

Transforming Maternity Care: A Bundled Payment Approach

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Many physician leaders, policy makers, and payers view maternity care as ideally suited for a bundled payment strategy based on high volume, high costs, and a defined episode of care.

ABSTRACT: 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. This issue brief explores the potential for bundled payment to drive both cost reductions and quality improvements in maternity care. Defining a maternity care bundle is a key step in the process, with implications for contracting relationships and care coordination. Two implementation initiatives are examined; while evidence to assess their impact is limited to date, the urgent need to improve how we pay for and deliver maternity care in the U.S. compels attention to bundled payment as an alternative to fee-for-service payment.

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THE STATE OF MATERNITY CARE IN THE UNITED STATES

The vast majority (98.7%) of the approximately four million annual births in the U.S. take place in hospitals, making childbirth the number one reason for hospitalization in the US.¹ Increasing numbers of healthy women are undergoing obstetric procedures such as cesarean, repeat cesarean, and early elective deliveries when they may not be medically indicated, practices that result in a higher rate of complications for mothers and babies.^{2,3}

At present, approximately one-third of births in the nation are delivered by cesarean section—significantly higher than the maximum rate of 15% recommended by medical experts. Approximately 90% of women with a prior cesarean have subsequent deliveries by cesarean, though research indicates that most women who have had a prior cesarean are good candidates to have subsequent children by vaginal birth.⁴ In addition, the rate of early elective deliveries (deliveries scheduled prior to 39 weeks gestation without a medical reason) is estimated at approximately 10-15% of all deliveries in the United States even though the American College of Obstetricians and Gynecologists has long advocated against early induction unless medically indicated.^{5,6,7}

In September 2010, IHA was awarded a 3-year, \$2.9 million grant from the Agency for Health Research and Quality (AHRQ) to implement a bundled payment strategy in California. The project, titled *Bundled Episode Payment and Gainsharing Demonstration*, aimed to test the feasibility and scalability of bundling payments to hospitals, surgeons, consulting physicians and ancillary providers in the California delivery system and regulatory environment. Issue briefs, practical tools such as episode definitions and contract language, and other resources are available at www.ih.org.



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Cesareans, repeat cesareans, and early deliveries can be life-saving procedures when medically indicated, but they carry higher risk of adverse outcomes for mothers and babies. Complication rates for women increase with each cesarean delivery;⁸ risks include infection and hemorrhage, the two leading causes for hospital readmission after deliveries.⁹ Early elective deliveries, either induced or done by scheduled cesarean, also carry risks. Babies born prior to 39 weeks are at greater risk for developing complications such as sepsis, respiratory distress, hypoglycemia, and feeding problems.^{10,11}

Procedure-oriented maternity care has a significant impact on cost as well as outcomes. According to a 2013 report by Truven Health Analytics, average total payments in 2010 for maternal and newborn care with cesarean births were about 50% higher than average payments with vaginal births for both commercial payers (\$27,866 vs. \$18,329) and Medicaid (\$13,590 vs. \$9,131).¹² Research simulating the effect of reducing the rate of early delivery from 10-15% to 2% estimated a savings of nearly \$1 billion in health care costs annually.¹³

An array of local, state, and federal efforts are underway to improve maternity outcomes through delivery and payment reform initiatives. National legislation introduced in 2013, the “Quality Care for Moms and Babies Act” aims to publish a standard set of maternity care quality measures.¹⁴ Strong Start for Mothers and Newborns, a Centers for Medicare & Medicaid Services (CMS) initiative, targets providers and pregnant women with educational outreach campaigns to promote awareness of risks associated with early elective deliveries.¹⁵ State level collaboratives are also actively working to reduce the rates of early elective and cesarean deliveries. For example, the California Maternal Quality Care Collaborative (CMQCC), working with the March of Dimes and the California Department of Public Health, developed a Quality Improvement Toolkit designed to reduce the number of early deliveries.¹⁶ Complementing the quality improvement initiatives, a number of states have implemented reimbursement policies that deny payment for deliveries before 39 weeks gestation without documentation of medical necessity. North Carolina reported that this approach, along with provider and patient education, has decreased rates of early deliveries and NICU admissions.¹⁷



