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MCH Innovations Database Practice Summary & Implementation Guidance

Chicago Collaborative for Maternal Health QI Collaborative

The Chicago Collaborative for Maternal Health QI Collaborative developed, implemented, and evaluated a quality improvement initiative connecting high-risk prenatal patients to primary care after delivery and routine postpartum care.



Location

Chicago, Illinois



Topic Area

Access to Health Care/Insurance, Primary/Preventative Care, Health Equity, Health Screening/Promotion



Setting

Clinical-Community Health Centers



Population Focus

Prenatal/Infant Health, Women's Maternal Health



NPM

NPM 1: Well-Woman Visit



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Section 1: Practice Summary

PRACTICE DESCRIPTION

The Chicago Collaborative for Maternal Health (CCMH), led by AllianceChicago and EverThrive Illinois, aims to improve maternal health outcomes in the ambulatory care setting via quality improvement initiatives, community engagement, and policy advocacy. This initiative was born out of our review of data from the Illinois Department of Public Health (IDPH) and Chicago Department of Public Health (CDPH) which identified the need for a local, and community based, approach to maternal mortality and morbidity disparities. IDPH found that in its measurement period of 2008 to 2016, 73 birthing people on average died each year within one year postpartum (IDPH, 2018). Non-Hispanic Black birthing people were six times as likely to die as non-Hispanic White birthing people of a pregnancy-related condition (IDPH, 2018). 72% of pregnancy-related deaths were deemed preventable by the Maternal Mortality Review Committee, which authored the report (IDPH, 2018). CDPH found in its measurement period of 2016-2017, the severe maternal morbidity rate overall in Chicago was 74.1 per 10,000 deliveries (CDPH, 2019). This was more than 2.5 times higher for non-Hispanic Black birthing people than their White counterparts (CDPH 2019). Those with high economic hardship (defined via the Economic Hardship Index) had the highest severe maternal morbidity rates and the highest pregnancy-associated mortality ratio (CDPH, 2019). Lastly, and important to the development of this initiative, the Illinois data showed that a substantial proportion of deaths occurred after the birth hospitalization, and while there were several initiatives addressing maternal health in Illinois, AllianceChicago and EverThrive Illinois saw a need for community-driven work.

AllianceChicago developed the CCMH Quality Improvement Collaborative as a practice within the overall CCMH initiative, and engaged thirteen ambulatory care partners, including Federally Qualified Health Centers (FQHCs) and hospital clinics, to inform and implement quality improvement initiatives for their patient populations. The quality improvement initiative was chosen, designed, and implemented by FQHCs and community health centers that were at the table from the beginning, with a focus on individual site flexibility. Following a capacity assessment, in which the postpartum period was identified as an area for improvement, the health centers decided to test a population health intervention connecting high-risk prenatal patients with primary care/medical home following delivery and after completion of routine prenatal care. Each of the six implementing health centers selected high-risk criteria specific to their patient populations and adapted existing workflows to support this intervention.

The CCMH QI Collaborative structure is informed by the Institute for Healthcare Improvement's (IHI) "Collaborative Model for Achieving Breakthrough Improvement," a model for collaborative learning in health care that has been implemented across thousands of health care organizations since the 1990s. The basic tenets of the model include the following activities that take place over 6-15 months per improvement initiative: topic selection; content expert recruitment; participating organization recruitment; learning sessions; and action periods.

Additionally, our primary objective for the QI initiative is supported by recommendations from the American College of Obstetricians and Gynecologists (ACOG) and evidence-based practice. ACOG recommends that postpartum care providers include the transition to well-woman care as part of the postpartum care plan, and that additional referrals should be made as appropriate (ACOG Committee Opinion, 2018). ACOG additionally notes that the transition needs to be documented in the medical record and communicated with the patient and all members of the care team (ACOG Committee Opinion, 2018). Evidence supports primary care provision to high-risk prenatal patients, such as patients with gestational diabetes, to reduce disparities in treatment and improve health promotion (LaManna & Quelly, 2020)



CORE COMPONENTS & PRACTICE ACTIVITIES

The broader outcome of this quality improvement work was to improve capacity of health centers to support continuity of care for high-risk pregnant patients in the postpartum period. This was a multi-year planning and implementation effort. The core components of the QI collaborative included: developing the stakeholder group; community needs assessment to identify our topic; informing our topic with input from the literature; subject matter experts and evidence-based practice; developing a standardized protocol with evaluation measures; implementing and testing the standardized protocol; and wrapping up the implementation period with a focus on sustainability.

