

**Physician-Focused Payment Model Technical Advisory Committee  
LOI: Environmental Scan and Relevant Literature**

**Minnesota Birth Center (MN Birth Center)**

**Letter Dated: No date provided**

**Letter Received: 2/13/2017**

The Minnesota Birth Center is proposing a single bundled payment for comprehensive low-risk maternity and newborn care provided by midwife-led practices in independent birth centers that are clinically integrated with physician and hospital services. The opportunities for benefit include: reduced elective early deliveries and the use of cesarean section, reduced low birth weight births and the need for neonatal ICU care, reduced delivery complications, and birth in lower-cost settings. Expected participants include certified nurse-midwife (CNM) team(s) collaborating with consulting obstetricians, pediatricians, and neonatologists. In addition to prenatal education, doulas and lactation support services are included in the package of care available to all payers, including Medicare, which annually pays for the care of 15,000 mothers or 300 in Minnesota specifically.

The MN Birth Center has utilized this model for the care of more than 1,000 mother/baby pairs. The care has primarily been provided in independent birth centers located in Minneapolis and St. Paul, Minnesota. If clinically necessary, care is provided in the hospital by the primary CNM and collaborating physicians. Patient satisfaction is very high and the cost of providing care is less than the current system. However, unsustainable payer reimbursement and regulation have created barriers that prevent further expansion of this model. The MN Birth Center has received a commitment from their hospital partners with the Mother Baby Clinical Service Line of Allina Health System and Children's Hospitals and Clinics of Minnesota to serve as subcontractors by giving us guaranteed case rates for mothers and babies who need hospital care for our birth and early newborn care.

**Key Search Terms**

*Maternal bundled payment; maternity care; maternity care model; maternity episode of care; Maternal Health Payment Reform; Minnesota Birth Center; newborn care; single bundled payment*

<b>Research Task</b>	<b>Section</b>	<b>Contents</b>
Environmental Scan	<a href="#">Section 1</a>	Key documents, timely reports, grey literature, and other materials gathered from internet searches (5).
Relevant Literature	<a href="#">Section 2</a>	Relevant literature materials (4).
References	<a href="#">Section 3</a>	References to relevant literature.

## Section 1. Environmental Scan

Environmental Scan		
<p><i>Key words: Maternal bundled payment; maternity care; maternity care model; maternity episode of care; Maternal Health Payment Reform; Minnesota Birth Center; newborn care; single bundled payment</i></p>		
Organization	Title	Date
The Health Care Incentives Improvement Institute	<a href="#">First-Year Results of a Pilot Effort at a Nonprofit Medicaid HMO in Texas</a>	10/16/2016
Purpose/Abstract		
<p><b>Background:</b> In the summer and fall of 2014, the Association for Community Affiliated Plans sponsored a Bundled Payment Learning Collaborative that was supported by Bailit Health Purchasing and the Health Care Incentives Improvement Institute (HCI3). Along with eight other plans, Community Health Choice (CHC), a nonprofit Medicaid HMO that participated in the learning collaborative, included a maternity care bundled payment pilot in its 2015 strategic initiatives.</p> <p><b>Summary:</b> The observations and recommendations detailed in this case study include: 1) the challenge of formulating comprehensive maternity-episode budgets for patients whose claims history is short or absent; 2) the significance of the C-section rate in driving financial outcomes for deliveries, and the budget methodology that can provide an explicit incentive to reduce unwarranted C-sections; and 3) the enormous effect even a few high-need, high-cost infants can have on a provider's actual costs, and ways to fairly moderate the effect these costs can have on a provider's potential gain or loss sharing.</p>		
Additional Notes/Comments		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
Health Care Payment Learning & Action Network (LAN)	<a href="#">Accelerating and Aligning Clinical Episode Payment Models</a>	8/1/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> The Health Care Payment Learning &amp; Action Network (LAN) was created to drive alignment in payment approaches across and within the public and private sectors of the U.S. health care system. To advance this goal, the Clinical Episode Payment (CEP) Work Group (the “Work Group”) was convened by the LAN Guiding Committee and charged with developing recommendations for the purpose of accelerating adoption of aligned clinical episode payment models in the areas of elective joint replacement, maternity care, and coronary artery disease. Composed of diverse health care stakeholders, the Work Group deliberated, incorporated input from LAN participants, and reached consensus on many critical issues related to designing person-centered clinical episode payment, which is the subject of this White Paper.</p> <p><b>Summary:</b> The purpose of this paper is to provide an episode payment design framework, as well as recommendations pertaining to each of the 10 elements in said framework, that will support adoption of aligned episode payment models in the areas of elective joint replacement, maternity care, and coronary artery disease. These recommendations were developed while considering the evolving state of the health care system. The discussion of maternity care begins on page 40 of the white paper. Within this chapter, one will find discussion of the role of episode payment in maternity care and 10 recommendations towards designing the episode payment model. The 10 recommendations are focused towards: 1) episode definition, 2) episode timing, 3) patient population, 4) services, 5) patient engagement, 6) accountable entity, 7) payment flow, 8) episode price, 9) type and level of risk, and 10) quality metrics.</p>		
<b>Additional Notes/Comments</b>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
AIS Health	<a href="#">Insurers, Large Employers Test Maternity Care Bundles; Some See Promising Results</a>	5/1/2016
<b>Purpose/Abstract</b>		
<p><b>Background:</b> Commercial and Medicaid insurers and employers are starting to test bundled payment arrangements in maternity care. Horizon Blue Cross Blue Shield of New Jersey has an extensive bundled payment program, with seven bundles now offered; Cincinnati-based health system TriHealth and General Electric began their maternity bundled payment program in October 2015; and the Minnesota Birth Center has implemented their BirthBundle maternity bundled payment.</p> <p><b>Summary:</b> This article by AIS Health from the bottom of page 1 through page 2, addresses the maternity bundled payment programs offered by Horizon Blue Cross Blue Shield of New Jersey, TriHealth and General Electric, and Minnesota Birth Center. Maternity bundle payment programs, including the aforementioned, represent a clear target for bundles: the episodes are easy to define, and there's a real opportunity to improve care and patient satisfaction while lowering costs.</p>		
<b>Additional Notes/Comments</b>		