MATERNITY REFORM: A BUNDLED PAYMENT STRATEGY

Unlike fee-for-service reimbursement, which compensates providers for each service, bundled payment combines all the services provided during a defined episode of care into a single, fixed rate.^{18,19} Payments are developed using historical claims data and are based on the resources needed to provide care that is consistent with “established clinical guidelines.”²⁰

Combining all costs into a single, episode-based payment creates financial incentives for providers and hospitals to be more accountable for efficiency and coordination across care settings. If a provider’s costs are lower than the bundled payment rate or a predetermined threshold, providers may share the savings. However, if a provider’s costs are higher than the bundled payment rate or a predetermined threshold, they may suffer a loss. Paying one fixed fee to multiple providers who deliver services during an episode of care incentivizes providers to work together. They are jointly responsible for the total cost of care and jointly accountable for the outcomes produced.²¹ Concerns that setting a fixed price for a bundle of services may encourage providers to withhold services can be alleviated by linking a provider’s payment to performance on quality measures, creating a financial incentive for providers to adhere to evidence-based practices.²²

Many physician leaders, policy makers, and payers view maternity care as ideally suited for a bundled payment strategy. Maternity care is high-volume and high-cost, with high rates of costly obstetric procedures. Furthermore, a pregnancy is an “episode of care” with a definite beginning (first prenatal visit or admission to hospital) and a definite end (last postpartum visit or discharge from hospital). Finally, most births involve a small number of providers, which has the potential to reduce the complexity of implementation.²³

DEFINING THE EPISODE OF CARE: IHA & PBGH MATERNITY DEFINITION DEVELOPMENT

Developing a standardized definition for an episode of care is an important first step in any bundled payment

strategy. Depending on how a maternity bundle is defined, it could include all prenatal care, labor and delivery, and postpartum care; alternatively, the bundle could be limited to care delivered during hospitalization. High-risk pregnant women and complications that arise during a designated time period may be included or excluded from the definition.

In 2010, the Integrated Healthcare Association (IHA) implemented a bundled payment demonstration project funded by the Agency for Healthcare Research and Quality (AHRQ). Through the three-year pilot, IHA tested the feasibility and scalability of bundling payments in California’s health care market; extensive information about the project is available at www.iha.org. One specific objective of the project was the development of ten episode definitions, two of which focused on maternity care.

Concurrent to the IHA pilot, the Pacific Business Group of Health (PBGH), a non-profit purchaser coalition, was awarded a three-year grant by the Robert Wood Johnson Foundation to test alternative payment methods for maternity care in order to reduce the cesarean rate in California. Having the same task of developing maternity definitions for their respective grants, IHA and PBGH collaborated in order to bring together a large coalition of stakeholders to create two separate definitions: a comprehensive maternity definition and a delivery only definition (see Figure 1).

The comprehensive definition bundles all facility and professional services for prenatal care, labor and delivery, and postpartum care, including payment for complications within sixty days of discharge. It aims to incentivize practitioners and hospitals to use evidence-based practice measures and coordinate their care. The delivery only definition bundles all facility and professional services provided during a hospitalization for labor and delivery. The definition uses a single, blended case rate for a delivery, regardless if it is vaginal or cesarean. Both definitions provide incentives for hospitals and physicians to reduce the use of cesareans by removing the financial incentive to use this procedure.

IHA contracted with Optum to help formulate the definitions using administrative claims and encounter data. A Technical Committee, consisting of clinical experts in maternity care (obstetricians, perinatologists) and health plan physicians reviewed the draft maternity definitions to determine clinical accuracy. Committee members were asked to make decisions on key parameters of each maternity definition such as which procedures to include, patient qualifications to consider, timeframe, and severity markers and exclusions to identify.

