Issue Brief

No. 12 · September 2014

Maternity Care Patient Engagement Strategies

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Patient engagement is an important element of any comprehensive strategy to improve maternity care and to specifically reduce medically unnecessary obstetric procedures.

INTRODUCTION

In 2013 California received a State Innovation Model (SIM) Design Grant from the Centers for Medicare and Medicaid Innovation (CMMI) to develop statewide strategies that lead to the Triple Aim of better health, better health care, and lower costs. California's SIM plan focuses on four key initiatives that build upon existing efforts within the state. Through a coordinated multi-payer strategy, they have the potential to significantly reduce costs. Maternity care was identified as one of the four focus areas. The Maternity Care initiative was designed to promote healthy, evidence-based obstetrical care and to reduce the quality shortfalls and high costs associated with unnecessary cesarean deliveries. The aim of the initiative is to catalyze a large health system transformation through a four pronged approach: data submission for measurement/quality improvement, public reporting, payment innovation, and patient engagement. This issue brief focuses on patient engagement in maternity care and the strategies that enable pregnant women to make informed decisions to improve their care, their health, and the health of their babies.

BACKGROUND

Medically Unnecessary Cesarean and Early Elective Deliveries

Over 500,000 babies are born every year in California, and this number is expected to grow.[1] Large numbers of women are undergoing obstetric procedures such as cesareans, repeat cesareans, and early elective deliveries when they may not be medically indicated; practices that result in a higher rate of complications for women and babies.[2,3] Furthermore, there are notable racial differences in the mode of delivery. Evidence indicates that non-Hispanic, black women are more likely to have cesareans, and have higher maternal morbidity and mortality rates.[4]

Early term elective deliveries are those scheduled between 37 and 39 weeks gestation without medical reason; they occur either through labor induction or a scheduled cesarean. The American College of Obstetricians and Gynecologists has long advocated against early induction unless medically indicated, but the rate of early elective deliveries has remained high until very recently.[5,6,7] In 2010, California's statewide average for early elective deliveries was 14.7%. Since that time, significant progress has been made in reducing the rate of early elective deliveries. According to the most recent data released by The Leapfrog Group, the current rate (2013) is reported at 3.0%. It should be noted that not all hospitals participated in Leapfrog's survey. Hospitals were encouraged, but not required, to report rates. Even though early elective deliveries in California have been significantly reduced, a wide variation in rates across hospitals signifies continuing opportunities for improvement.[8]

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While early term elective delivery rates have fallen, cesarean rates remain high.[9] According to the Centers for Disease Control and Prevention, 32.7% of births in the United States in 2013 were cesarean deliveries.[10] California's total cesarean rate for 2013 was very similar at 33.2%. What is particularly noteworthy is the extreme variation noted among California hospitals with total cesarean rates ranging from 15% to over 70% in 2011 and 2012.[11] Furthermore, 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.[12]

Cesareans, repeat cesareans, and early deliveries can be life-saving procedures when medically indicated, but they carry a higher risk of adverse outcomes for mothers and babies. Complication rates for women also increase with each cesarean delivery;[13] risks include infection and hemorrhage, the two leading causes for hospital readmission after deliveries.[14] Early term elective deliveries —either induced or 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.[15, 16]

Drivers of Medically Unnecessary Cesareans and Early Elective Deliveries

Several factors may influence the timing and method by which babies are delivered in the United States. A common misperception exists that maternal "convenience" drives most planned deliveries that are not medically indicated. In reality, according to a longitudinal national survey of mothers by Childbirth Connection/National Partnership for Women and Families, only 1% of women requested a cesarean for no medical reason in 2011-2012.[17] Research suggests the key drivers of early elective deliveries and medically unnecessary cesareans include:

- **Provider Pressure:** Traditionally, women have deferred to providers' recommendations. The survey found 13% of respondents felt pressured to have a cesarean by their provider. An even larger percentage of women (22%) felt pressure to have a repeat cesarean.[18]
- **Large Baby Diagnosis:** Providers' often inaccurate, prenatal diagnosis of macrosomia or "Large Baby" may be a significant driver of the increase in rates of unnecessary induction and cesareans.[19]
- **Increased Use of Obstetrical Interventions:** Increased rates in the use of interventions during labor, such as inductions and epidural anesthesia, have contributed to the higher rates of unplanned cesareans.[20]
- **Misaligned Financial Incentives:** Current payment structures may promote cesarean deliveries over vaginal births for providers and health systems. 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).[21]
- **Maternal Health Literacy:** Recent surveys indicate that most pregnant women have misconceptions about the optimal gestational age for giving birth and are not aware of the risks and benefits of obstetrical interventions.[22, 23]