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Catalyst for Payment Reform	<a href="#">Issue Brief: Maternity Care Payment</a>	2/1/2015
<b>Purpose/Abstract</b>		
<p><b>Background:</b> Maternity practices that were developed to treat specific problems are now applied routinely to all pregnant women regardless of their risk, and many obstetrical practices have become standard without scientific evaluation of their effectiveness; thus, costs of maternity care have increased and health outcomes have worsened. Many less-invasive approaches, such as continuous labor support, non-supine positions for giving birth, delayed cord clamping, and vaginal birth after cesarean, continue to be underutilized. The areas of greatest concern in the growing gap between evidence-based practice and current US practice patterns are the increasing rates of preterm births, cesarean delivery, and elective induction.</p> <p><b>Summary:</b> Beginning in the appendix, this issue brief explains a variety of payment alternatives that can align incentives for providers and hospitals to adhere to evidence-based practices that improve outcomes for both infant and mother and decrease the growth in health care spending for maternity care services. These alternate payments include financial incentives to eliminate elective deliveries prior to 39 weeks gestation, a blended facility payment for delivery fee, and new bundled payments for pregnancy.</p>		
<b>Additional Notes/Comments</b>		

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<b>Organization</b>	<b>Title</b>	<b>Date</b>
Integrated Healthcare Association	<a href="#">Issue Brief: Transforming Maternity Care: A Bundled Payment Approach</a>	9/1/2013
<b>Purpose/Abstract</b>		
<p><b>Background:</b> Current trends in maternity care in the United States show an increase in the use of costly, medically unnecessary interventions, such as elective cesarean deliveries, which have resulted in higher costs and poorer outcomes for mothers and babies. As policymakers consider viable options for payment reform, interest in a bundled payment strategy continues to gain momentum.</p> <p><b>Summary:</b> This issue brief explores the potential for bundled payment to drive both cost reductions and quality improvements in maternity care. Additionally, two implementation initiatives are examined: the Arkansas Perinatal Bundle and the Geisinger Perinatal ProvenCare Bundle.</p>		
<b>Additional Notes/Comments</b>		

## Section 2. Relevant Literature

Relevant Literature		
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Journal	Title	Date
Medicare & Medicaid Research Review	Delivery and Payment Redesign to Reduce Disparities in High Risk Postpartum Care	1/28/2017
Purpose/Abstract		
<p><b>Purpose:</b> This paper describes the implementation of an innovative program that aims to improve postpartum care through a set of coordinated delivery and payment system changes designed to use postpartum care as an opportunity to impact the current and future health of vulnerable women and reduce disparities in health outcomes among minority women.</p> <p><b>Description:</b> A large health care system, a Medicaid managed care organization, and a multidisciplinary team of experts in obstetrics, health economics, and health disparities, designed an intervention to improve postpartum care for women identified as high-risk. The program includes a social work/care management component and a payment system redesign with a cost-sharing arrangement between the health system and the Medicaid managed care plan to cover the cost of staff, clinician education, performance feedback, and clinic/clinician financial incentives. The goal is to enroll 510 high-risk postpartum mothers.</p> <p><b>Assessment:</b> The primary outcome of interest is a timely postpartum visit in accordance with National Committee for Quality Assurance (NCQA) healthcare effectiveness data and information set guidelines. Secondary outcomes include care process measures for women with specific high-risk conditions, emergency room visits, postpartum readmissions, depression screens, and health care costs.</p> <p><b>Conclusions:</b> The authors conclude that this evidence-based program will focus on an important area of maternal health, target racial/ethnic disparities in postpartum care, utilize an innovative payment reform strategy, and bring together insurers, researchers, clinicians, and policy experts to work together to foster health and wellness for postpartum women and reduce disparities. As the program's implementation progresses, the authors anticipate that findings will be of interest to both the health system and payer, as the landscape of health care delivery moves towards a value-based model.</p>		
Additional Notes/Comments		