A Steering Committee of both health plan and hospital representatives reviewed the definitions to ensure they were operationally and administratively sound. The definitions were then made publicly available on IHA’s website.

Figure 1
MATERNITY EPISODE DEFINITIONS

	Delivery Only Definition	Comprehensive Definition
Episode Structure	Begins on date of admission	Begins 270 days prior to delivery
Warranty	Not Applicable	60 days postpartum
Standard Services	Only facility and professional services for labor and delivery included	Prenatal, labor and delivery, and postpartum services for both facility and professional services are included
Exclusions	Can be customized for patient qualifications, co-morbidities and severity markers	Can be customized for patient qualifications, co-morbidities and severity markers
Contracting	Health plan & hospital: Blended per diem (vaginal and cesarean)	Health plan, hospital & physicians: Plan pays hospital and hospital pays physicians



IMPLEMENTING A BUNDLED PAYMENT STRATEGY FOR MATERNITY CARE

In addition to the work of IHA and PBGH, several initiatives across the country are pursuing bundled payment strategies for maternity care.^{24, 25} Two efforts that have made substantial progress to date are the Arkansas Health Care Payment Improvement Initiative, which has adopted an incremental approach to bundling maternity care, and the Geisinger Perinatal ProvenCare initiative, which has implemented a maternity bundle in the Geisinger Health System. This section briefly outlines the structure of each program and progress to date.

Arkansas Perinatal Bundle: An Incremental Approach

In 2011 the state's major payers—Arkansas Medicaid, Arkansas Blue Cross and Blue Shield, and Arkansas QualChoice—partnered with the Arkansas Department of Human Services to transform the health care delivery system by implementing an innovative, statewide payment reform model.²⁶ The collaboration emerged from increasing concern over Arkansas's low ranking on national health indicators, steep increases in health insurance premiums, and significant increases in state health care spending over the last decade. By gradually shifting the payment structure from fee-for-service to episode based bundled payment, the initiative aims to shift the focus of Arkansas's health care delivery system from volume to value while reducing the cost of care.

The year-long development of the initiative was informed by input from over 500 stakeholders. Based on the stakeholder perspectives, the Arkansas Health Care Payment Improvement Initiative (AHCPII) pursued an incremental approach to bundled payment that combines fee-for-service payments for episodes of care with retrospective sharing of savings or losses. In order to ensure the success of AHCPII, providers throughout the state were mandated to participate. The initiative was launched in July 2012 with providers under contract as of January 2013.

Perinatal care was among the first five episodes to be implemented because of the high volume and high cost of maternity care across the state. Providers in Arkansas care for nearly 40,000 pregnant women each year; given that public funds pay for a large portion of that care, maternity care is a priority for Medicaid as well as for private payers.

The Arkansas initiative's perinatal bundle covers a full range of services: all prenatal care, care related to labor and delivery, and postpartum care. The episode excludes neonatal care and high-risk pregnancy from the bundle.

Arkansas providers receive regular fee for service payments for care they provide during the perinatal episode; payments are then adjusted retrospectively based upon provider costs. For each maternity care episode, the payer (Medicaid or a private insurer) designates the physician or midwife who delivers the baby as the "Principal Accountable Provider" (PAP), with responsibility for the quality and cost effectiveness of care provided during the episode.

After the close of a twelve month performance period, the payer calculates each PAP's average costs across all episodes delivered during that period and compares them against cost thresholds previously established by Medicaid and the private payers. If a PAP's average costs are below a designated threshold and quality targets are met, the PAP will receive an incentive payment. However, if a PAP's average costs per episode exceed a designated threshold, the PAP will be held responsible for a share of the costs above that threshold. A PAP's measurements will be adjusted based on a number of patient and provider indicators, such as patient risk/severity, low case volume, and differences in regional pricing.