PATIENT ENGAGEMENT IN MATERNITY CARE

Patient engagement is emerging as a significant component of efforts to improve health outcomes. Patient engagement includes involving patients and their families in their care by educating them about the risks and benefits of treatments and empowering them to make informed decisions in partnership with their providers. Shared decision making tools, like personal decision aids and mobile health applications, have the potential to integrate patients' individual preferences, needs, and values into their care.[24, 25, 26]

Studies have highlighted that pregnant women want to be involved in their care and more specifically in making decisions about their care.[27] Many initiatives are occurring outside traditional health care settings, as pregnant women increasingly seek pregnancy and childbirth information from the Internet, social media, and mobile health sources.

Through a targeted literature review, web-based research, and interviews with key stakeholders in patient engagement in maternity care, more than forty national

and California-based maternity care initiatives that engage patients to improve maternity care outcomes were identified, including efforts specifically targeting medically unnecessary cesareans and early elective deliveries (See Appendix A for a complete list of initiatives and patient engagement efforts including details on geographic scope and partners). After a review and synthesis of these initiatives, four key patient engagement strategies emerged. Table 1 below provides an overview of each strategy and examples identified through the scan.

Table 1: Maternity Care Patient Engagement Strategies

STRATEGY	OVERVIEW
PUBLIC EDUCATION CAMPAIGNS	Campaigns targeted at pregnant women and the general public. The materials disseminated by campaigns are designed to improve health literacy in maternity care and to inform individuals about evidence-based maternity practices. Public education campaigns include traditional media and web-based campaigns, as well as social media efforts and public reporting. **Examples:** ▪ *March of Dimes:* Healthy Babies are Worth the Wait© ▪ *Association of Women's Health, Obstetric and Neonatal Nurses*: Go the Full 40 ▪ *Childbirth Connection:* Transforming Maternity Care – Resources for Women ▪ *Lamaze International*: Giving Birth with Confidence
SHARED DECISION MAKING	Collaborative process in which patients and health care professionals work together to make health care decisions based upon clinical evidence and a patient's preferences and values. **Examples:** ▪ *Informed Medical Decisions Foundation:* PregnantMe ▪ *March of Dimes:* Late Preterm Brain Development Card
ENHANCED PRENATAL CARE	Prenatal care provided through innovative models developed to increase the engagement of women in their maternity care and to improve birth outcomes. **Examples:** ▪ *Centering Healthcare Institute*: CenteringPregnancy ▪ *American Association of Birth Centers*: Birth Center Care ▪ *California Department of Public Health*: Black Infant Health Program ▪ *Centers for Medicare and Medicaid Services*: Strong Start
MOBILE TECHNOLOGY: SELF-TRACKING AND INTERACTIVE TOOLS	The use of mobile devices to provide access to health information and services, including the use of self-tracking and other interactive tools that enable pregnant women to receive information (education) individualized to their stage of pregnancy and personalized to their needs. **Examples:** ▪ *National Healthy Mothers, Healthy Babies Coalition:* Text4baby ▪ *March of Dimes*: Cinemama ▪ *Mayo Clinic*: Pregnancy mHealth Application ▪ *Regence Blue Cross Blue Shield:* Text me if you're pregnant

PROMISING PROGRAMS

Evidence suggests that strategies to increase and strengthen patients' engagement in their care can be effective.[28,29] While fewer studies have focused specifically on maternity care and obstetrics, patient engagement researchers and health care professionals suggest that strategies to engage pregnant women in their prenatal care and encourage healthy deliveries are important elements to consider in efforts aimed to reduce unnecessary obstetrical interventions. In fact, surveys indicate that women's perceptions and knowledge of evidence-based maternity care affect the choices they make to induce labor or to have a cesarean or repeat cesareans.[30]

While more evidence on patient engagement in maternity care is needed, this scan identified several promising programs that are worth considering as part of a comprehensive statewide strategy to reduce early elective deliveries and medically unnecessary cesareans. These programs have an existing—and growing—evidence base that indicates they have the potential to effectively engage women in their maternity care. This scan is not a comprehensive assessment of maternity care initiatives in general; rather this review focused solely on the intersection of patient engagement strategies and maternity care.