To develop the stakeholder committee, called the QI Subcommittee, we sent emails and held recruitment calls describing the larger objective of developing the committee to inform and implement quality initiatives. We then gathered the QI Subcommittee together to identify potential QI topics via a capacity assessment survey. Most of the stakeholders identified the postpartum period as a potential area for improvement, and specifically identified improving continuity of care for high-risk prenatal patients. From this input, we landed on the QI Initiative topic of improving the number of high-risk prenatal patients connected to primary care and/or medical home following delivery and postpartum care. We then conducted a literature review for best practice recommendations and convened a smaller working group from the QI Subcommittee to inform the topic and develop the standardized protocol. Finally, we then presented the proposal back to the QI Subcommittee to invite them to implement. Out of the 13 QI Subcommittee members, six decided to implement. We worked with each site one-on-one to help them plan how to adapt this intervention into their existing workflows and any staff training that was needed. We also worked with each health center to develop their high-risk criteria and process for adding patients to their registries for outreach. Once we implemented, we had each site report their monthly evaluation data (structure, process, and outcome measures; outlined below) and convened the implementing sites bimonthly to share successes and opportunities for improvement. Throughout the implementation period, we planned for sustainability beyond the formal data collection through site surveys and discussion at bi-monthly meetings. As we wrapped up the implementation period, we convened the larger QI Subcommittee to share the results and celebrate the efforts of the implementing sites.

Core Components & Practice Activities

Core Component	Activities	Operational Details
Develop Stakeholder Committee	Engage and invite potential stakeholders	Recruitment emails and meetings with community health centers (CHC), federally qualified health centers (FQHC), and ambulatory care centers in hospitals to discuss high-level goals of the work and invite them to join the Quality Collaborative.
Identify Topic	Community Needs Assessment (CNA); Survey stakeholders	CNA to gauge community strengths and opportunities for improvement; stakeholder survey to identify what quality improvement



		<p>topics resonated with them and their patient populations.</p> <p>Meeting with all the recruited stakeholders to present assessment and survey findings and to finalize a QI refine further and ultimately test.</p>
Inform Topic	Review literature; Assess clinical guidelines/ evidence-based practice; Connect with experts, people with lived experience, and quality collaboratives for resources and lessons learned	Following our initial meeting with the stakeholders and topic selection, we reviewed the literature, clinical guidelines, and evidence-based practice. Additionally, we met with maternal health experts, people with lived experience, and quality collaboratives.
Develop Standardized Protocol	Select intervention to test; Establish aim and measures for testing; Develop key driver diagram; Develop toolkit and resources; Review protocol and revise as needed; Finalize standardized protocol	<p>Smaller working group from the larger quality collaborative to develop and refine an intervention to test, evaluation measures, the key driver diagram, and implementation toolkit and resources.</p> <p>All materials were presented to the larger collaborative for review and to ensure that what we had developed aligned with their priorities.</p>
Implement and Test Standardized Protocol	Data collection and reporting to track progress towards outcomes and monitor adherence to protocol; PDSA Cycles/tests of change; Protocol revision (as needed)	<p>Pilot implementation with data collection of structure, outcomes, and process measures from all implementing partners. Baseline data also collected to evaluate improvement.</p> <p>One check-in survey with implementation group halfway through implementation period to assess meeting experience and any changes needed</p> <p>One-on-one meetings with sites, monthly/bi-monthly meetings with the implementation group, and quarterly meetings with the larger Quality Collaborative to share successes and lessons learned.</p>



Wrap up Implementation Period and Sustainability

Review outcomes and acknowledge successes; continued site support; Determine timeline for sustainability

Final meeting with implementation sites and larger QI collaborative with final results presented.

Additional survey with implementation group to discuss sustainability plans and needs for support.

HEALTH EQUITY

The CCMH QI Collaborative sought to improve healthcare quality and access for high-risk prenatal patients, specifically patients with diabetes and hypertension. Data have shown that patients of color with these conditions are disproportionately impacted by the maternal health crisis, and are also being cared for by the community health centers implementing this QI initiative. The Chicago Community Areas prioritized for the work have medium to high rates of economic hardship and are primarily made up of non-Hispanic Black/African American and Hispanic/Latinx populations according to the Chicago Health Atlas (Chicago Health Atlas, n.d.). On average, these community areas had lower rates of health insurance, access to a primary care provider, and access to early and adequate prenatal care compared to the city of Chicago between 2016-2018 (Chicago Health Atlas, n.d.). At the same time, we see disparities in access to primary care across the lifespan, and this can impact wellness for birthing people before, during, and after pregnancy (Declercq, 2020). The partners implementing the QI initiative care for prenatal patients facing barriers to care in a variety of ways, including but not limited to, lack of childcare, transportation, and insurance. Our partner health centers noted that there was inequity in ensuring high-risk prenatal patients were engaged back into care following the postpartum period.