Two sets of quality measures are included in the perinatal bundle. One set of quality metrics, performance metrics, are linked to payment. The other set of quality metrics, reporting metrics, are used only for reporting and are not linked to payment. To be eligible to share in cost savings, a provider must meet a quality threshold on all performance metrics and report data for reporting metrics. Cost-saving payments are capped beyond a limit determined by each payer.

A key component of the Arkansas initiative is the provider portal. This portal is an online tool that allows providers to access their performance reports which include an overview of their average quality, costs, and utilization across episodes over a given period of time.

It also allows physicians, hospitals, and other providers to enter quality metrics for their patients. Some of these quality metrics are linked to financial incentives and are used to reward providers who deliver high quality care at cost efficient prices. The provider portal is not an electronic medical record; rather, it is an online tool developed to collect quality metrics and disseminate performance reports.

The Arkansas initiative is in its first year of implementation and results are not yet available. However, based on interviews with providers, Arkansas officials report increasing collaboration to better manage patient care. While it is too early to predict the outcome of the Arkansas initiative, the organizers are banking on three key factors: the commitment of the private insurers in the state to work with Medicaid to support implementation of the initiative; the mandate that all providers participate; and the engagement with multiple stakeholders during the development and implementation stages of the initiative to secure their support.

Geisinger Perinatal ProvenCare: A Comprehensive Approach

Geisinger Health System (GHS) is an integrated healthcare delivery system providing health care to nearly three million residents in rural central and northeastern Pennsylvania. Geisinger facilities and staff include three hospitals and nearly fifty-five clinical sites with over seven hundred physicians, as well as the Geisinger Health Plan that covers roughly two hundred and twenty thousand enrollees.²⁷ In 2005, GHS launched ProvenCare, an initiative to redesign clinical processes for specific acute conditions in order to reduce variations in care and improve patient outcomes. In 2007, to address concerns regarding high cesarean rates, incidences of medically unnecessary labor inductions, and variations in care delivery, the Geisinger team developed a perinatal bundle initiative. The model included a fixed rate paid for all prenatal, labor and delivery, and postpartum care; neonatal care was not included. In addition, it was decided that only those episodes that included deliveries performed by GHS providers after 12 continuous weeks of care would be included. Late referrals of high-risk patients were excluded. Similar to other ProvenCare models, the perinatal bundle was designed to reward providers who followed evidence-based practices.²⁸

A nine-step model for care redesign was developed to implement the perinatal bundle across GHS's multiple sites. The goals of the care redesign process were to improve

efficiency of care, increase process reliability, improve patient safety, and reduce costs. A team of quality improvement specialists, administrators, providers, and IT professionals was selected to work with staff members at 22 clinical sites to redesign and standardize care processes. To determine the context of care at each clinic, the team developed process-flow maps that depicted the "real time" care processes used at each clinic. Next, the team created a bundle of 103 evidence-based best practice measures, grouped by trimester, which would be tracked for each patient using GHS's electronic health records (EHR) system. Once these two steps were completed, the team used both to develop a standardized workflow pathway that preserved some of the unique care processes at the local clinics. In order to standardize the redesign workflow pathways, the team worked with IT specialists to incorporate each element of the bundle into the EHR. The team also developed an electronic dashboard to track compliance with the measures for each patient and to provide real-time feedback at each clinic. In addition, a "patient compact" was developed so that patients could become partners in their own care. Finally, a tiered rollout was planned to resolve any issues that occurred prior to a full implementation.

Preliminary results have shown improvements in nearly all of the 103 measures identified. For example, the rate of screening and smoking cessation interventions increased from 45% to 88% following care redesign. Neonatal intensive care admissions have decreased; since 2011, Geisinger has not performed an early induction or elective cesarean before 41 weeks unless medically indicated. Data from one Geisinger hospital showed that primary cesarean rates decreased from 30% to 24% while rates remained stable at another Geisinger hospital. While quality improvements have been reported, no related cost savings have been made publicly available to date.