PUBLIC EDUCATION CAMPAIGNS

Public education campaigns are one strategy to improve health literacy in maternity care and to inform women about evidence-based maternity practices. Traditional media and web-based campaigns use a combination of print media (brochures, posters, bus advertising, etc.), television, special events (walks, 5K runs, etc.) and websites to engage both pregnant women and the general public.

Well-organized, targeted mass media campaigns have been shown to increase awareness and have a beneficial effect on behavior. Written information has been shown to improve health knowledge and information recall. Furthermore, studies have demonstrated that websites can improve health knowledge and have beneficial effects on health behavior and on self-efficacy.[31] Some evidence suggests that websites have a greater health benefit for disadvantaged groups.[32] One example of a public awareness/educational campaign is the March of Dimes Healthy Babies are Worth the Wait© initiative highlighted below.

Healthy Babies are Worth the Wait©

Healthy Babies are Worth the Wait© is both a public awareness campaign and a multi-faceted, community-based program model designed to reduce preventable preterm births. The overall goal of the awareness campaign is to educate pregnant women, health providers, and the general public about prematurity and to increase their awareness of the importance of preventing preterm births and the risks associated with late preterm births, elective inductions, and medically unnecessary cesareans.[33,34]

Healthy Babies are Worth the Wait© has five core components: forming partnerships within a local community; educating providers regarding evidence-based practices to prevent preterm births; supporting patients by providing prenatal education and other community services; engaging the community; and measuring the progress and effectiveness of the program. An important strategy of the initiative is integrating evidence-based clinical interventions and public health services to create care systems at the community level that provide pregnant women with consistent, comprehensive care that meets their social and psychological needs as well as their clinical needs.[35,36]

The initiative was first piloted in three communities in Kentucky from 2007 to 2009. Each community, or site, included the March of Dimes chapter, the local Health Department, the hospital where women delivered their babies, and the surrounding community. Evaluations of the Kentucky pilot reported declines in preterm and late preterm births.[37,38] Results from pre- and post- surveys also indicated positive changes in patients' and providers' knowledge, attitudes, and reported behaviors related to preterm birth.[39] It is important to note that evaluation results covered all components of the initiative and were not specific to the patient engagement and support components.

The March of Dimes expanded its Healthy Babies are Worth the Wait© initiative to other sites in Kentucky and also launched new sites in Texas. Program evaluations in Texas report declines in preterm births.[40] In addition, the March of Dimes has implemented a demonstration project in Newark, New Jersey in an effort to adapt the program for an urban African-American community.[41, 42] At this time there are no final evaluations of the New Jersey initiative. March of Dimes plans to continue to implement its initiative throughout the US, including in California.

SHARED DECISION MAKING

Shared decision making is emerging as a key strategy for engaging patients in their health care through a collaborative process between patients and their health professionals. Patient decision aids (PDAs) can be used to facilitate the shared decision making process. Many different types of PDAs are used to educate patients and help them understand their choices. They range from printed patient questionnaires, fact sheets, and brochures describing conditions, treatment options, and risks to DVDs, computer programs, and interactive web sites that include filmed interviews with patients and health professionals.[43]

Studies suggest that decision aids improve patients' knowledge; in turn, evidence-based knowledge helps pregnant women make more informed decisions regarding their maternity care. Decision aids can also encourage patients to become more involved in the decision-making process, thus engaging them more fully in their care. One systematic review of decision aids in obstetrics found that using decision aids increased pregnant women's knowledge, decreased their anxiety, and decreased their decisional conflict. Furthermore, the review found that greatest benefits for women were achieved when decision aids were combined with counseling from care providers discussing risks, options, and patients' preferences and values.[44] One example of a shared decision making initiative is the Informed Medical Decisions Foundation's PregnantMe highlighted below.

