

A Bundled Payment Proposal to Improve Maternity Care Outcomes and Lower Costs

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Purpose: Test a value-based payment and a service delivery model to improve the quality and lower the cost of maternity care by providing women and their families with access to the full range of type of care provider and birth setting options.

The Problem: Maternity care is a key driver of health care costs. Care of childbearing women and newborns is the number one reason for hospitalization in the U.S.; in 2009, maternal and newborn hospital admissions accounted for 23% of all hospital stays (Wier et al., 2011), Total estimated maternal and newborn charges for hospital alone, not including professional fees (e.g., obstetrician, midwife, anesthesiologist, pediatrician), were about \$126 billion in 2013. Hospital maternal and newborn charges increased by 90% in the decade from 2003 to 2013 (AHRQ 2015), while the total number of births decreased by 4% over the same period (AHRQ, 2015). Medicaid is the largest payer for maternal and newborn care, and paid for 45% of all maternal hospital stays in the U.S. in 2009 (Wier et al., 2011).

Maternity care in the United States is characterized by overuse of expensive technologies and underuse of many beneficial forms of care. For example, cesarean section has become the most commonly performed surgery in the U.S. (Wier et al., 2011). The overall cesarean delivery rate in the United States increased by 60% from 1996 through 2009, from 20.7% to 32.9%. Although the American College of Obstetricians and Gynecologists and the Society for Maternal-Fetal Medicine clarify that this steep rise was not associated with benefits for women or babies (2014), approximately one-third of pregnant women continue to give birth by cesarean every year (Martin et al., 2015). For most low-risk pregnancies, cesarean birth poses a greater risk of maternal complications and death than vaginal birth, and the risk of certain complications such as placental abnormalities increases with each cesarean (Cho and Norman, 2013; Gregory et al., 2012; Clark and Silver, 2011). Despite overwhelming evidence that having a vaginal birth after a cesarean (VBAC) would be an appropriate option for a very large proportion of women with a history of cesarean (Guise et al., 2010) and current professional guidelines in support of access to VBAC (American College of Obstetricians and Gynecologists, 2010; King et al., 2015), the VBAC rate in the U.S. has continued to hover at around just one in ten pregnant women with a previous cesarean; this is the lowest VBAC rate among 14 industrialized countries, three of which are greater than 50% (MacDorman, et al., 2011).

Other underused forms of care with clear support from rigorous Cochrane systematic reviews include: smoking cessation intervention in pregnancy, external version to turn fetuses that are not headfirst near the end of pregnancy, doula care/continuous support during labor, drug-free measures for comfort and progress in labor, ambulation and upright positioning in labor, intermittent auscultation for fetal monitoring, early skin-to-skin contact, and lactation support (2015).

Overuse of costly and consequential interventions in a primarily healthy population is associated with what is likely to be the most expensive maternity care system in the world (International Federation of Health Plans, 2014) and mediocre outcomes. A 2014 World Health Organization report identified 36 nations with a lower infant mortality rate, 62 with a lower maternal mortality ratio, and 97 with a higher rate of exclusive breastfeeding to six months than the United States (2014a). The U.S. has the highest maternal death rate among developed countries and is the *only* developed country in which the maternal mortality rate is rising. (World Health Organization, 2014b). There are also considerable racial disparities across Healthy People core indicators for maternal and infant health (National Center for Health Statistics, 2012). The pregnancy-related mortality ratio for native-born black women is 5.2 times greater than for native-born white women (Creanga, et al., 2012). The infant mortality rate of non-Hispanic black babies is more than double that of non-Hispanic white babies (Mathews TJ, 2013). Reducing the rate of preterm birth in the U.S. would have a significant impact on the rate of infant mortality. (Callaghan, et al., 2006)

Essential Payment and Delivery System Solution: Evidence is increasing that the type of professional who manages the birth and the site of birth impacts value. While 98.6 percent of births occur in hospitals, we increasingly understand that birth in community settings – birth centers and home births – are beneficial and less expensive alternatives to hospital births for lower risk women (Shah, 2015; Hill et al., 2014). Further, even if the actual birth occurs in the hospital, cesarean section rates and the cost of vaginal birth are lower if a midwife or birth center has managed the prenatal care and manages the birth in the hospital (Howell E, et al, 2014; Johantgen et al., 2012). A meta-analysis comparing studies of home and hospital birth (Wax et al., 2010) found that the following outcomes favored home: reduced preterm birth and low birth weight; reduced use of epidural, electronic fetal monitoring, episiotomy, operative vaginal birth, and cesarean birth; and reduced lacerations (any perineal, third and fourth degree perineal, vaginal), infection, postpartum bleeding/hemorrhage, and retained placenta. The study found no difference in perinatal mortality, newborn ventilation, cord prolapse and large for gestation babies. The home birth studies reported more babies born at post-term. The sole outcome of concern in the home birth group was greater neonatal death, a controversial result for many reasons, e.g., as some included studies could not exclude higher-risk unplanned out-of-hospital births, and because of the small number of home birth babies (16,500) for the neonatal mortality comparison versus the twenty-fold greater number of home birth babies included in the no-difference comparison for perinatal mortality (331,666) (Michal et al., 2011). A subsequent report of nearly 17,000 who planned home birth reported favorable results congruent with the 2010 meta-analysis (Cheyney M, et al., 2014).