Geisinger attributes initial results to three main factors. First, the redesign of the workflow processes created a more standardized care pathway based on clinical evidence. Second, integrated electronic health records and IT resources aided implementation by developing the ability to track care in near real time. Finally, the development of an effective communication and management model created opportunities to engage regularly with providers throughout the process.

CONCLUSION

There is a compelling need to improve how we pay for and deliver maternity care in the United States. Evidence indicates that reducing the number of medically unnecessary obstetric interventions, currently rewarded by the fee-for-service payment system, would reduce maternity care costs while improving care and outcomes for mothers and babies.

Bundled payment has the potential to realign incentives in maternity care. Combining all costs into a single, episode-based payment creates financial incentives for providers to enhance care coordination and increase efficiency, which in turn should lead to lower costs and improved health outcomes. However, there is little empirical evidence available at present regarding the effectiveness of bundled payment strategies in reducing costs and improving outcomes. Findings from the Arkansas

Health Care Payment Improvement Initiative and Geisinger Perinatal ProvenCare, two maternity care initiatives taking distinct and ambitious approaches to payment reform, will contribute evidence to inform the future direction of bundled payment in the years ahead.

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Notes

1. Sakala C and Corry MP. (2008) "Evidence-based maternity care: What it is and what it can achieve." New York: Milbank Memorial Fund. Available at: <http://www.milbank.org/uploads/documents/0809MaternityCare/0809MaternityCare.html>
2. National Quality Forum. (2013) "Fast Forward: Preventing Harm to Newborns and Mothers: A Case Study on Early Elective Deliveries." Issue No. 2. Available at: http://www.qualityforum.org/Publications/2013/06/Fast_Forward__Preventing_Harm_to_Newborns_and_Mothers__A_Case_Study_on_Early_Elective_Deliveries.aspx
3. Main E, Morton C, Hopkins D, Giuliani G, Melsop K, and Gould J. (2011). "Cesarean Deliveries, Outcomes, and Opportunities for Change in California: Toward a Public Agenda for Maternity Care Safety and Quality." Palo Alto, CA: CMQCC. Available at: <https://www.cmqcc.org/resources/2079>
4. Ibid.
5. Centers for Medicare & Medicaid Services (CMS). (2012). "Reducing Early Elective Deliveries in Medicaid and CHIP." Available at: <http://www.medicare.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/EED-Brief.pdf>
6. Clark SL, Frye DR, Meyers JA, Belfort MA, Dildy GA, Kofford S, Englebright J, and Perlin JA. (2010). "Reduction in elective delivery 39 weeks of gestation: comparative effectiveness of 3 approaches to change and the impact on neonatal intensive care admission and stillbirth." *American Journal of Obstetrics & Gynecology*. November. Vol. 203(5):449.e1-6.
7. Main E, Oshiro B, Chagolla B, Bingham D, Dang-Kilduff L, and Kowalewski L. (2010) "Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age." (California Maternal Quality Care Collaborative Toolkit to Transform Maternity Care) Developed under contract #08-85012 with the California Department of Public Health; Maternal, Child and Adolescent Health Division; First edition published by March of Dimes, July 2010. Available at: <http://www.cdph.ca.gov/programs/mcah/Documents/MCAH-EliminationOfNon-MedicallyIndicatedDeliveries.pdf>
8. The American College of Obstetricians and Gynecologists. (2010). "Vaginal Birth After Previous Cesarean Delivery." Practice Bulletin No. 115. August 2010. Available at: http://www.acog.org/Resources_And_Publications/Practice_Bulletins/Committee_on_Practice_Bulletins/Obstetrics/Vaginal_Birth_After_Previous_Cesarean_Delivery
9. Main E, et al. 2011, op. cit.
10. Centers for Medicare & Medicaid Services (2012), op. cit.
11. Main E, et al. 2010, op cit.
12. Truven Health Analytics. (2013). "The Cost of Having a Baby in the United States." Greenwood Village (CO): Truven Health Analytics: January. Available at: <http://transform.childbirthconnection.org/wp-content/uploads/2013/01/Cost-of-Having-a-Baby1.pdf>
13. Clark SL, et al. 2010, op. cit.
14. National Partnership for Women & Families. (2013). "Fact Sheet: The Quality Care for Moms and Babies Act: Improving Maternity Care for Women and Families." Available at: <http://www.nationalpartnership.org/research-library/repro/quality-care-for-moms-and-babies-act.pdf>
15. Centers for Medicare & Medicaid Services (CMS). (n.d.) "Strong Start for Mothers and Newborns Initiative: General Information." Available at: <http://innovation.cms.gov/initiatives/strong-start/>
16. California Maternal Quality Care Collaborative (CMQCC). (n.d.). "<30 Weeks Toolkit." Available at: https://www.cmqcc.org/_39_week_toolkit
17. Centers for Medicare & Medicaid Services (2012), op. cit.
18. Bach BP, Mirkin JN, and Luke JJ. (2011). "Episode-based payment for cancer care: A proposed pilot for Medicare." *Health Affairs*. March: Vol.30 (3): 500-509.
19. Hussey PS, Ridgely MS, and Rosenthal MB. (2011). "The PROMETHEUS Bundled Payment Experiment: Slow Start Shows Problems in Implementing New Payment Models." *Health Affairs*. November: Vol. 30(11): 2116-2124.

