The information contained in this report was produced for Members of the Pacific Business Group on Health and Silicon Valley Employers Forum. As this is a living document, please visit pbgh.org/maternity for the most up-to-date version of this guide.

For additional information, including vendor contact information, tool demos, and evaluation criteria, please contact Brynn Rubinstein, Senior Manager of PBGH’s Transform Maternity Care program.

For other maternity resources, such as a recorded webinar highlighting four of the tools included in this guide and analysis of the variation in NTSV C-section rates among California hospitals, visit pbgh.org/maternity.

For more information, contact:
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1. Introduction

Employers can play a proactive role in reducing unwarranted C-sections and promoting high-value maternity care. Maternity-focused patient engagement tools encourage expectant mothers and their spouses/partners to learn about treatment options during birth. Preliminary research suggests that use of these tools deepens the involvement of parents during pregnancy, helping to identify problems sooner and prevent unnecessary, costly procedures, such as C-sections. Ultimately, by deploying these resources, employers help to improve pregnancy-related health outcomes and increase patient satisfaction.

To facilitate a large employer’s selection and implementation of a maternity-focused patient engagement tool, the Pacific Business Group on Health (PBGH) conducted an extensive market assessment of available tools to develop this guide. PBGH Members can use this guide to learn more about the tools PBGH considers most effective and determine which best suits the organization’s budget, time constraints, and culture.

Section 4 outlines eight acceptable or recommended maternity-focused patient engagement tools. The chart also provides a summary of factors to consider when selecting any patient-engagement tool.

2. Importance of Patient Engagement in Maternity

Many health plans and physicians overlook the support needed by the 85-90% of women who have low-risk pregnancies. Maternity-focused patient engagement tools can help these women take active roles in their pregnancy-related care to improve its quality and reduce their risk for undergoing a C-section. Such resources are particularly important in maternity given significant differences in quality among delivery providers, even within small geographical areas.

Often, pregnancy serves as a woman’s first prolonged interaction with the healthcare system and the first time she is making decisions regarding potential medical interventions and care. Because new mothers often become the primary healthcare decision makers for their household, providing them with useful guidance as they navigate the system for the first time ultimately helps women establish habits and preferences that impact future provider engagements. Furthermore, supporting new mothers during this important time demonstrates an employer’s commitment to the health of employees and their partners.

Until recently, however, few tools or resources existed to guide women as they make critical health decisions for themselves and their families. The increasing availability of maternity quality data in combination with the recent surge in funding for women-focused digital health tools has started to fill this gap.

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1 Health and cost concerns associated with unwarranted C-sections are explained in PBGH’s NTSV C-section Report.
3 Research indicates that women make 80% of household healthcare decisions.
4 See Amino’s C-section predictor and Leapfrog’s hospital C-section data reporting.
3. Patient-Engagement Approaches

Most tools utilize one of four different approaches to patient engagement: 1) public education campaigns, 2) self-tracking and interactive mobile tools, 3) shared decision-making, and 4) enhanced prenatal care. Each strategy differs in the methods used to organize content, deliver information, and engage the consumer. They also vary significantly in the amount of resources, such as time and money, required to implement. Ultimately, the tools included in this guide range from those that are turnkey and inexpensive to those that offer customization and health plan integration for a fee.

The four approaches are explained below and ordered based on the extent to which the approach can be tailored (through tracking, personal health data, or interactive features) to maximize patient engagement. Although all tools referenced in this guide are effective and of high caliber, those that are interactive and consider the varying needs and perspectives of the patient (approaches #3 and #4 below) are more likely to produce an informed decision and preferred action.

1. Public Education Campaigns
   These materials provide general education about pregnancy and raise awareness about medical issues and health concerns that women may encounter while pregnant. Often presented as a library of online articles and short videos, public education campaigns have minimal outreach features as compared to other approaches.

2. Self-Tracking and Interactive Mobile Tools
   These interactive tools incorporate some personalized details, such as a woman’s due date, to provide moderately tailored educational content as well as timely referrals to other relevant services. Frequently configured as mobile applications, these tools deliver convenient, targeted information to a woman’s email or phone and utilize regular alerts to keep her referring back to the tool throughout her pregnancy.

3. Shared Decision-Making
   Shared decision-making is a collaborative approach that allows patients and their physician to make healthcare decisions together, taking into account the best available scientific evidence, as well as the patient’s values and preferences. These tools help a woman come to a decision about a particular intervention when multiple treatment options are presented and prepare her for a constructive discussion with her provider.