PregnantMe

PregnantMe is a national maternity care shared decision making initiative launched in 2013 by the Informed Medical Decisions Foundation and Childbirth Connection/ National Partnership. The initiative aims to improve health outcomes and patient experiences during pregnancy by helping pregnant women access the information they need to work with their providers and make informed decisions about their care. The initiative team developed a portfolio of multimedia, evidence-based decision aids to assist pregnant women in making a broad range of maternity decisions regarding issues such as choosing a caregiver and birth setting, induction of labor for suspected macrosomia, and elective repeat cesarean vs. planned vaginal birth. The decision aids are designed to be appropriate for use by women with low health literacy skills, and selected aids are translated into Spanish. These tools are intended for use by women and their providers in medical settings but may also be made available beyond specific care settings. Realizing that pregnant women are frequent users of mobile technology and social media, the team integrated the maternity decision aids with these technologies.[45]

Currently there is little evidence of the effectiveness of this new, promising program. However, PregnantMe is piloting their decision aids in California through a project funded by the California HealthCare Foundation (CHCF). Selected member organizations from Catalyst for Payment Reform and Pacific Business Group on Health will have one year of unlimited access to select decision aids in exchange for evaluation data. The one-year pilot began in spring 2014.

ENHANCED PRENATAL CARE MODELS

Many studies indicate that inadequate prenatal care is associated with poor pregnancy outcomes, including a greater risk for preterm delivery.[46] Statistics reveal that adequacy of prenatal care varies by race and ethnicity. In 2011, American Indian and Native Alaskan women were the most likely to receive late or no prenatal care (11% of births), followed by African American women (10%) and Hispanic women (8%) while only four percent (4%) of white women received inadequate or

no prenatal care.[47] Several innovative prenatal care models have been developed to address these issues. Selected promising models are summarized below.

Centering Pregnancy/Group Prenatal Care

Centering Pregnancy is an innovative, interactive program that replaces individual office visits with group prenatal care. Groups of pregnant women of the same gestational stage and their providers meet in 9 or 10 two-hour sessions during which the pregnant women receive health assessments, learn skills related to pregnancy, birth, and parenting, participate in facilitated discussions, and develop a support network.[48]

The Centering Pregnancy model is being used across the United States and within California in hospitals, community clinics, birth centers, academic institutions, provider offices, military bases, and Indian Health Service sites. In 2012, the Centers for Medicaid and Medicare Services (CMS) launched a four-year Strong Start Initiative in collaboration with the Health Resources and Services Administration (HRSA) and the Administration on Children and Families (ACF) to test and evaluate three evidence-based prenatal care interventions for women enrolled in Medicaid or the Children's Health Insurance Program (CHIP) and at risk for preterm births. Enhanced prenatal care through Centering/Group Visits is one of the models being tested.[49]

Centering Pregnancy/Group Prenatal Care has been shown to reduce preterm births, improve birth outcomes, and increase patient satisfaction. It promotes efficiency by providing information in a group setting rather than individually and offers the potential for cost savings by utilizing nurse practitioners and midwives, rather than physicians, to provide most of the prenatal services.[50] Organizations like the March of Dimes provide start-up and ongoing funds for Centering Pregnancy projects.[51]

Several studies have been conducted to evaluate the effectiveness of the Centering Pregnancy/Group Prenatal Care model. Results from studies reported decreased preterm birth rates, patients better prepared for birth, increased breastfeeding rates, increased learning, and support from peers.[52, 53, 54] Another study found that group prenatal classes allowed more time for interactions between women and their providers, and offered more opportunities to address psychological and social concerns as well as clinical concerns. Moreover, studies revealed that women preferred receiving prenatal care in groups and reported increased satisfaction with a group model for prenatal care.[55]

Birth Centers

The Birth Center model uses midwives and teams of health professionals, including peer counselors and doulas, working in collaboration to provide comprehensive prenatal care at birth center sites. Key components of this model are: engaging mothers as partners in their care, using evidence-based, coordinated care, and providing health education and emotional support.

The Strong Start Initiative is evaluating the Birth Center model at 48 birth center sites in 22 states across the country. California sites piloting this model are: Best Start Birth Center (San Diego); Women's Health and Birth Center (Santa Rosa); and The Birth Center, A Nursing Corporation (Sacramento).[56, 57]

Several studies have been conducted to evaluate the effectiveness and safety of birth centers. One of the most recent, The National Birth Center Study II, was a four-year study reporting on a large sample of low risk women (15,574) giving birth in birth centers in diverse geographic areas across the United States. Of the women studied, 93% had a spontaneous vaginal birth, 6% a cesarean birth, and 1% an assisted vaginal birth. Results of this study are similar to the results of previous studies demonstrating both the safety of the birth center model and the low rates of obstetric interventions at birth centers. The low rate of cesarean deliveries and low utilization of interventions highlight the potential cost savings of implementing and expanding the birth center model.[58]

