

Case Study:
Maternity Payment and Care
Redesign Pilot

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Large variation (as much as 10-fold) in obstetric clinical practices, particularly C-section rates, has gained the attention of the media and national healthcare stakeholders including the National Quality Forum, California Hospital Assessment and Reporting Taskforce (CHART), The Joint Commission, the Leapfrog Group, American College of Obstetricians and Gynecologists, employers, and health plans. Such widespread interest highlights the extent of the problem and the need for effective interventions to narrow care variation and improve maternal health outcomes.

In 2012 the Pacific Business Group on Health (PBGH) received a grant from the Robert Wood Johnson Foundation (RWJF) to reduce low risk, first time C-sections in a pilot group of Southern California hospitals by facilitating access to performance data, supporting quality improvement, and aligning outcomes with payment. In 2014, PBGH and its partners implemented the intervention at three hospitals in Southern California and the preliminary results are very encouraging. In less than a year, all participating hospitals successfully reduced the number of C-sections performed by an average of 20% when compared to the previous three years.¹

Achieving such results is a remarkable and unprecedented accomplishment that required a coordinated and collaborative effort among local clinicians, hospital staff, health plans, a state quality collaborative, and PBGH. Decreasing C-sections is no simple task because it entails changing culture within hospitals and the way clinicians deliver care to women in

labor. It can mean asking practitioners to stand back and wait in a setting that increasingly rewards providers for high throughput. It can mean doing less, when clinicians are trained to intervene more.

Key Organizations and Roles

PBGH designed the approach and provided project management for the implementation process, helping to garner hospital participation, engage purchasers and facilitate collaboration across all grant participants.

California Maternal Quality Care Collaborative (CMQCC) runs the *California Maternal Data Center (MDC)*, which collects and reports rapid-cycle data from existing administrative sources so hospitals can drill down into monthly maternity care practices at the department and physician level. CMQCC provided data reporting support and led the quality improvement intervention at the participating hospitals.

Hospital Recruitment

Recruiting three hospitals to participate in the pilot required a coordinated effort on several fronts. Targeted hospitals met a few basic prerequisites including medium to large birth rate, higher than average C-section rate, strong leadership engagement and readiness for quality improvement project. Direct employer engagement proved the most effective method for recruiting hospitals to join the pilot. PBGH asked its Members with a large employee representation at prospective hospitals discuss their concerns about high C-section rates with hospital leadership in person or over the phone. Hospitals, in turn, were highly motivated by

¹ For more information about variation in C-section rates and obstetric outcomes among California hospitals, see PBGH's Report: *Variation in NTSV C-section Rates among California Hospital* or CMQCC's white paper: *Cesarean*

Deliveries, Outcomes, and Opportunities for Change in California: Toward a Public Agenda for Maternity Care Safety and Quality.

purchaser concerns, and in combination with community pressure, committed to participation.

Intervention (Three Levers)

The hospital intervention aimed to bring down C-section rates among low-risk first births (nulliparous term singleton vertex or NTSV) and improve maternal-neonatal health outcomes. The intervention integrated existing research, physician-level variation data about hospital cesarean rates, and effective quality improvement techniques into an intervention that deployed three levers to create change:

- 1. Data and measurement support*
- 2. Quality improvement (QI) support*
- 3. Payment reform*

The implementation process for each of these levers is described below.

1. Data and measurement support

At the outset of the pilot, each hospital enrolled in the California Maternal Data Center (MDC) at no charge. The MDC links California Birth Certificate data in real time to patient discharge diagnosis data provided by the hospital. Retrieving easily accessible and well-presented data functioned as the first step to better understanding why the department performed unnecessary C-sections (e.g. failed induction, failure to progress, or fetal concerns). Using the MDC, hospitals analyzed physician and patient-level data on perinatal quality measures to identify a set of “drivers” (practices) contributing to a high C-section rate and then linked those drivers to a specific set of QI initiatives. This process allowed each hospital to tailor the QI program to the specific needs of

their facility. The MDC also allowed hospitals to monitor for any unintended consequences on maternal and neonatal health by using balancing measures.

Access to good data alone will not bring down a hospital’s C-section rates. Dozens of hospitals have started submitting to the MDC over the last 18 months, but none have achieved the significantly lowered rates of these three hospitals. Rather, the data serve as a motivator and guiding light when designing and implementing a coordinated quality improvement intervention.