4. Enhanced Prenatal Care
   Enhanced prenatal care offers women a collaborative extension of standard prenatal care led by a nurse or health educator, in person, in a group or by phone. Typically offered as a resource through a health plan, these coaching programs provide a handheld experience for pregnant women, often integrating elements of shared decision-making.

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4. Acceptable & Recommended Tools

The chart on page 4 includes eight tools that PBGH identified as either acceptable or recommended. The chart also captures each tool’s key features, including time necessary for launch, regulatory complexity, number of existing users, references from employers using the tool, and cost, if relevant.

Because pregnancy-related patient engagement tools can have many different goals, PBGH based its assessment on tools that met the following two criteria: a) content includes accurate, unbiased information about the decision points that affect a woman’s C-section risk and b) tool is reasonable for a large employer to implement. Furthermore, the highlighted tools in this guide were limited to those that are available now or will be released within the next six months.

In compiling this assessment, PBGH reviewed over twenty different maternity patient engagement resources (full list is in Section 6. PBGH conducted interviews and collected materials from health plans, integrated delivery systems, publically available education, industry tools and mobile applications based on the criteria discussed above.

Given the growth of patient engagement as a new field and the proliferation of consumer-focused digital health tools, the availability and quality of meaningful maternity-focused patient engagement tools is expected to increase significantly in the years ahead. This assessment will be updated based on new offerings.

5. Considerations for Successful Implementation

Delivering these tools to an expectant mother or spouse/partner in a timely manner presents a significant challenge to employers and health plans. The window to implement these tools is relatively small (less than nine months). Furthermore, women’s reluctance to disclose pregnancies to their employers and delays in access to health plans’ claims data that can identify pregnant beneficiaries further shrinks the timeframe to deliver these tools. Therefore, developing an implementation strategy that ensures a tool’s use and sustained adoption is critical to its success.

From discussions with tool vendors and patient engagement experts, the following dissemination strategies were identified and can be utilized to promote use of these tools:

A. **Develop a campaign.** Incorporate into employee handbooks and internal maternity leave education resources, distribute in on-site clinics, and promote through all levels of the organization.

B. **Market digitally.** Use multiple means to distribute tools including email, intranet, and benefits platform, if applicable.

C. **Use incentives.** Promote tools with cost-effective incentives such as co-pay subsidies.

D. **Engage partners and family.** Don’t forget about spouses / partners! Engage spouses / partner as they play a critical role in passing on resources to pregnant dependents.

E. **Leverage health plan relationship.** Push your health plans to offer patient engagement tools with decision support components to ensure women have access to these resources from multiple avenues.

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8 For more information about how you can promote patient engagement tools in your organization, we suggest Castlight Health’s White Paper *Creating healthcare consumers: 5 best practices for driving employee engagement*
## Acceptable and Recommended Maternity-Focused Patient Engagement Tools

