be used to motivate physicians and hospital administration, along with nursing staff, to engage together in changing the culture on labor and delivery units.

Hospitals should examine their care processes and consider appropriate quality improvement projects to reduce admissions in early labor, reduce elective inductions in first-time mothers, improve diagnostic and treatment approaches for labor complications, encourage vaginal birth after cesarean delivery through hospital policies and supportive care during labor, or all of these. Several groups in the United States are working to develop formal quality improvement toolkits with strategies such as these to support cesarean delivery reduction programs at the local, hospital system, and state levels.

What is an optimal target rate for an upper limit of cesarean deliveries as a percentage of all births? This question remains to be resolved. In 1985, the World Health Organization proposed a target for the total cesarean delivery rate for all countries of 15% arguing that there was no evidence of benefit above that level—a target that has not been adopted in the United States. A 2000 College report concluded that the most important group to focus on was women having their first labor and recommended using the nulliparous, term, singleton, vertex (low-risk, first-birth) cesarean delivery rate with a proposed target of 15.5%.[18] The Healthy People 2020 objectives, which are more modest than their 2010 predecessor, call for a 23.9% nulliparous, term, singleton, vertex rate and for a doubling of the percentage of vaginal births after a prior cesarean delivery. The nulliparous, term, singleton, vertex cesarean delivery rate often falls 2–4 percentage points lower than the total cesarean delivery rate. Some hospitals and large geographic areas already meet the Healthy People 2020 targets, whereas others are quite far off.

The need for usable, validated quality measures in maternity care is rapidly gaining national attention; and the success of quality improvement efforts depends on the development, implementation, and tracking of such measures. Two foundational requirements for the success of a multistrategy initiative to improve maternal quality care and reduce cesarean delivery rates are recognition that change is necessary, desirable, and achievable and the availability of a reputable source for reliable, timely, and relevant quality data. Some hospitals are able to provide such data to drive internal professional and cultural change efforts, but many more are not; and in most cases, outcome data are not publicly reported in sufficient detail or in a timely way. A California maternal data center with the capacity to provide a robust source of near-real-time outcome data for large-scale maternity quality improvement projects has been created through collaboration between California Maternal Quality Care Collaborative and state and federal agencies and other stakeholders. Washington state and Louisiana have similar projects underway.

Financial incentive strategies can redirect clinical practices to change the cesarean delivery rate trajectory. Given the budget issues faced by all payers (Medicaid and commercial) and the considerable dollars at stake, reforming payment for cesarean deliveries is likely to be a priority for policymakers and payers. Payment reform could create the proverbial "burning platform" that spurs change more quickly than other strategies. The first step is to remove the perverse financial incentives that currently help drive the rising rate.

Payment schemes can be used to reward providers for high-quality clinical practice and good patient outcomes, to encourage specific practices (eg, vaginal birth after cesarean delivery) or discourage others (eg, labor induction with an unfavorable cervix or repeat cesarean deliveries), or both. Nonpayment for "unapproved" services is quite controversial, because there can be justifications for some individual cases. However, payment can be linked to overall health care provider and hospital performance. A good example is the Value Based Purchasing program currently being implemented nationally for selected outcomes for Medicare patients. Another approach gaining significant interest is bundled or blended payments. An example of such a program is a single payment to a hospital for a "birth" that is a blend of vaginal and cesarean delivery rates. Importantly, this approach keeps the quality improvement activity local to the hospital rather than having decisions for medical care driven by government, insurance payers, or other stakeholder groups. Appropriate balancing measures documenting newborn outcomes are needed for this approach.

Despite the abundance of reputable online sites for information on pregnancy and childbirth, most women enter the hospital with little knowledge of common procedures, their indications, and risks. Indeed, the rate of prenatal education program attendance has declined in the United States.[8] Clinicians and other important stakeholders, including payers, purchasers, and public health officials, need education on the disconnect between dollars spent and outcomes achieved in U.S. maternity care.

A coordinated effort by many organizations and individuals is needed to address these information and awareness gaps not only about the bigger picture, but also about specific ways that the cesarean delivery rate can be lowered through the strategies outlined here.

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The endorsement and adoption of the nulliparous, term, singleton, vertex measure for cesarean delivery by the National Quality Forum and The Joint Commission has raised clinical awareness of the importance of first labor management. Educational efforts, although necessary, are not sufficient to ensure lower cesarean delivery rates.

The College's revised policy on vaginal birth after a prior cesarean delivery[19] is a positive step together with the strong scientific evidence for the National Institutes of Health recommendation that most women who are good candidates should be counseled about vaginal birth after cesarean delivery and offered a trial of labor.[15] Nevertheless, it likely will take persistent pressure from childbearing women and advocates for evidence-based practice in childbirth, changes in medical liability laws giving protection for following established guidelines ("safe harbors"), supported by public reporting of a trial of labor after a cesarean delivery and vaginal birth after cesarean delivery availability at the hospital level, to reverse the current trend and make vaginal birth after a prior cesarean delivery more widely available.

Public reporting can aid consumer health care decision-making and incent or pressure health care providers to improve their performance. The experience of states such as Virginia indicates that public online reporting of hospital and physician cesarean delivery rates is not sufficient to stabilize or reduce the cesarean delivery rate. However, public reporting and transparency remain an important strategy when combined with other efforts including payment reform, education, and advocacy for practices that support vaginal birth. These recommendations have been presented in greater detail in the California Maternal Quality Care Collaborative White Paper at www.cmqcc.org/white_paper.[10]

We recommend that the multiple approaches described in this article, or as many as possible of them, be undertaken simultaneously, as appropriate to the local context. Many of these interventions interact positively with and reinforce each other. In this era of searching for value and improving quality in the U.S. health care system, the significant increase and variation in cesarean delivery rates should command national attention. The multistrategy approach advocated here must engage all relevant stakeholders and focus equally on the medical and cultural factors responsible for the rising cesarean delivery rate. In so doing, maternal health outcomes will improve.

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