2. Quality improvement support

CMQCC facilitated data-driven, physician-led, quality improvement support activities with hospitals. Over the course of two to three in-person meetings with hospital leadership and department staff, CMQCC led the group through their MDC performance report. To help the group gauge performance, CMQCC compared the department’s performance to that of nearby or similar sized hospitals and then examined variation in provider C-section rates within the hospital.

Initially, many clinicians were incredulous about their role in creating and addressing high C-section rates. Further examination of the data, however, revealed large variations in C-section rates within the department that could not be explained away.

After leading with the MDC data, CMQCC facilitated department-wide conversations with clinicians and nursing staff about how to address practice variation and poor outcomes. The group addressed doubts about the data trends, established a baseline for performance and developed insights into what hospital-specific scenarios contributed to unnecessary C-

sections. One hospital, for example, discovered that its failed induction rate was the primary contributing factor to their high NTSV rate. Departments committed to reviewing and publishing department and physician-level MDC data on a monthly basis to monitor internal practice variation and address its root causes.

CMQCC did not prescribe a single intervention but offered an array of tools and ideas that the department could assemble into a customized intervention tailored to the culture of that hospital and its unique patient population. As a result, all QI activities were endorsed and spearheaded by hospital physician leadership.

Some of the strategies adopted by hospitals to bring about practice changes included:

- Simple-to-follow checklists based on American College of Obstetrics and Gynecology's "Safe Prevention of Primary C-Section"
- Distribution of monthly reports that included un-blinded hospital and provider-level C-section rates
- Intervention elements targeted at empowering nursing staff, who play a critical role in managing care during labor and delivery, to own QI efforts.

3. Payment reform

In order to align hospital and physician payment with desired outcomes (reduced NTSV C-section rates) all participating hospitals were required to negotiate a blended case rate for deliveries that reimbursed physicians and hospitals, respectively, one flat rate regardless of delivery method (cesarean or vaginal). The blended case rate definition, developed by Integrated Healthcare Association, CMQCC, PBGH, and a

health plan partner in advance of implementation, aimed to remove any perverse financial incentives associated with the clinical decision to perform C-sections. The proposed definition served as a guideline for negotiations that occurred between hospitals or physician organizations and a health plan.

To encourage acceptance of the blended case rate among physicians, PBGH and CMQCC emphasized to hospitals the growing healthcare movement towards value based payment methodologies. With many organizations nationwide focusing on reducing preventable C-sections, PBGH and CMQCC stressed that the blended case rate as a method to help hospitals mitigate the impact of what would otherwise be a larger revenue loss.

PBGH identified several health plan partners who had agreed to work with participating hospitals to implement the blended case rate in advance of recruitment. Ultimately, each hospital negotiated the rate using PBGH and local health plan contacts (most often a local contracting manager) during their annual contracting process.

Implementing the blended case rate into hospital and medical group health plan contracts was both time and resource intensive, lasting anywhere from four to 18 months. Negotiations occurred separately for the facility and professional services, making coordination more challenging and slowing the negotiation process. Although negotiations for hospital contracts were lengthy, recruiting physician groups to adopt payment initiatives was a more complex task. Once the physician groups were on board, however, hospital negotiations accelerated.

Results

Three hospitals in Los Angeles County and Orange County as well as two commercial health plans, Aetna and Blue Shield, launched

the intervention in the first and second quarters of 2014. As of May 2015, four additional hospitals with a health system in San Diego confirmed participation and implementation is underway.

Figure 1. Graph of changes in NTSV C-section rates at each participating hospital