To complement the CCMH QI Collaborative practice, our funded partner, EverThrive Illinois, developed a community engagement campaign and a social service provider training curriculum that focused on equitable access to care and community support. They also convened an advisory board of people with lived experience to engage more fully with the communities we hoped to support.

EVIDENCE OF EFFECTIVENESS

The quality improvement initiative implemented was a population management approach to ensure medically complex pregnant patients are connected to a medical home after the immediate postpartum period (6 weeks). The goal of the initiative was to improve processes at our partner health centers to enhance coordination of care for high-risk postpartum patients and our primary outcome was to increase the number of high-risk postpartum patients linked to medical home care following their delivery within 6 months postpartum. We used baseline and monthly reported data for each QI Implementation site to evaluate the success of the intervention. These data were assessed pre-, during, and post-implementation. Data collected were deidentified and aggregate-level and are derived from the following structure, outcome, and process measures:

1. Structure:
 - a. Are criteria for defining high-risk patients defined?
 - b. Is a registry to identify high-risk patients in place?
 - c. Is a process in place to coordinate care for high-risk patients?
2. Process



- a. How many cumulative locations of care to date are implementing this process?
 - b. Number of staff trained
3. Outcome
- a. Percent of high-risk prenatal patients linked to primary care provision at delivery discharge and 6 months and completed appt (primary outcome)
 - b. Percent of high-risk prenatal patients who attended a postpartum appointment (secondary outcome)

Results

Structure Measures

Measure	Baseline	Final
% of CHCs with defined high-risk criteria in place	3/6 (50%) sites	6/6 (100%) sites
% of CHCs with registry of high-risk patients in place	3/6 (50%) sites	6/6 (100%) sites
% of patients to coordinate high-risk patients to medical home and/or primary care visit in place	0/6 (0%) sites	6/6 (100%) sites

Process Measures

Measure	Final
Cumulative number of locations of care implementing	19 locations
Cumulative number of staff trained	54 staff

Outcome Measures

Measure	Baseline	Final
Percent of high-risk prenatal patients linked to primary care provision at delivery discharge and 6 months and completed appt (primary outcome)	26/102 (25%) patients	97/134 (72%) patients
Percent of high-risk prenatal patients who attended a postpartum appointment (secondary outcome)*	51/61 (83%) patients	87/96 (91%)

*one site did not collect postpartum visit data due to existing workflows related to high-risk patients

In our initial survey results, most stakeholders identified the postpartum period and an anecdotal observation that patients were falling out of care after their 6 week postpartum visit. This gap in care was confirmed by the baseline data we collected prior to implementation, and we saw a significant improvement from the baseline data by the end of the implementation period.

After the formal implementation period ended, five out of the six implementing CHCs decided to continue maintaining the processes they established as a part of this work. The larger group of thirteen health centers remained connected to the efforts through via quarterly meetings.

As our data collection method was structured so that sites self-reported data, there is a potential for bias in the self-reported data. Additionally, we were unable to collect qualitative data from the high-risk patients themselves as to why or why not they were able to pursue primary care after their postpartum care. The literature demonstrates that bias in the patient-provider interaction can impact the patient experience and their decision whether to pursue care (Hall, W.J. et al, 2015).

While we hoped for any improvement in our primary outcome, the vast improvement (tripling) from the baseline was unexpected and very empowering on behalf of the immense effort input by our CHC stakeholders.



Out of the six health centers who implemented this QI initiative, five have elected to continue implementing past the formal data collection period and incorporate into their existing workflows.

Future study of this work will include qualitative analysis from key informant interviews of CHC stakeholders who participated in the QI Collaborative, and a rigorous evaluation, including an experimental design to establish efficacy. We hope will provide crucial insights into the QI model and how it can be improved to increase health center engagement.