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Journal	Title	Date
Health Affairs	Wide Variation Found in Hospital Facility Costs for Maternity Stays Involving Low-Risk Childbirth	7/1/2015
Purpose/Abstract		
<p><b>Introduction:</b> Hospital care is the most expensive component of national health spending, and childbirth is the leading cause of hospital admission. In 2011, childbirth accounted for 3.8 million hospitalizations and more than \$15.1 billion in hospital facility costs for maternity care. This makes childbirth one of the most costly conditions for inpatient care in the United States, and the variation in hospital facility costs for childbirth may greatly influence overall costs of health care.</p> <p><b>Study Data and Methods:</b> Researchers used discharge data from the 2011 Nationwide Inpatient Sample, part of the Healthcare Cost and Utilization Project sponsored by the Agency for Healthcare Research and Quality to identify hospitalizations for childbirth using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), diagnosis and procedure codes and diagnosis-related groups (DRGs). To minimize the difference in patient case-mix across hospitals, researchers focused on low-risk childbirths in which mothers were ages 16–34 and did not have any of 23 maternal comorbidities or any of 15 obstetric risk factors identified in the discharge records. To generate stable hospital-level estimates, researchers included only hospitals with at least 100 low-risk childbirths.</p> <p><b>Study Results:</b> Researchers found that the average estimated facility cost per maternity stay ranged from \$1,189 to \$11,986 (median: \$4,215), with a 2.2-fold difference between the 10th and 90th percentiles. Estimated facility costs were higher at hospitals with higher rates of cesarean delivery or serious maternal morbidity. Hospitals having government or nonprofit ownership; being a rural hospital; and having relatively low volumes of childbirths, low proportions of childbirths covered by Medicaid, and long stays also had significantly higher costs.</p> <p><b>Conclusions:</b> Research found wide variation among US hospitals in the estimated facility costs of maternity stays for low-risk childbirths, which suggests that there is an opportunity for strategies to reduce costs. Estimated facility costs were higher at hospitals with higher rates of cesarean delivery or serious maternal morbidity. Yet, the hospital characteristics that were studied explained only 13 percent of the variation in estimated facility costs. Additional research is needed to identify other sources of variation in hospital facility costs, to clarify the relationship observed between high cost and high morbidity, and to inform strategies for improving efficiency, value, and patient outcomes in obstetric care.</p>		
Additional Notes/Comments		

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<b>Journal</b>	<b>Title</b>	<b>Date</b>
Medicare & Medicaid Research Review	Potential Medicaid Cost Savings from Maternity Care Based at a Freestanding Birth Center	9/9/2014
<b>Purpose/Abstract</b>		
<p><b>Objectives:</b> Medicaid pays for about half the births in the United States, at very high cost. Compared to usual obstetrical care, care by midwives at a birth center could reduce costs to the Medicaid program. This study draws on information from a previous study of the outcomes of birth center care to determine whether such care reduces Medicaid costs for low-income women.</p> <p><b>Methods:</b> The study uses results from a study of maternal and infant outcomes at the Family Health and Birth Center in Washington, D.C. Costs to Medicaid are derived from birth center data and from other national sources of the cost of obstetrical care.</p> <p><b>Results:</b> The research estimates that birth center care could save an average of \$1,163 per birth (2008 constant dollars), or \$11.6 million per 10,000 births per year.</p> <p><b>Conclusion:</b> Medicaid is the leading payer for maternity services. As Medicaid faces continuing cost increases and budget constraints, policy makers should consider a larger role for midwives and birth centers in maternity care for low-risk Medicaid pregnant women.</p>		
<b>Additional Notes/Comments</b>		