A 2007 study in Washington State found that community-based births (at home or in freestanding birth centers) attended by Certified Professional Midwives (CPMs) resulted in fewer low-birth weight babies and much lower cesarean section rates, while delivering substantial savings to the state budget (Health Management Associates, 2007). A more recent study examined whether birth center care would reduce Medicaid costs and found an average savings of \$1163 per birth, or \$11.6 million in savings per 10,000 births per year (Howell E, et al., 2014). This same study found that in the District of Columbia the difference in Medicaid costs between a vaginal birth in a birth center and one in a hospital was \$3,281 (\$6,468 versus \$3,187, 2008). A national study of average total payments for women and babies over the full episode of maternity care in 2010 documented significant costs for both commercially insured women and babies (\$18,329 for vaginal and \$27,866 for cesarean births) and for those covered by Medicaid (\$9,131 for vaginal and \$13,590 for cesarean births) (Truven Health Analytics, 2013).

A large proportion of women who currently give birth in hospitals would meet criteria for giving birth in community settings and, further, are interested in or open to considering those settings (Declercq et al., 2013b). If only a small percent of those 98.6 percent of U.S. births in hospitals were shifted to community settings, savings and health benefits for women and babies could be significant. The American Public

Health Association recommends midwives as the most appropriate and cost-effective providers for the majority of women (APHA, 2000). While most women give birth in hospitals attended by obstetricians, a growing number are choosing to give birth at birth centers or at home attended either by certified nurse midwives (CNMs) or certified professional midwives (CPMs). In 2013, more than 56,000 births took place outside the hospital (Martin JA, et al., 2015).

With over \$126 billion in hospital charges alone at stake – one of the largest single costs in our health care system – a model that encourages broader choice for mothers and their families could save significant dollars for payers, purchasers, taxpayers, and consumers in out-of-pocket costs.

If the outcomes are comparable and often better and the costs are less, why are so few women being encouraged to use these other options? The answer lies in the limited coverage for these providers and settings, inadequate knowledge of the choices available, and lack of incentives for using them. Medicaid and private coverage remains very limited for these other options – either they are not covered at all or covered at very low reimbursement levels. With the shift towards managed care for moms and kids in the Medicaid program, this issue has grown even more problematic.

Even if all the options are covered, women are typically on their own in choosing their providers, with no real discussion of site of care options. Further, the payment system rewards the providers who deliver the higher tech, hospital experience with higher payments. In fact, the level of payment for the non-hospital setting and midwives is often so low that it limits the supply of these practitioners who struggle to continue their practices.

But, even more worrisome is, that in a time when the health care system is working to transform into a system that rewards value, the incentives for birth encourage the use of higher cost cesarean sections, higher cost hospital birth versus birth center or home birth and higher cost providers – physicians rather than midwives. The evidence strongly suggests that a healthy woman with an uncomplicated pregnancy and a single, term baby in a head-down position can safely be managed in a community birth setting. Yet, when only 1.4 percent of births occur in these settings, the nation is not doing its best to create value for pregnant women and their families. (Martin JA, et al., 2015)

An additional concern is the limited information that pregnant women can find in provider directories and implications for their choices. While they can generally search for obstetrician-gynecologists, many of those practitioners have retired from providing maternity care, may have limits on accepting new patients, or may not be a good match for the woman seeking care. Further, a very large proportion of U.S. counties have no currently practicing obstetrical provider (Rayburn, 2011). Typically, provider directories do not identify available midwives and family physicians as able to provide maternity care.

Further, the national *Listening to Mothers III* survey found that a large proportion of pregnant women seek online information about the quality of prospective maternity care providers and hospitals, and factor this information into these choices (Declercq et al., 2013a). Unfortunately, most childbearing women have not had robust, user-friendly sources of meaningful comparative quality information to help them make these crucial decisions as, for example, California's calqualitycare.org website currently offers for hospital-level maternity measures.

This proposal allows for the full range of options for birth settings and types of provider to be available and provides incentives for mothers and their families and their providers to choose together the birth option that best suits their needs.

Overview of proposal:

Eligible population: Medicaid and/or commercial beneficiaries who are pregnant. When a woman first sees a practitioner wherever that may occur, she would be provided with information to help her choose her prenatal provider and the site and manner of her delivery. Just as women need to make decisions related to how much intervention they may want, this would be another overt choice they would be given.

Participants: Organizations applying for the initiative would be required to provide the full spectrum of birth options either themselves or in partnership in their community. The organizations could be hospitals or health systems that already have strong partnerships with birth centers that may also extend into the community through providing home birth options. Or they could be birth centers individually or in tandem with a hospital that also include a choice for women and their families for home births. It will be critical for the organizations to demonstrate strong cross-provider coordination and collaboration, such that whatever choices are made, the woman and her family find the entire process seamless.