Section 2: Implementation Guidance

COLLABORATORS AND PARTNERS

The Chicago Collaborative for Maternal Health and QI Collaborative organizational structures are described by the partnerships below:

Practice Collaborators and Partners		
Partner/Collaborator	How are they involved in decision-making throughout practice processes?	Does this stakeholder have lived experience/come from a community impacted by the practice?
EverThrive Illinois	Co-leader of larger CCMH effort providing community insight working with people with lived experience	Yes, EverThrive Illinois Community Outreach Workers conducting community engagement have lived experience and/or live in Chicago communities that were of focus in this work
Illinois Perinatal Quality Collaborative	Thought partner and subject matter expertise for planning and leading a stakeholder collaborative	Yes, subject matter expertise in leading collaboratives and how to implement through capacity challenges
QI Collaborative (13 FQHC and hospital ambulatory care members)	Helped select and inform QI topic; smaller working group to develop and design; six health centers implementing	Yes, all partners serve communities and populations that were of focus in this work
CCMH Steering Committee and Key Advisors (including people with lived experience)	Provided feedback throughout the planning, implementation, and evaluation of effort	Yes, all partners serve, advocate for, or represent the communities most impacted by maternal mortality and morbidity in Chicago.

REPLICATION

As part of feedback from the implementing health centers, we are currently implementing a pilot in which one centralized outreach resource contracted by AllianceChicago is reaching out to high-risk prenatal patients at



three CHCs to connect them to primary care. Additionally, we have proposals under review for replication and more robust evaluation of this QI effort.

INTERNAL CAPACITY

The activities of the Chicago Collaborative for Maternal Health Quality Collaborative are led by AllianceChicago. Project staff include:

- Lisa Masinter, MD, MPH; Director of Research: Dr. Masinter is serving as the principal investigator and Project Leader (PL) for the project. She is leading the quality improvement collaborative and providing technical expertise around the quality improvement initiative. (12% time allocation)
- Jena Wallander Gemkow, MPH, BSN, RN; Clinical Research Manager: Mrs. Wallander Gemkow is providing project management for the quality improvement collaborative as the Project Coordinator (PC). (30% time allocation)
- Ta-Yun Yang; Clinical Data Manager: Mr. Yang is assisting with data collection, maintenance, and visualization for the quality improvement collaborative as the Clinical Data Manager (DS). (10% allocation)

AllianceChicago meets weekly internally and bi-weekly with our partner, EverThrive Illinois to discuss project progress and troubleshoot as necessary.

All CCMH activities are informed and evaluated with input from the CCMH Steering Committee and Key Advisors, including people with lived experience, the Chicago Department of Public Health, the Illinois Department of Public Health, the Illinois Perinatal Quality Collaborative, Chicago community health centers, and community-based organizations involved in maternal health. Each person or organization at the table brings key experience, knowledge, and insight into our work. This group meets quarterly and an intentional component of meeting agendas is to allow these stakeholders to share out about the important work they are doing in the field of maternal health in Chicago. This fosters engagement and collaboration among the group and our hope is to align these efforts when and where appropriate to have the highest impact.

PRACTICE TIMELINE

The work of the CCMH QI Collaborative began in late fall 2020, when we began to engage potential stakeholders to develop the QI Collaborative Subcommittee. This engagement took approximately 4 months, after which we convened stakeholders to identify the QI topic in March 2020. We spent the next several months (April-December 2020) in collaboration with the QI Development Workgroup to inform our topic and to develop the standardized protocol for implementation and evaluation measures. Implementation took place January-December 2021, with rolling implementation for the sites – all sites were fully implementing by July 2021. Evaluation was ongoing at this time as partners submitted monthly data, with all evaluation data aggregated and finalized in January 2022, with a focus on sustainability and developing new pilot efforts starting in 2022 and ongoing.

Please note that this timeline was subject to delays due to the ongoing progression of the COVID-19 pandemic and the limited organizational capacity of health centers to engage.



PRACTICE COST

Budget			
Activity/Item	Brief Description	Quantity	Total
Personnel	Staff expenses for Project Lead, Project Coordinator, and Data Scientist (by allocation)	3	\$60,000
Key Advisors	Contract advisors with subject matter experience	2	\$27,000
Site Stipends	Stipends for QI Implementation Sites	6	\$27,000
Total Amount:			\$114,000

LESSONS LEARNED

Our results highlight the importance of a collaborative to facilitate FQHC efforts to identify and test innovative strategies to support maternal health. They also demonstrate the feasibility of a model to enhance continuity of care for patients at high risk for adverse outcomes in the first year postpartum.