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<b>Journal</b>	<b>Title</b>	<b>Date</b>
Health Affairs	Cesarean Delivery Rates Vary Tenfold Among US Hospitals; Reducing Variation May Address Quality and Cost Issues	3/1/2013
<b>Purpose/Abstract</b>		
<p><b>Abstract:</b> Cesarean delivery is the most commonly performed surgical procedure in the United States, and cesarean rates are increasing. Even for women with lower-risk pregnancies, in which more limited variation might be expected, cesarean rates varied fifteen-fold. Thus, vast differences in practice patterns are likely to be driving the costly overuse of cesarean delivery in many US hospitals. Because Medicaid pays for nearly half of US births, government efforts to decrease variation are warranted. The authors focus on four promising directions for reducing these variations, including: (1) better coordinating maternity care, (2) collecting and measuring more data, (3) tying Medicaid payment to quality improvement, and (4) enhancing patient-centered decision making through public reporting.</p> <p><b>Data and Study Population:</b> The authors used data from 1,050 hospitals in 44 states from the 2009 Nationwide Inpatient Sample, part of the Agency for Healthcare Research and Quality’s Healthcare Cost and Utilization Project. The authors focused on two outcomes calculated at the hospital level: overall cesarean rates and cesarean rates for lower-risk deliveries. The research identified cesarean delivery using International Classification of Diseases, Ninth Revision (ICD-9), procedure codes (740.X, 741.X, 742.X, 744.X, 749.9) as well as diagnosis-related group payment codes 370 and 371. The authors calculated each hospital’s cesarean delivery rate as the percentage of all obstetric deliveries in each hospital in 2009 that were cesareans.</p> <p><b>Study Results:</b> Research found much variation in both overall and lower-risk cesarean delivery rates. The mean hospital-level rate of cesarean delivery in the sample was 32.8 percent, with rates that ranged nearly tenfold, from a low of 7.1 percent to a high of 69.9 percent. Hospital rates of cesarean delivery among lower-risk mothers, which we would expect to show less variation compared with overall rates, in fact varied even more widely. The mean rate of cesarean delivery among women with term, singleton, vertex pregnancies, and no prior cesarean delivery, was 12.0 percent, with fifteen-fold variation, from a low of 2.4 percent to a high of 36.4 percent.</p> <p><b>Conclusions:</b> The variations in hospital cesarean rates uncovered were striking in their magnitude. One would expect rates to vary less among women with similar clinical characteristics, yet findings revealed even greater variation in cesarean rates among lower-risk mothers. The scale of the variation in hospital cesarean delivery rates indicated a wide range in obstetric care practice patterns across hospitals and signaled potential quality concerns.</p>		
<b>Additional Notes/Comments</b>		

## Section 3. References

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4. Xu, X., Garipey, A., Lundsberg, L. S., Sheth, S. S., Pettker, C. M., & Krumholz, H. M., et al. (2015). Wide Variation Found In Hospital Facility Costs For Maternity Stays Involving Low-Risk Childbirth. *Health Affairs*, 34(7), 1212–1219. <https://doi.org/10.1377/hlthaff.2014.1088>

October 24, 2017

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**Report as requested on “A single bundled payment for comprehensive low-risk maternity and newborn care provided by independent midwife-led birth center practices that are clinically integrated with Physician and hospital services”**

I have reviewed the report and have the following comments:

**With regard to the list of exclusionary criteria I have a few suggestions as well as questions for clarification:**

In general-I would recommend using the SMFM definition of low risk (AJOG article 2016 Armstrong et al.) Some additional thoughts are below.

- Add gestational hypertension to preeclampsia
- Remove with pregnancy from history of embolus (should be any history of deep venous embolus)
- Remove symptomatic and would keep all congenital heart defects as exclusionary
- Essential hypertension at any time in pregnancy or need for medications through pregnancy
- Would change grand multipara to 5 or more
- Add placenta previa and vasa previa
- Add active Syphilis
- Add previous baby with GBS sepsis
- Add intrauterine growth restriction <10<sup>th</sup> percentile
- Add fetal anomalies needing immediate pediatric care
- Add active maternal cancer

I am not sure I understand what the following mean: Primip pre-pregnancy ; Multip pre-pregnancy BMI >=40 (BMI >=36 already exclusion)

**When evaluating Appendix A, I would add the following:**

- Operative Vaginal delivery (Forceps, Vacuum)
- Contraceptive counseling

- GBS evaluation
- Pitocin
- Postpartum rhogam work –up
- Type and screen
- Postpartum bilateral tubal ligation
- Long acting reversible contraception (IUD or Nexplanon)
- Regional anesthesia
- Maternal TDAP vaccine
- Car seat test newborn
- Pulse Ox screening (for neonatal cardiac disease)

I am not sure if TSH is warranted –as universal screening is not recommended

**Few points of clarification:**

If patients meet any of the exclusionary criteria-is the bundle no longer applicable?

VBAC patients are discussed in the patient choice section but are listed under exclusionary-are they included in the bundle?

Will there be a quality improvement process built in with case review to ensure appropriate care being provided and tests that should be done are not being avoided? Will outcomes be tracked in some systematic way?