Home Visiting

Another approach to evidence-based enhanced prenatal care is structured home visiting during pregnancy. The goals of home visiting are to provide voluntary evidence-based home visiting services to pregnant women and families with young children birth to age five to improve the following: (1) prenatal, maternal and newborn health; (2) child health and development, including the prevention of child injuries and maltreatment; (3) parenting skills; (4) school readiness and child academic achievement; (5) family economic self-sufficiency; and (6) referrals for and provision of other community resources and supports. Home visiting programs use professionals and

paraprofessionals to visit pregnant and parenting at-risk women and their families and provide them with support and education during their pregnancies and throughout their children's early years. Using funds provided by the Affordable Care Act, the State of California has recently selected two evidence-based home visiting programs, the Nurse-Family Partnership (NFP) that uses public health nurses as home visitors, and Healthy Families America (HFA) that uses paraprofessionals and professionals as home visitors. These models target and engage the community's underserved, low-income, high-risk populations.[60]

The US Department of Health and Human Services (HHS) has rigorously assessed the effectiveness of many home visiting programs including the two models selected for use in California. Both programs had positive impacts in all areas rated, including maternal health and child health. Home visiting has also been shown to improve birth outcomes and parental capacity and efficacy, reduce maternal depression, strengthen positive parenting behaviors, promote healthy child development, identify early developmental delays and link children to appropriate services, and improve school readiness.[61]

In addition, as part of its Strong Start initiative, CMS has partnered with HRSA and ACF to evaluate the effectiveness of home visiting programs throughout the country that use either the HFA or the NFP home visiting model. This study, the Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start), is designed to evaluate the effectiveness of these models at improving health care and health outcomes for pregnant women and their babies who are enrolled in Medicaid or CHIP and to decrease the costs of maternity care.[62]

MOBILE TECHNOLOGY

Recent studies reveal that approximately 91% of Americans use cell phones and that 80% of those users send and receive text messages. In addition, studies report that 99% of text messages are read, nearly all within three minutes.[63] Moreover, cell phone use in the United States is spread across all socioeconomic, racial, ethnic, and age groups. Statistics reveal that Hispanics and African Americans use texting more than White Americans; that low income Americans text more than higher income Americans; and that approximately 79% of Americans who receive Medicaid text. These statistics indicate the potential of using text-based mobile health programs for reaching medically underserved populations.[64,65]

Mobile health (mHealth) is a relatively new patient engagement strategy that many researchers contend has the potential to reach the large, diverse populations that use cell phones. mHealth programs enable individuals to use their cell phones and other mobile devices to access and interact with health information and applications. Studies reveal that individuals are increasingly searching for and receiving health information on their cell phones. Studies also report that patients, including young pregnant women, are amenable to receiving health related text messages. Finally, research suggests there is great potential for the use of text messaging and other mHealth applications, such as self-tracking and interactive tools, in maternity care.[66] One example of a texting program is the National Healthy Mothers, Healthy Babies Coalition's Text4baby initiative highlighted below.

Text4baby

Text4baby is a free cell phone text messaging service that provides pregnant women and families with infants under age one with evidence-informed information about pregnancy, birth, and caring for babies. Text messages are available in English or Spanish and are free regardless of the wireless provider. The messages cover a broad range of topics including the benefits of full-term delivery, infant developmental milestones, breastfeeding assistance, and oral health. They are timed to a mother's due date or baby's birth date. Text4baby also includes interactive appointment and immunization reminders, educational videos, mobile web pages, links to health-related services, and urgent health alerts. Since its launch in 2010, Text4baby has enrolled over 750,000 mothers (over 65,000 in California) and delivered over 108 million health messages and urgent alerts nationwide.[67,68]

Several independent studies have evaluated the impact and effectiveness of Text4baby. In one randomized evaluation by George Washington University, Text4baby users were nearly three times more likely to believe they were prepared to be new mothers compared to those in a control group. In addition, Text4baby users seemed more likely to understand the value of behaviors such as regularly visiting their doctors, taking prenatal vitamins, not smoking and eating healthy foods.[69]

California State University, San Marcos also conducted a nationwide telephone survey among Text4baby users who were enrolled for at least one month in the service. The study findings indicated that Text4baby increased users' health knowledge, strengthened access to health and information resources, facilitated interactions with healthcare providers, and improved compliance regarding medical appointments and immunizations. In addition, study findings indicated that Text4baby improved access to services for underrepresented populations such as the uninsured and those with low educational attainment. Finally, the study also reported that Text4baby was meeting its goal of reaching a "target audience" of underserved women from minority groups and from lower socioeconomic populations.[70]