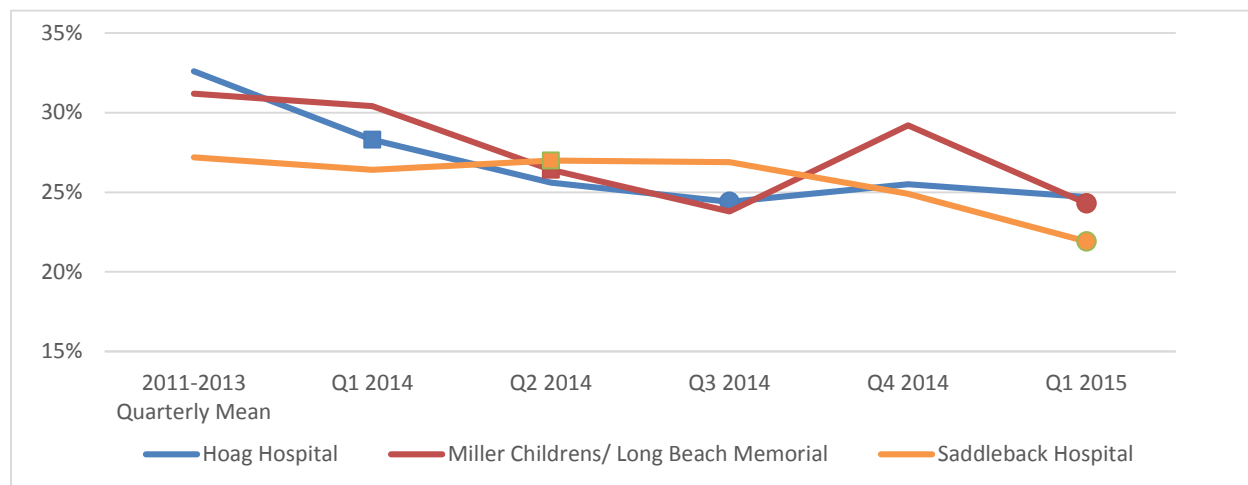


Figure 2. Table of changes in mean quarterly NTSV C-section rates at participating hospitals

	Hospital 1	Hospital 2	Hospital 3
Baseline NTSV C-section Rate (Qrtly Mean 2011-13)	32.6%	31.2%	27.2%
Intervention Start Date	1/15/14	3/20/14	4/15/14
Last Qtr Post Intervention Rate Mean (Qrtly Mean)	24.1%	24.3%	21.9%
Percent Reduction	24.2%	22.1%	19.5%

Within one month of initiating the QI, NTSV C-section rates dropped at each of the three participating hospitals and continued to decline for several months. Participating hospitals reduced NTSV C-section rates by an average of over 20% (see Figures 1 and 2). Eighteen months from the initiation of the QI, all three hospitals have sustained lowered C-section rates.

These reductions represent 390 women who delivered vaginally who would have likely

otherwise delivered by C-section, resulting in nearly two million dollars in immediate savings (using average savings of \$5,000 per averted Cesarean). If including repeat cesareans averted in patients' subsequent pregnancies, these changes represent nearly four million dollars in avoided costs for one year in only three hospitals.

Simultaneously, even though not a target of the project, vaginal births after a cesarean (VBACs) increased by 40% in two of the sites that had

relatively low rates (9-10%) to start. The third hospital that already had a higher VBAC rate of 24% did not see a further increase. Such changes suggest that a major effect of the QI project was to increase the value and support for vaginal births in hospitals generally.

Finally, QI projects should always ensure that no unintended harm occurs by using balancing measures to monitor for changes in adverse outcomes. The balancing measure for this project, incidence of unexpected newborn complications, did not increase at any of the three sites.

Keys to Success

Hospitals receptive to change

The recruited hospitals were early adopters with forward thinking physician and hospital leadership that embraced and endorsed the pilot. All hospitals had demonstrated leadership in maternal and child health (one hospital physician leader serves on the executive committee of CMQCC) and commitment to improving patient outcomes. Additionally, intervention hospitals were attuned to the changing dynamics of the healthcare market as demonstrated by their responsiveness to purchaser concerns and their reputation in the community and on social media.

Purchasers' role in hospital recruitment

Purchasers of healthcare services, in particular large self-insured employers, played a significant role in recruiting hospitals for the pilot. For employers, participation in the initiative signifies a hospital's commitment to providing high-quality care to their employees. On two different occasions, benefits managers from local employers met face-to-face with hospital leadership to discuss their concerns about rising C-section rates and helped to

persuade leadership to commit to pilot participation.

Critical role of data

Timely, accurate, and actionable provider level data was a critical precursor to initiating the intervention. Data from the MDC established consensus about the nature of the problem within the department while also fostering a sense of accountability and trust in the intervention process. Furthermore, reputation and strength of the MDC data helped to dispel many concerns about the validity of the problem.

