Q2579, Q258, Q259, Q7960, Q7961, Q7962, Q7963, Q7969, Q8740, Q87410, Q87418, Q8742, Q8743
Cardiac Valve Disorders	I050, I051, I052, I058, I059, I060, I061, I062, I068, I069, I070, I071, I072, I078, I079, I080, I082, I083, I089, I090, I091, I092, I098, I0981, I0989, I099, I340, I341, I342, I348, I349, I350, I352, I358, I359, I360, I361, I362, I368, I369, I370, I371, I372, I378, I379, I38, I39
Cardiomyopathies	I420, I421, I422, I423, I424, I425, I426, I427, I428, I429, I43, I502, I5022, I503, I5032, I504, I5042, I508, I5081, I50812, O903
Arrhythmias	I440, I441, I442, I443, I4430, I4439, I444, I445, I446, I4460, I4469, I447, I450, I451, I4510, I4519, I452, I453, I454, I455, I456, I458, I4581, I4589, I459, I470, I471, I472, I479, I480, I4811, I4819, I482, I4820, I4821, I483, I484, I489, I4891, I4892, I490, I491, I492, I493, I494, I4940, I4949, I495, I498, I499
Coronary Artery Disease	I200, I201, I208, I209, I251, I2510, I2511, I25110, I25111, I25118, I25119, I252, I253, I254, I2541, I2542, I255, I256, I257, I2570, I25700, I25701, I25708, I2571, I25710, I25711, I25718, I25719, I2572, I25720, I25721, I25728, I25729, I2575, I25750, I25751, I25758, I25759, I2576, I25760, I25761, I25768, I25769, I2579, I25790, I25791, I25798, I25799, I2581, I25810, I25811, I25812, I2582, I2583, I2584, I2589, I259, M300, M301, M302, M303, M308
Pulmonary Hypertension	I2720, I2721, I2722, I2723, I2724, I2729, I278
Other/Not Specified	I300, I301, I308, I309, I310, I311, I312, I313, I314, I318, I319, I32, I400, I401, I408, I409, I41, O994, O9941, O99412, O99413, O99419, O9942, O9943, Z941, Z943, Z950, Z951, Z952, Z953, Z954, Z955, Z958, Z9581, Z95810, Z95811, Z95812, Z95818, Z9582, Z95820, Z95828, Z959

This document was developed with support by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award, UC4MC49476, totaling $3,000,000 with 0% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.