In partnership with CMS, Text4baby implemented a Medicaid module in 2012. The module was developed to identify which Text4baby users had health insurance and to provide information on Medicaid/CHIP to users who were uninsured. Data self-reported from Text4baby users, who enrolled between December 24, 2012 and March 24, 2014, revealed that approximately 66% of Text4baby users were low-income women and that 52% of Text4baby users reported they were Medicaid/CHIP recipients while 14% reported they were uninsured.[71] Furthermore, interviews conducted by the Kaiser Family Foundation with Text4baby users revealed that many had limited knowledge of Medicaid and CHIP programs when they signed up for Text4baby and indicated that the messages from Text4baby encouraged them to seek out information and apply for health coverage.[72]

In 2013, CMS funded a Text4baby quality improvement pilot project for California. The California Department of Health Care Services (DHCS) and the California Department of Public Health (CDPH), in collaboration with Text4baby, developed and implemented customized Text4baby messages, including messages regarding Medi-Cal (California's Medicaid program), Covered California (California's Exchange), the WIC program (the Special Supplemental Nutrition Program for Women, Infants, and Children), and other programs to help mothers and their families easily access local health services. In addition, in January 2014, CDPH's Maternal, Child and Adolescent Health (MCAH) unit established an official partnership with the National Healthy Mothers, Healthy Babies Coalition to fully participate in the evidence-informed Text4baby program and included Text4baby in the MCAH Policies and Procedures for Local Health Jurisdictions funded by CDPH MCAH Division.[73]

CONCLUSION: CONSIDERATIONS FOR CALIFORNIA

Current trends in maternity care show that many pregnant women undergo obstetric procedures such as cesareans, repeat cesareans, and labor inductions that may not be medically indicated. Programs that employ patient engagement strategies to promote healthy, evidence-based deliveries stand out as an important element of any comprehensive strategy to improve maternity care and to specifically reduce unnecessary obstetric procedures.

In addition to the promising programs described above, several key issues for California to consider regarding the development and implementation of patient engagement strategies are described below.

Focus on reducing the cesarean delivery rate in low-risk women. Most of the evidence-based initiatives identified in this brief focused on eliminating early term elective deliveries rather than on reducing medically unnecessary cesarean deliveries. These initiatives to reduce early elective deliveries, coupled with an increase in intervention strategies at the provider-level (e.g. hard-stop policies) have resulted in dramatic declines in rates of early term elective deliveries both nationally

and within California. Many medical experts have suggested implementing multi-dimensional efforts similar to those used for reducing the rates of early elective deliveries to reduce the rates of medically unnecessary cesarean deliveries, focusing on the low-risk, first-birth cesarean rate. Strategies discussed in this brief can be used in conjunction with other interventions to focus on reducing unnecessary cesarean deliveries. For example:

- California can build upon the momentum created around early elective delivery campaigns and raise public awareness of both the high rates of cesarean deliveries and the risks associated with these deliveries by partnering with organizations such as the American College of Obstetricians and Gynecologists (ACOG), the Association of Women's Health, Obstetric and Neonatal Nurses, Childbirth Connection/National Partnership for Women and Families, Lamaze International, and March of Dimes.
- Given the low rates of cesarean deliveries in Birth Centers, increasing the public's awareness of birth centers as an alternative option to giving birth in hospitals, particularly for young, healthy (low risk) women, may also help reduce medically unnecessary cesarean deliveries.
- Shared decision-making tools for patients and providers may help to reduce unnecessary cesareans by informing women of the risks of these deliveries.

Facilitate increased access to usable, actionable data for consumers. California has been a leader in efforts to measure and report early elective and cesarean rates to hospitals and providers. With funding and support from the California Department of Public Health (CDPH), the California Maternal Quality Care Collaborative (CMQCC) was established in 2005. Working with CDPH and other organizations, such as the March of Dimes and the ACOG, CMQCC has developed tools and resources for providers (e.g. <39 week tool kit), engaged in quality improvement efforts, and developed the Maternal Data Center to collect, measure, and report maternal quality data to hospitals and providers. Recently CMQCC has teamed with the California HealthCare Foundation to make outcome data for all California hospitals for cesarean birth, VBAC, and episiotomy rates available for women and their families at www.calqualitycare.org. Starting in 2015, major state insurance programs, including the California Public Employees' Retirement System, Covered California, and the Department of Health Care Services' Medi-Cal program, will display in their respective provider directories those hospitals that are participating in the CMQCC measurement effort. In future years, actual outcomes data will be displayed. Other creative strategies to provide this type of information, taking into consideration health literacy and language preferences, are needed to ensure that patients are able to access, understand, and use quality data in their decision-making processes.