Clinical champions

All participating hospitals had at least one physician and/or nurse who had a contagious passion and enthusiasm for this initiative. These champions and change ambassadors were critical in selling the program to other staff, ensuring its progress, and sustaining the hospital's continued commitment to the QI effort over multiple years. Some of the physician champions had so much enthusiasm for this project that they have continued to actively support similar changes to the healthcare system more broadly by writing and speaking in support of this initiative.

Adaptable Intervention

Finally, the quality improvement support provided was data driven, physician-led, and, most notably, customizable. CMQCC did not prescribe a single intervention for all hospitals but instead facilitated discussion among department leadership and staff about care-change strategies that best fit the organization. This process yielded changes that were tailored to a department's unique culture and perceived needs while ensuring that physicians and nurses were invested in the intervention's success.

Lessons Learned

1. Significant reductions of Cesarean births are possible

Although variation of hospital C-section rates are well documented, effective strategies that change a hospital from a high C-section rate to a low rate are less understood. The three hospitals in this pilot demonstrated a large (20% decrease), quick (within four months) and sustained (over 12 months) reduction in their NTSV Cesarean rate.

2. The intervention is replicable and adaptable

The adaptability of the intervention makes it relatively easy and low cost for hospitals throughout California and the US to implement. The intervention achieved significant reduction in C-section rates at hospitals with distinct and diverse patient populations. PBGH and CMQCC intend to continue to validate the intervention's efficacy in a diverse range of hospital setting and cultures.

3. Payment reform plays a supporting but critical role in care transformation

Although an analysis of the full fiscal impact of the blended case rate is forthcoming, the implementation process provides us with some important lessons. Given the practice redesign and culture change necessary to achieve a lower C-section rate, financial incentives alone are not likely an adequate motivator to improve outcomes. During implementation, physicians repeatedly emphasized that non-fiscal incentives to perform C-sections, such as schedule constraints, have a stronger influence on physician decision-making than payment. Conversely, since three quarters of the charges associated with deliveries are facility fees, reimbursement changes associated with the blended case rate are much more likely to

impact the hospital's bottom line. Payment reform strategies are thereby more likely to motivate hospital adoption of the QI efforts required to achieve a reduction in C-section rates.

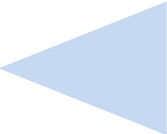
The negotiations and politics surrounding payment change sometimes slowed the implementation of the QI program. As a result, all three hospitals launched QI efforts during negotiations and began to implement changes five to six months before new contracts went into effect. All hospital staff, however, were aware of the impending payment change when the QI initiated. To scale in the future, regulatory requirements or a coordinated push from health plans could reduce the time and resource burden required of plans and hospitals to implement the blended case rate.

4. One blended case rate contract may accelerate change for all births hospital-wide

Each hospital implemented the blended case rate into contracts with one to two health plans representing only 10 to 20% of the hospitals' total births. Yet, the resulting quality improvement changes impacted all deliveries at the hospitals. Such success even with limited plan participation suggests that adoption of payment reforms across all payers is not necessary to achieve better outcomes and practice transformation. Additional research, however, is necessary to corroborate this learning.

Impact

The success of this project in reducing hospital NTSV C-section rates demonstrates that tackling significant variation in costs, outcomes, and practices associated with labor and delivery is feasible and within reach of many hospitals. The combination of data access, quality



improvement support, and payment reform is a powerfully potent recipe for achieving this change.

The reliability and timeliness of physician-level data and the adaptability of the quality improvement support were critical to the intervention's success. The role of the blended case rate in driving and sustaining change needs to be explored further in future interventions.

In all pilot sites, hospitals' open-minded cultures eased the intervention process and facilitated change. As California seeks to spread the successes of this pilot to hospitals throughout the state, the intervention will likely need to be adapted for hospital environments and cultures that are change resistant, change fatigued with the implementation of the Affordable Care Act or wary of increased scrutiny.

Such significant and sustained improvements in health outcomes are noteworthy and encouraging. The successes of this intervention should serve as a model for other hospitals throughout California and the country. PBGH looks forward to supporting future efforts to replicate the results of this pilot in new markets and new hospitals.