**Legend:**
- Acceptable
- Recommended

<table>
<thead>
<tr>
<th>Organization: Tool Name</th>
<th>Platform/Customizable Content</th>
<th>Health Plan Integration</th>
<th>Launch Timeline</th>
<th>Regulatory Complexity</th>
<th>Summary Report on Employee Usage</th>
<th>Total Users</th>
<th>Employer Reference Available</th>
<th>Cost</th>
<th>Overall Implementation Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childbirth Connection: “What Every Pregnant Woman Needs To Know About Cesarean Section”</td>
<td>Public Education Campaign</td>
<td>Web Page / No</td>
<td>Available immediately</td>
<td>None</td>
<td>No</td>
<td>NA</td>
<td>No</td>
<td>Free</td>
<td>Low</td>
</tr>
<tr>
<td>March of Dimes: “Healthy Babies, Healthy Businesses”</td>
<td>Public Education Campaign</td>
<td>Web Portal / No</td>
<td>Available immediately</td>
<td>None</td>
<td>No</td>
<td>13,000</td>
<td>Yes</td>
<td>Free</td>
<td>Low</td>
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<tr>
<td>Consumer Reports: “Safe Pregnancy Hub”</td>
<td>Public Education Campaign</td>
<td>Web Portal / No</td>
<td>Available immediately</td>
<td>None</td>
<td>No</td>
<td>NA</td>
<td>No</td>
<td>Free</td>
<td>Low</td>
</tr>
<tr>
<td>Zero to Three/Voxiva: “Text4baby”</td>
<td>Public Education Campaign</td>
<td>Text Message Campaign / Yes</td>
<td>3-4 weeks</td>
<td>None</td>
<td>No</td>
<td>940,000</td>
<td>Yes</td>
<td>Free</td>
<td>Low</td>
</tr>
<tr>
<td>Maternity Neighborhood: “Care Guide”</td>
<td>Self-tracking and Interactive Mobile Tool</td>
<td>Web Portal &amp; Mobile Application / Yes</td>
<td>6 weeks</td>
<td>None</td>
<td>Yes</td>
<td>75,000</td>
<td>No</td>
<td>Varies by size/program</td>
<td>Medium</td>
</tr>
<tr>
<td>Wildflower Health: “Due Date Plus”</td>
<td>Self-tracking and Interactive Mobile Tool&lt;sup&gt;10&lt;/sup&gt;</td>
<td>Mobile Application / Yes</td>
<td>6 weeks</td>
<td>Business associate agreement required if program includes an eligibility feed</td>
<td>Yes</td>
<td>50,000</td>
<td>Yes</td>
<td>Up to $.25 PPEM</td>
<td>Medium</td>
</tr>
<tr>
<td>Healthwise: “PregnantMe”</td>
<td>Shared Decision Making</td>
<td>Web Modules / Yes</td>
<td>3 months</td>
<td>Consent required for sending PHI information via non-secure email</td>
<td>Yes</td>
<td>750</td>
<td>Yes</td>
<td>$.03 PPEM&lt;sup&gt;11&lt;/sup&gt;</td>
<td>High</td>
</tr>
<tr>
<td>Anthem: “Future Moms”</td>
<td>Enhanced Prenatal Care</td>
<td>Phone-Based Coaching / No</td>
<td>3 months</td>
<td>None</td>
<td>Yes</td>
<td>15,000</td>
<td>Yes</td>
<td>$.09-.25 PMPM</td>
<td>Medium</td>
</tr>
</tbody>
</table>

<sup>8</sup> Overall Implementation Effort: a summary of effort required for an employer to implement a tool from launch to maintaining employee use over time  
<sup>10</sup> Maternity Neighborhood incorporates member experience surveys to capture women's experiences during pregnancy, labor and postpartum and is expanding their offering of shared decision making support aids.  
<sup>11</sup> Pricing is tiered based on size of the employer but is $0.03 PPEM for a medium-large employer plus a $5,500 one-time implementation fee, depending on the integration required.
### 6. List of Additional Tools and Resources

In addition to the tools identified as acceptable or recommended, PBGH reviewed the following tools and resources. Primarily, these tools were not highlighted in this guide due to lack of content on C-section reduction levers, readiness, feasibility of employer distribution/implementation, or user-friendliness.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Tool Name</th>
<th>Patient Engagement Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser</td>
<td>Healthy Beginnings Newsletter</td>
<td>Public Education Campaign</td>
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<tr>
<td>Baby Center</td>
<td>Baby Center: Expert Advice (website)</td>
<td>Public Education Campaign</td>
</tr>
<tr>
<td>Childbirth Connection</td>
<td>Childbirth Connection Website</td>
<td>Public Education Campaign</td>
</tr>
<tr>
<td>Lamaze International</td>
<td>Healthy Birth Practices Resources</td>
<td>Public Education Campaign</td>
</tr>
<tr>
<td>Mayo Clinic</td>
<td>Mayo Clinic Guide to a Health Pregnancy</td>
<td>Public Education Campaign</td>
</tr>
<tr>
<td>Alt12</td>
<td>Baby Bump</td>
<td>Self-tracking and Interactive Tool</td>
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<tr>
<td>iBirth</td>
<td>iBirth</td>
<td>Self-tracking and Interactive Tool</td>
</tr>
<tr>
<td>Mayo Clinic</td>
<td>Mayo Clinic on Pregnancy Application</td>
<td>Self-tracking and Interactive Tool</td>
</tr>
<tr>
<td>Blue Cross Blue Shield</td>
<td>My Pregnancy Assistant</td>
<td>Self-tracking and Interactive Tool</td>
</tr>
<tr>
<td>WebMD</td>
<td>WebMD Pregnancy</td>
<td>Self-tracking and Interactive Tool</td>
</tr>
<tr>
<td>Glow</td>
<td>Glow Nurture</td>
<td>Self-tracking and Interactive Tool</td>
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<tr>
<td>Geisinger</td>
<td>MyGeisinger</td>
<td>Self-tracking and Interactive Tool/Enhanced Prenatal Care</td>
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<tr>
<td>Doula Spot</td>
<td>Doula Spot</td>
<td>Enhanced Prenatal Care</td>
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</tbody>
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