In the planning, implementation, and evaluation of our QI approach, we encountered several challenges:

- The COVID-19 pandemic and the Chicago healthcare community response resulted in significant delays to planning and implementing the quality improvement effort.
 - We consistently checked in with our partners to ensure the work still aligned with their priorities in a dynamic and shifting public health environment, and to provide as much support as possible, including technical assistance and data support.
 - Additionally, the delays actually allowed us to be more thoughtful and intentional in planning both the intervention to test and the evaluation measures to ensure the highest yield possible given the challenges presented during the pandemic.
- Limited funding to provide to QI Implementation sites to support the on-the-ground efforts of developing and implementing the intervention.
 - We listened to our partners about the most feasible implementation plan at each of their sites, especially in the initial implementation and pilot period.



- In response to this feedback, we minimized the data collection points for outcome measures to keep them at an aggregate level, and gave each site as much discretion as possible in their pilots

While we had initially planned to implement 2-3 QI initiatives for this effort, the pandemic caused delays that ultimately prohibited multiple initiatives. However, this change enhanced the quality of the QI initiative we implemented, as we were able to spend more time thinking through the design and implementation and were able to meaningfully involve our health center partners in the process. While this was a small-scale pilot, the many successes prove that the model of health center-led research and quality improvement can work towards improving care for health center patients.

NEXT STEPS

As noted above, five out of the six implementing health centers have continued implementing the QI initiative in some capacity after the formal initiative has closed. We have several pilot projects planned or in the proposal stage that stem from the lessons learned of this initiative and are thinking through ways to continue and evaluate the QI collaborative model.

While the formal QI implementation period has ended, we are currently thinking through the lessons we've learned to continue to implement QI work within the FQHC care setting. As noted above, we are currently implementing the centralized resource pilot.

RESOURCES PROVIDED

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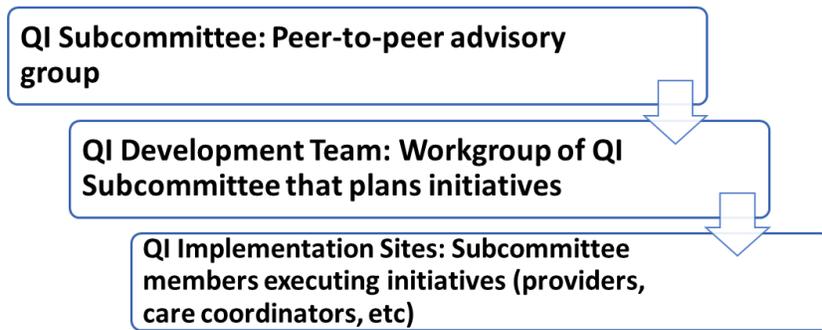
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APPENDIX

Appendix A: Chicago Collaborative for Maternal Health Organizational Chart



Appendix B: Quality Improvement Collaborative Organizational Structure



Appendix C: Quality Improvement Collaborative Initiative One Implementation Timeline

CCMH QI Initiative One																	
Initiative Pre-Launch			Initiative Implementation												Initiative Sustainability		
Oct. 2020	Nov. 2020	Dec. 2020	Jan. 2021	Feb. 2021	Mar. 2021	Apr. 2021	May 2021	June 2021	July 2021	Aug. 2021	Sept. 2021	Oct. 2021	Nov. 2021	Dec. 2021	Jan. 2022	Feb. 2022	Mar. 2022

Appendix D: Quality Improvement Collaborative Initiative One Key Driver Diagram and Measures

Aim	Driver	Strategy	Measure
Global Aim: Improve number of patients with pregnancies complicated by medical conditions who linked to PCP by 3 months postpartum by December 31, 2021.	Identify and follow high-risk pregnancies	Establish criteria for identifying high-risk/medically complex patients.	STRUCTURE: Are criteria for identifying high-risk patients defined?
		Develop registry of high-risk/medically complex patients during pregnancy	STRUCTURE: Is a registry in place to identify high-risk patients in place?
		Realign workflow to identify patients and coordinate care through postpartum follow up	STRUCTURE: Is a process in place to coordinate care for high risk patients? PROCESS: # of cumulative locations of care to date implementing this process
	Training on process	Train providers and staff on the importance of and process of care coordination for patients with high risk pregnancies	PROCESS: % of staff trained (by type)
	Ensure delivery of prioritized health services (postpartum care)	Ensure postpartum visit scheduled and attended.	OUTCOME: % patients who attended a postpartum appointment
		Create a process for establishing primary/well-person care following initial postpartum visit	OUTCOME: % patients linked to PCP at delivery discharge and 3 months and completed appt
		Establish checklist of appropriate postpartum services necessary for patients on high-risk list	OUTCOME: % of patients from registry who received care per checklist item