20. Mechanic R and Altman S. (2009). "Payment Reform Options: Episode Payment is a good to start." *Health Affairs*. Mar-Apr: Volume 28(2): 262-271.
21. Hussey PS, et al. 2011, op cit.
22. Pham H, Ginsburg P, Lake T, Maxfield M. (2010). "Episode-Based Payments: Charting a Course for Health Care Reform." Policy Analysis No. 1. Washington, DC: National Institute for Health Care Reform.
23. Main E. et al. 2011, op. cit.
24. Health Care Incentives Improvement Institute Inc. (n.d.). "Low-Risk Pregnancy and Delivery (PREG) ECR Playbook ECR Definition Summary." Available at: http://www.hci3.org/sites/default/files/files/Low-Risk%20Pregnancy%20%26%20Delivery_Playbook_1b_ECR%20Definition%20Summary.pdf
25. Washington State Hospital Association.(n.d.). "Safe Deliveries: Reducing Elective Deliveries Prior to 39 Weeks." Available at: <http://www.wsha.org/0398.cfm>
26. Information for this section draws from the following sources: Arkansas Center for Health Improvement. (March 2013). "Arkansas Health Care Workforce: A Guide for Policy Action." Available at: <http://www.achi.net/HCR%20Docs/AR%20Health%20WF%20Guide%20for%20Policy%20Action%20web.pdf>; Arkansas Payment Improvement Initiative (APII): Perinatal Episode Statewide Webinar on January 14, 2013; Arkansas Payment Improvement Initiative Website: <http://www.paymentinitiative.org>; National Governors Association. (October 2012). "Case Study: Arkansas Implements a Payment Improvement Initiative." Available at <http://statepolicyoptions.nga.org/casestudy/arkansas-implements-payment-improvement-initiative>; Hartsfield, Kimberly. (2013, July 31). Telephone Discussion.
27. Paulus RA, Davis K, and Steele GD. (2008). "Continuous Innovation in Health Care: Implications of the Geisinger Experience." *Health Affairs*. September: Vol. 27(5): 1235-1245.
28. Information for this section draws from the following sources: Berry SA, Laam LA, Wary AA, Mateer HO, Cassagnol HP, McKinley KE, and Nolan RA. (2011). "ProvenCare Perinatal: A Model for Delivering Evidence/Guideline-Based Care for Perinatal Populations." *The Joint Commission Journal on Quality and Patient Safety*. May: Vol. 37(5): 229-239.; Geisinger Website: <http://www.geisinger.org/>; Potsko, Kerri. (2013, August 15). Telephone Discussion.