Pursue strategies to engage California's diverse population. California is a large, diverse state, creating challenges for efforts to engage patients in their maternity care. Strategies supporting women in minority, low socioeconomic, and rural populations are essential components of any state effort. The mobile texting, home visiting, and group prenatal care programs described in this brief have been shown to reach and engage pregnant women in low income and minority communities. Expanding the use of these programs and linking them with existing programs at state, county, and local community levels may help to engage pregnant women from California's diverse populations in their maternity care. Additionally, while many of the initiatives identified offered both Spanish and English language materials, more efforts are needed to reach Latina women. Fostering public/private partnerships to expand existing programs that are delivered in Spanish and other languages, such as the Becoming a Mom/Comenzando bien® program for Latina women, may also help to meet the cultural needs of California's diverse populations.

Consider the role of the provider in supporting patient engagement in maternity care. While this issue brief focuses on patient engagement rather than provider behavior and education, the key informant interviews surfaced concerns regarding provider influence on maternity care outcomes. Specific concerns about patient deference to provider recommendations and misaligned incentives for providers to engage patients in the use of obstetric interventions merit attention. Two areas for further consideration are: (1) ensure that payment structures for labor and delivery do not provide perverse incentives so that patients can trust that providers are free of a conflict of interest; and (2) consider opportunities for

clinicians to support patient engagement and to more actively partner with patients in their maternity care and decision making. The use of decision aids that provide both patients and providers with the benefits and risks of evidence-based care options may help to educate women about elective obstetrical procedures and mitigate the pressure women feel to have such procedures.

Collaborate with other states to identify policy levers. States across the country are incorporating patient engagement strategies into their efforts to improve health outcomes for mothers and babies. California has an opportunity to learn from other states to identify key policy levers that effectively reduce early elective deliveries and medically unnecessary cesareans. For example, many states are exploring the use of shared decision making aids to better engage patients and families in their care. Washington, Minnesota, Maine and Massachusetts have all passed legislation to certify guidelines for shared decision making processes. Washington is also implementing maternity decision aids in its State Innovation Model, an option that California could consider.

Many patient engagement strategies are currently being used in California, and promising, new strategies designed for use in maternity care will be implemented. Irrespective of the specific strategies California pursues, all interventions will need to be rigorously evaluated in order to inform future investments.

Acknowledgments

The Integrated Healthcare Association has provided technical assistance to the California Health and Human Services Agency on design work related to the Maternity Care initiative outlined in the State Health Care Innovation Plan. This publication was developed to support this work.

The authors would like to thank the following key informant interviewees for their valuable contributions to this brief: Jill Arnold, Cesareanrates.com; Katie Shea Barrett, Blue Cross Blue Shield of California; Molly Beinfeld, Informed Medical Decisions Foundation; Jeff Convissar, MD, Kaiser Permanente Northern California; Maureen Corry, National Partnership for Women and Families; Kirsten Firminger, PhD, American Institutes for Research; Tracey Flanagan, MD, Kaiser Permanente Northern California; William Gilbert, MD, Sutter Health System Sacramento; Neal Kohatsu, California Department of Health Care Services; Leslie Kowalewski, March of Dimes; Rodger Lehl, County of Riverside; Victoria Lombardo, March of Dimes; Adrienne Lowe, California Department of Health Care Services; Maureen Maurer, American Institutes for Research; Christine Morton, PhD, California Maternal Quality Care Collaborative; and Barbara Murphy, California Maternal Quality Care Collaborative.

The authors would also like to thank the following reviewers for their thoughtful insights and recommendations: Alyce Adams, PhD, Kaiser Permanente Division of Research; Ron Chapman, MD, California Department of Public Health; Neal Kohatsu, MD, California Department of Health Care Services; Leslie Kowalewski, March of Dimes; Elliot Main, MD, California Maternal Quality Care Collaborative; and Connie Mitchell, MD, California Department of Public Health, Jill Yegian, PhD, Integrated Healthcare Association; and Patricia Powers, California State Innovation Model.

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