Appendix E: Baseline Data Collection Tool

Question	Response Format
Implementation Partner ID #	
Date of completion	
Structure Measures	
At this time, have criteria for high-risk patients been defined and implemented? (select one)	<p>Yes – criteria are in place and are currently being implemented (at least one location of care)</p> <p>Implementation in progress - criteria are in place but not yet implemented</p> <p>Development in progress – criteria are currently in development</p> <p>No – there are no criteria in place or in development</p>
If YES: What is the criteria for high-risk patients? (i.e. diagnoses, labs, SDOH)	
At this time, is a registry/process in place and being implemented to identify high-risk patients?* (select one)	<p>Yes – a process is in place and is currently being implemented (at least one location of care)</p> <p>Implementation in progress - a process is in place but not fully implemented</p> <p>Development in progress – a process is currently in development</p> <p>No – there are no processes in place or in development</p>
If YES: Please describe the process.	
At this time, is there a process in place to coordinate care for high-risk patients?* (select one)	<p>Yes – a process is in place and is currently being implemented (at least one location of care)</p> <p>Implementation in progress - a process is in place but not yet implemented</p> <p>Development in progress – a process is currently in development</p> <p>No – there are no processes in place or in development</p>
If YES: Please describe the process	
Process Measures	
How many locations of care does your health center have?	
How many staff members does your health center have who could be carrying out this intervention (FTE, part-time, etc)?	Number of Prenatal Care Providers
	Number of Nurses
	Number of Support Staff
	Number of Other



Outcome Measures	
Number of High-Risk Patients identified this month per designated criteria	Number
Number of High-Risk Patients Who Delivered this month	Number
Number of Postpartum High-Risk Patients Who Attended a Postpartum Appointment this month**	Number
Number of Postpartum High-Risk Patients who scheduled and attended a primary care appointment within three months of delivery this month*	Number

*denotes primary outcome measure

**denotes secondary outcome measure

Appendix F: Implementation Data Collection Tool

Question	Response Format
Implementation Partner ID #	Number
Reporting Month	Month/Year
Structure Measures	
At this time, have criteria for high-risk patients been defined and implemented?	<p>Yes – criteria are in place and are currently being implemented (at least one location of care)</p> <p>Implementation in progress - criteria are in place but not yet implemented</p> <p>Development in progress – criteria are currently in development</p> <p>No – there are no criteria in place or in development</p>
At this time, is a registry/process in place and being implemented to identify high-risk patients?*	<p>Yes – criteria are in place and are currently being implemented (at least one location of care)</p> <p>Implementation in progress - criteria are in place but not yet implemented</p> <p>Development in progress – criteria are currently in development</p> <p>No – there are no criteria in place or in development</p>
At this time, is there a process in place to coordinate care for high-risk patients?*	<p>Yes – criteria are in place and are currently being implemented (at least one location of care)</p> <p>Implementation in progress - criteria are in place but not yet implemented</p> <p>Development in progress – criteria are currently in development</p> <p>No – there are no criteria in place or in development</p>
Process Measures	
How many cumulative locations of care to date are implementing this process? (Please select N/A if implementation has not started)	Cumulative Number to date
How many staff have been trained on this process? (Please select N/A if staff type does not apply)	Cumulative Number of Prenatal Care Providers to date N/A
	Cumulative Number of Nurses to date N/A



	Cumulative Number of Support Staff to Date N/A
	Other
Outcome Measures	
Number of New High-Risk Patients identified this month	Number
Cumulative Number of High-Risk Patients to date	Number
Cumulative Number of High-Risk Patients Who Delivered to date <i>Note: stop collecting this number six months prior to end of data collection</i>	Number
Cumulative Number of Postpartum High-Risk Patients Who Attended a Postpartum Appointment to date**	Number
Cumulative Number of Postpartum High-Risk Patients who scheduled and attended a primary care appointment within six months of delivery to date*	Number
Successes and Changes	
What changes, if any, did you make or test to your process this month? (i.e. added a location of care; added patient education component, etc)	
What are some successes you had this month?	
Where are some opportunities you can improve for next month?	

*denotes primary outcome measure

**denotes secondary outcome measure