The choices included would be dependent on state law, but could include the settings of hospitals, birth centers and at-home and providers to include ob-gyns, family physicians, certified nurse midwives and certified professional midwives. The choices given to patients would include any provider or setting of care up to the fullest extent they are allowed by state law to practice.

The organizations would be expected to use significant consumer engagement tools for making the choices that best suit the woman and family's situation and preferences. Topics would include choices about child birth, including site and type of provider, and choices related to breast-feeding and support services in the post-natal time period. Also, the information would provide education around nutrition, exercise, breastfeeding and post-natal support. This foundation of engagement may also be coupled with incentive for consumers to make value-based decisions.

Payment: The payment model would be one of three options:

- Bundled payment that would include the prenatal care, the birth and two months postpartum. Payment would be based on a discount of 5 percent (Note: the amount of 5 percent is for illustrative purposes) on the average Medicaid or commercial payer costs (calculated with data for the last two years and trended forward for expected costs going forward) for births and associated pre-natal and post-natal services in that state. If the actual costs of the care were lower on a population per episode basis than this discounted bundle the organization could keep the savings and/or share it with their care delivery partners. **OR**
- Shared savings strategy. The same calculation would be done to determine a benchmark target for average birth costs as above in the bundled model, but the organization would only receive additional dollars if it was demonstrated that the average costs of birth were actually lower than what otherwise might be the case in the performance year. Providers would be paid as they currently are through a FFS reimbursement. Medicaid or the commercial payer would establish a minimum savings rate to ensure savings were due to the initiative design. **OR**
- Bonuses for performance. The same calculation would be done to determine a benchmark target for average birth costs as above in the bundled payment and shared savings models, but the incentive would be a bonus payment that might be less than the difference in the actual versus the benchmark.

Considerations would include determining how to address outlier cases, how to cover NICU costs with the proper balance of avoiding overuse and limiting health system risk, how to address retroactive spend

down cases, etc. Further, the payments or shared savings calculations would need to be adjusted for the risk of the population given the impact that some health and socioeconomic factors may have on the costs of birth. Further, the incentives payments in any of the scenarios might vary based on performance on quality metrics.

Evaluation metrics: To ensure a full understanding of the impact of site of care and provider of care on the cost and quality of care, these statistics would be tracked for all three sites and reports generated on the provider that was attending within the site. Other utilization statistics, such as care transfers would also be tracked.

Cost: The cost metrics would be built into the payment model, primarily with incentives built in for lower cost delivery of care.

Quality: Quality metrics would be closely tracked, such as:

- Patient Activation Measure (PAM, healthy person version) measured in first and third trimesters (currently going through NQF endorsement process)
- Preterm Birth Rate
- Cesarean Section rate (The Joint Commission PC-02)
- VBAC in low-risk women rate (AHRQ IQI-22)
- Average length of term, including rates of pre-term births
- Unexpected Newborn Complications (revision of NQF 0716 Healthy Term Newborn; will go through measure maintenance in 2016)
- Perinatal Mortality
- Incidence of Episiotomy (NQF 0470)
- Exclusive Breast Milk Feeding (The Joint Commission PC-05)
- Attend postpartum visit
- Postpartum Contraceptive Use (of most or moderately effective method by 3 and 60 days after birth) (CDC)
- Breastfed Exclusively Through Three Months (Healthy People)

Data collection and information sharing: To ensure high quality data collection and the ability to share information across settings of care the initiative could utilize the high quality electronic collection tool provided by Maternity Neighborhood to the Strong Start participants. This tool could also be used to provide women with the ability to share in the many decisions related to birth.

Who Might be Interested in Considering Bundling Payment around Maternity Care?

Option one: Medicaid State waiver. A state determines this is a good model for their Medicaid program and seeks a waiver from CMS to allow for this type of payment and for the full continuum of settings and providers to be included.

Option two: Extension of Strong Start: The Strong Start Model focuses on specific interventions that lessen the incidence of elective pre-term birth. This model would consider the impact of a broader choice of settings and providers and payment incentives on the birth outcomes. Some of the Strong Start sites may want to expand the reach of their strategies by applying for this new model, and this could be a phase two for some sites.

Option three: New model in the CMMI portfolio: The CMMI has not focused on the Medicaid population, particularly the non-duals, as much as it could. In part, this is because the Medicaid program itself offers

significant flexibility already. Option three would require discussions with CMMI staff to determine their interest and assist in the design of the model.

Option four: Medicaid managed care payer: Given that such a significant amount of the children and family Medicaid coverage is now through managed care companies, it makes sense that this type of initiative may also be included in their contracts with providers.

Option five: Commercial population: Several large purchasers/payers may want to consider this option in their portfolio of bundling experimentation. Geisinger, United Healthcare, the Integrated Healthcare Association and members of the Catalyst for Payment Reform have all expressed interest in bundling maternity care. Interestingly, the primary focus has been on hospital births only, when recent initiatives demonstrate the value of also considering the site of care and the type of practitioner who manages the care as also impacting the quality and cost.

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